

Overview and Analysis of the Economic Impact of U.S. Sanctions With Respect to India and Pakistan

Investigation No. 332-406

Publication 3236

September 1999

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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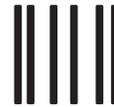
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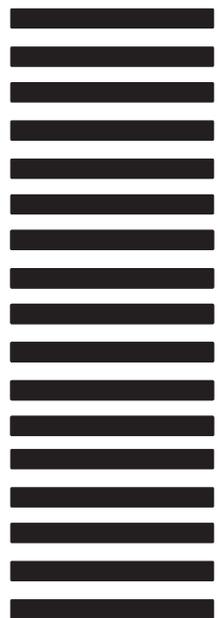
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PREFACE

On April 16, 1999, the United States International Trade Commission (the Commission) instituted investigation No. 332-406, *Overview and Analysis of the Economic Impact of U.S. Sanctions With Respect to India and Pakistan*. The investigation, conducted under section 332(g) of the Tariff Act of 1930, was in response to a request from the Committee on Ways and Means, U.S. House of Representatives (see appendix A).

The purpose of this investigation is to assess the impact of the economic sanctions imposed on India on May 13, 1998, and Pakistan on May 30, 1998, pursuant to section 102 of the Arms Export Control Act (also known as the “Glenn Amendment”). In particular, the Committee requested that the Commission’s report analyze the actual effects of the sanctions, and the likely economic effects if the sanctions are reimposed, on U.S. industries, agriculture, workers, and consumers. The Committee also requested an assessment of the effects of the sanctions on the economies of India and Pakistan.

The Commission solicited public comment for this investigation by publishing a notice in the *Federal Register* of April 27, 1999 (see appendix B) and holding a public hearing on June 22, 1999.

ABSTRACT

On March 19, 1999, the Committee on Ways and Means, U.S. House of Representatives (the Committee) requested the U.S. International Trade Commission (the Commission) to examine the economic sanctions imposed on India and Pakistan in May 1998, pursuant to section 102 of the Arms Export Control Act (also known as the “Glenn Amendment”). The sanctions were triggered after India and Pakistan detonated nuclear explosive devices. The Committee requested that the Commission’s report identify U.S. industries and agricultural commodities which were affected by the sanctions; analyze the effects of the sanctions on the U.S. economy; assess the likely economic impact on the United States if the sanctions are reimposed; and analyze the likely impact of the sanctions on the Indian and Pakistani economies, including the effects of the sanctions on humanitarian activities.

This investigation employs three approaches—a telephone survey of over 200 U.S. companies and associations; market share and lost export sales analysis, to the extent that data are available; and economic modeling. Additional information was provided by a public hearing held on June 22, 1999, and written submissions to the Commission received in response to a *Federal Register* notice of the institution of this investigation.

Based on the telephone survey, the Commission found that U.S. companies most affected by the Glenn Amendment sanctions were those involved in the sale of certain agricultural products; industrial machinery; transportation, construction, and mining equipment; electronics products; and infrastructure development services. Several companies noted the loss of trade and project finance support from the U.S. Export-Import Bank and the Overseas Private Insurance Corporation as factors that hinder their ability to operate in India. The Commission received several reports that the Glenn Amendment sanctions have contributed to the perception of U.S. companies as unreliable international suppliers.

The Glenn Amendment sanctions appeared to have had a relatively minimal overall impact on India, while they appeared to have had a more pronounced adverse impact on Pakistan. However, for both countries it is difficult to isolate the effects of the U.S. sanctions from other concurrent economic events, such as each country’s domestic economic policies and sanctions imposed by other countries.

Recent trade data indicate that reimposition of the Glenn Amendment sanctions prohibiting USDA export credits and guarantees most likely would adversely affect U.S. wheat exports to Pakistan, which is an important customer for white wheat grown in the U.S. Pacific Northwest states. Quantitative estimates from a global general equilibrium trade model indicate that economic effects of the Glenn Amendment sanctions on India, Pakistan, and the United States are likely to be small. For the United States, the sanctions impose a total cost of \$161 million. Other model results show that the Glenn Amendment sanctions have limited effects on U.S. employment (a decline of less than 0.2 percent in the U.S. grain sector); U.S. wages and the return to capital decline by less than 0.05 percent. The effects on wages and the return to capital in India and Pakistan also are small (decline by 0.1 percent). The major alternative suppliers benefitting from reduced U.S. exports to India and Pakistan under the Glenn Amendment sanctions are Japan; Europe; the rest of Asia; and Australia, New Zealand, and other South Pacific trading partners.

The information provided in this report is for the purpose of this report only. Nothing in this report should be considered to reflect possible future findings by the Commission in any investigation conducted under statutory authority covering the same or similar subject matter.

EXECUTIVE SUMMARY

On March 19, 1999, the Committee on Ways and Means, U.S. House of Representatives (the Committee) requested the U.S. International Trade Commission (the Commission) to examine the economic sanctions imposed on India on May 13, 1998, and Pakistan on May 30, 1998, pursuant to section 102 of the Arms Export Control Act (also known as the “Glenn Amendment”).¹ The Committee requested that the Commission’s report: identify the U.S. industries, including agricultural commodities, that were affected by the sanctions and analyze the effects of the sanctions on the U.S. economy; assess the likely economic impact on the United States if the sanctions are reimposed; analyze the likely impact of the sanctions on the Indian and Pakistani economies; and summarize the instances when the sanctions have affected humanitarian activities and the activities of multinational institutions in India and Pakistan.

The President announced the immediate imposition of economic sanctions against India and Pakistan in May 1998, after both countries detonated nuclear explosive devices. This marked the first time the Glenn Amendment had been triggered. The Glenn Amendment requires that the President impose the following economic sanctions when a non-nuclear country detonates a nuclear explosive device:

- terminate U.S. foreign aid programs except for humanitarian assistance and food or other agricultural commodities;
- deny export credits and guarantees by any U.S. Government department or agency, such as the U.S. Department of Agriculture (USDA), the U.S. Export-Import Bank (Eximbank), the Overseas Private Investment Corporation (OPIC), and the U.S. Trade and Development Agency (TDA);
- terminate sales of defense articles and defense services;
- terminate all foreign military financing;
- oppose the extension of any loan for financial or technical assistance by any international financial institution—such as the Asian Development Bank (ADB), the International Monetary Fund (IMF), and the World Bank—except for humanitarian purposes;
- prohibit U.S. banks from making any loan to the government of the detonating country, except for the purposes of purchasing food or other agricultural commodities; and
- prohibit exports of specific goods and technology having both military and other strategic uses and civilian uses subject to export licensing by the U.S. Commerce Department.

Several important components of the Glenn Amendment sanctions were waived during 1998. On July 14, 1998, President Clinton exempted from the sanctions the denial of USDA export credits and guarantees until September 30, 1999. Second, on December 1, 1998, the President waived until October 21, 1999, the sanctions concerning: (1) prohibitions with respect to Eximbank, OPIC, and TDA assistance for India and Pakistan; (2) the prohibition with respect to the International Military Education and Training programs for India and Pakistan; (3) the prohibition with respect to the provision of loans or credits to the Government of India or Government of Pakistan by U.S. banks; and (4) the extension of any financial or technical assistance to Pakistan by any international financial institution assisting the IMF in regard to Pakistan.

¹ A copy of that request letter appears as appendix A of this report. The Glenn Amendment, named for its primary sponsor Senator John Glenn (D-Ohio), was enacted in 1994. A more detailed discussion of the Glenn Amendment is presented in chapter 2.

Approach

This investigation applies three types of analysis—a telephone survey of over 200 U.S. companies and associations; market share and lost export sales analysis, to the extent that data are available; and economic modeling. The Commission obtained additional industry views from a public hearing held on June 22, 1999, and written submissions to the Commission received in response to a *Federal Register* notice of the institution of this investigation.

Summary of Findings

Effects on U.S. Industry: Industry Perspectives

Based on a telephone survey of 269 firms and trade associations, the Commission found that the U.S. companies most affected by the Glenn Amendment sanctions were those involved in the sale of certain agricultural products; industrial machinery; transportation, construction, and mining equipment; electronics products; and infrastructure development services. Restrictions on company or customer access to project financing or loan guarantees from Eximbank and OPIC were noted by several companies as factors hindering their business in India and Pakistan. Financial services firms stated that their operations were affected by the uncertainty regarding how those sanctions eventually would be implemented.

According to several industry statements received by the Commission, one result of the Glenn Amendment sanctions is the increasing perception of U.S. companies as unreliable suppliers. The U.S. Embassy in New Delhi recently reported that the Glenn Amendment sanctions continue to have a negative impact on U.S. business in India as U.S. companies are reluctant to pursue business opportunities because of uncertainty over sanctions.

Impact on India and Pakistan

Based on an analysis of economic and trade data, the Glenn Amendment sanctions appear to have had a relatively minimal overall impact on India's economy, although it is difficult to isolate the effects of the sanctions from the effects of other concurrent economic events. India experienced an initial downturn in its financial sector after the U.S. sanctions were imposed. However, the Indian economy sufficiently recovered from this downturn by late 1998 to post a 5.6 percent economic growth rate for 1998. India does not appear to have been adversely affected by the postponement of several non-humanitarian World Bank loans. The Government of India estimated the overall cost of the Glenn Amendment sanctions to the Indian economy in 1998 to be approximately \$1.5 billion.

The Glenn Amendment sanctions may have had a small adverse impact on Pakistan, although it is difficult to delineate specific effects of the U.S. sanctions on the Pakistani economy. The United States was a relatively small provider of aid, trade, and investment for Pakistan before the Glenn Amendment sanctions were activated; thus, it is unlikely that U.S. sanctions alone had a large impact on Pakistan's economy. Moreover, most U.S. economic assistance to Pakistan was terminated in 1990 by other U.S. sanctions. Pakistan experienced a sharp economic downturn immediately after the Glenn Amendment was triggered, but that downturn in part may have been caused by austerity measures implemented by the Pakistani Government in conjunction with an IMF loan program. Also contributing to that economic downturn may have been the decision by Japan, Pakistan's largest trading partner and aid donor, to cut its bilateral aid program to all but humanitarian assistance after Pakistan's nuclear detonations. Despite the international sanctions and economic difficulties it faced during the year, Pakistan's economy expanded by 5.4 percent in 1998, in contrast to an economic contraction the previous year.

Effects of the Glenn Amendment sanctions on humanitarian activities in India and Pakistan also appeared to be minimal. The U.S. sanctions did not apply to the provision of humanitarian aid; the provision of medicines and medical equipment also was exempted from the sanctions. The United

States waived until September 30, 1999, sanctions prohibiting the provision of USDA export credits and guarantees for India and Pakistan to purchase U.S. food, agricultural commodities, and fertilizer.

Likely Impact of the Reimposition of the Sanctions

Industry perspectives

Based on reports from the U.S. private sector, the reimposition of the prohibition of USDA export credits and guarantees is likely to adversely affect U.S. wheat exports to Pakistan, primarily because Pakistan is a significant user of USDA export credits. U.S. wheat producers in the Pacific Northwest (Idaho, Oregon, and Washington) would be affected most if Pakistan were to shift to alternate suppliers such as Australia and Canada.

Reports from the U.S. private sector expressed the concern that the reimposition of the Glenn Amendment sanctions prohibiting Eximbank and OPIC financing might harm U.S. international competitiveness and diminish the perception of U.S. companies as reliable suppliers. These sanctions would make it more difficult for U.S. companies to participate in major infrastructure projects. U.S. banking and financial service providers reported that their operations would be adversely affected by the reimposition of sanctions prohibiting U.S. bank loans to the Governments of India and Pakistan.

Reimposition of the Glenn Amendment sanctions prohibiting Eximbank and OPIC financing could delay projects in India and Pakistan until alternate sources of financing are arranged. Reimposition of the Glenn Amendment sanctions prohibiting USDA export credits could adversely affect Pakistan until that country finds alternate suppliers for wheat. Pakistan also could be adversely affected if the United States and other major countries oppose future IMF loans for Pakistan.

Quantitative estimates

The Commission used the Global Trade Analysis Project (GTAP) general equilibrium trade model and its COMPAS partial equilibrium model to obtain quantitative estimates of the effects of reimposition of the Glenn Amendment sanctions. Based on the GTAP model, the overall economic effects of the Glenn Amendment sanctions on India, Pakistan (derived from results for South Asia), and the United States are small. For India, the sanctions impose an estimated total cost of \$320 million dollars; of that amount, the cost of the sanctions prohibiting USDA export credits and guarantees was estimated to be zero, reflecting the fact that India imports relatively little grain from the United States. For Pakistan, the sanctions impose an estimated total cost of \$57 million; approximately \$20 million of that amount was estimated to be due to the cost of reimposing the sanctions prohibiting USDA export credits and guarantees. For the United States, the sanctions impose a total cost of \$161 million. In the GTAP model, reimposition of the sanctions prohibiting USDA export credits and guarantees had effects comparable to those of removing an export subsidy—resulting in a net benefit for the United States of about \$27 million dollars.

Other results of the GTAP model show that the Glenn Amendment sanctions have limited effects on U.S. employment (a decline of less than 0.2 percent in the U.S. grain sector); U.S. wages and the return to capital decline by less than 0.05 percent. The effects on wages and the return to capital in India and Pakistan also are small (decline by 0.1 percent). The major alternative suppliers benefitting from reduced U.S. exports to India and Pakistan under the Glenn Amendment sanctions are Japan; Europe; the rest of Asia; and Australia, New Zealand, and the South Pacific trading partners. The COMPAS model confirmed many of these trends, and showed that net welfare loss to Pakistan from the imposition of the sanctions could be as large as \$6 million in the special industrial machinery and equipment sector, or less than \$500,000 for most of the other sectors examined.

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CHAPTER 1

Introduction

Purpose of the Report

The purpose of this report is to provide an overview and analysis of the economic impact of U.S. sanctions with respect to India and Pakistan. The U.S. International Trade Commission (USITC or “the Commission”) initiated work on this fact-finding investigation under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)) following receipt of a letter of request from the Committee on Ways and Means, U.S. House of Representatives (the Committee), on March 19, 1999.¹

In its letter, the Committee requested that the Commission examine the economic sanctions imposed on India on May 13, 1998,² and Pakistan on May 30, 1998,³ pursuant to section 102 of the Arms Export Control Act (also known as the “Glenn Amendment”).⁴ The Committee noted that on December 1, 1998, the President waived certain aspects of the Glenn Amendment sanctions (the Congress granted the President the authority to waive those sanctions when it passed the India-Pakistan Relief Act of 1998⁵), and that by law, the President’s waiver authority ends October 21, 1999.⁶ The Committee stated that the request for this report was in anticipation of Congressional action during 1999 on sanctions reform legislation and consideration of possible renewal of Presidential waiver authority of section 902 of the India-Pakistan Relief Act.

¹ A copy of the request letter appears as appendix A of this report.

² Presidential Determination No. 98-22 of May 13, 1998, *Federal Register*, May 20, 1998 (63 FR 27665).

³ Presidential Determination No. 98-25 of May 30, 1998, *Federal Register*, June 10, 1998 (63 FR 31881).

⁴ The Glenn Amendment, named for its primary sponsor Senator John Glenn (D-Ohio), was enacted in 1994. A more detailed discussion of the Glenn Amendment is presented in chapter 2.

⁵ Sec. 902 of that Act grants Presidential waiver authority. The India-Pakistan Relief Act of 1998 is discussed in more detail in chapter 2.

⁶ Legislation to extend that waiver has been approved both by the House of Representatives (H.R. 973) and the Senate (S. 1122). That legislation is discussed in more detail below.

The Committee specifically requested that the Commission’s report accomplish the following:

- Identify U.S. industries, including U.S. agricultural commodities, which were affected by economic sanctions on India and Pakistan under section 102 of the Arms Export Control Act, and the impact on each industry;
- Analyze, to the extent data are available, the economic impact of these sanctions on U.S. exports, U.S. imports, jobs, consumers, and investment in the affected industries;
- Assess the likely economic impact on the United States if U.S. economic sanctions against India and Pakistan are re-imposed, including: the U.S. products and sectors which would be significantly affected; the availability of alternative foreign suppliers for leading U.S. exports; and the likely impact of U.S. sanctions on the reputation of the United States as a reliable supplier of food, technology, and other products, and on U.S. competitiveness in the affected industries;
- Assess the impact of the reimposition of U.S. economic sanctions against India and Pakistan on U.S. agriculture, including the likelihood of retaliation, the specific commodities most likely to be affected, potential alternative foreign suppliers, the likely impact on the incomes of U.S. agricultural producers, and the likely impact on the U.S. reputation as a reliable supplier of agricultural commodities;
- Analyze the likely impact of the U.S. economic sanctions on the Indian and Pakistani economies; and

- Summarize the instances where U.S. sanctions have affected humanitarian activities as well as the activities of multinational institutions in India and Pakistan.

Scope of the Report

This report focuses exclusively on U.S. economic sanctions against India and Pakistan that were triggered in May 1998, under section 102 of the Arms Export Control Act (the Glenn Amendment), and subsequent actions related to those sanctions. Certain U.S. economic sanctions and export controls were in force with respect to India and Pakistan prior to May 1998; such pre-existing economic sanctions⁷ and export controls⁸ are not discussed in detail in this report.⁹ General background information on economic sanctions and a literature review are not included in this study as the Commission's 1998 report, *Overview and Analysis of Current U.S. Unilateral Economic Sanctions*,¹⁰ provides an overview, historical background, and literature review of U.S. economic sanctions.

Approach of the Report

In its 1998 report on sanctions, the Commission found that not all of the economic effects of sanctions can be quantified. In addition to the direct, quantifiable costs of reduced trade, investment, and export-related jobs, there are other less quantifiable, indirect costs. Such indirect costs include reduced U.S. trade opportunities in foreign markets, foregone business opportunities, and a "chilling effect" on long-term commercial relationships as foreign partners grow reluctant to do business with U.S. companies out of concern about future U.S. sanctions.¹¹

⁷ Most U.S. economic and military assistance to Pakistan was terminated in October 1990. These U.S. economic sanctions on Pakistan are summarized in chapter 2.

⁸ The United States uses a licensing regime to control exports of certain items and technologies to prevent the proliferation of certain chemical, biological, nuclear and missile activities. That licensing regime is summarized in chapter 2.

⁹ Trade in strictly military goods and services traditionally is not monitored by the Commission, and such items and services were excluded from the analysis.

¹⁰ That report, investigation No. 332-391, publication No. 3124, August 1998, can be downloaded from the Commission's Internet site, found at <http://www.usitc.gov>.

¹¹ USITC, *Overview and Analysis of Current U.S. Unilateral Economic Sanctions*, p. 1-6.

The Commission's 1998 report on sanctions identified types of analysis estimating the short- and long-term costs of U.S. unilateral sanctions and their impact on the U.S. economy. The types of analysis identified included economic modeling including economy-wide general equilibrium analysis and partial equilibrium analysis; market share and lost export sales analysis; and surveys, questionnaires, and case studies. The current investigation applies a telephone survey; market share and lost export sales analysis, to the extent that data are available; and economic modeling using both general equilibrium and partial equilibrium analysis.

The Commission obtained U.S. private sector views on the effects of the Glenn Amendment sanctions and the likely effects of reimposition of the sanctions from an informal telephone survey conducted by USITC staff of over 200 U.S. companies and associations;¹² a public hearing held on June 22, 1999; and written submissions to the Commission received in response to a *Federal Register* notice of the institution of this investigation.¹³ The telephone survey, the hearing, and the written submissions provided economic data and anecdotal information from the U.S. private sector that also have been incorporated in the analysis conducted in this study.

Information on the industries and commodities affected by the sanctions was provided from analysis of U.S.-Indian and U.S.-Pakistani bilateral trade and market share data; staff interviews with relevant public and private sector officials; consultation with other U.S. government agencies involved in monitoring and enforcing sanctions; and hearing testimony, written submissions, and the telephone survey.

Information on the effects of the Glenn Amendment sanctions on the Indian and Pakistani economies was obtained through analysis of relevant trade, investment, and macroeconomic data. Information on the effects of sanctions on humanitarian activities and on multinational institutions with projects in India and Pakistan was obtained through literature review and staff interviews with relevant public sector officials.

¹² A survey of U.S. industry views using statistical sampling techniques was not feasible due to time constraints. The methodology employed, and the Commission's findings from its informal telephone survey, are discussed in chapter 3.

¹³ A copy of that *Federal Register* notice appears as Appendix B of this report. A list of individuals who appeared at the hearing or who provided written submissions in response to the *Federal Register* notice appears as Appendix C.

A global general equilibrium trade model and a partial equilibrium model were used to obtain a quantitative estimates of the likely impact on the United States of reimposition of the Glenn Amendment sanctions with respect to India and Pakistan.¹⁴ The models identified the likely impact on U.S. exports, imports, jobs, investment, consumers, and agriculture, and provided information on potential alternative foreign suppliers; the models also provided information on the likely effects of the sanctions on India and Pakistan.

Analytic Considerations

Four circumstances regarding the implementation of the Glenn Amendment sanctions were of particular importance to the analysis in this report:

- There was a significant time lag between when the Glenn Amendment sanctions were triggered (in May 1998) and when the implementing regulations for the sanctions were issued (as late as November 1998).¹⁵ This time lag created uncertainty in the U.S. private sector regarding the scope of the Glenn Amendment sanctions.¹⁶ From the perspective of analyzing economic data and modeling the economic effects of the sanctions, the time lag means that there is no single, fixed beginning date for the sanctions.
- The sanctions were fully in force for just a short period of time—restrictions on the provision of USDA export credits and guarantees were lifted on July 15, 1998, and many of the remaining components of the Glenn Amendment sanctions were

¹⁴ Because of limitations of the global trade model, detailed information on Pakistan could not be obtained from that model. The Commission used its Commercial Policy Analysis System (COMPAS) partial equilibrium model to estimate the effects of sanctions on Pakistan. More detailed information on the models is presented in appendix F.

¹⁵ Implementation of the Glenn Amendment sanctions is discussed in greater detail in chapter 2.

¹⁶ Examples of this uncertainty was provided by Michael T. Clark, Executive Director, U.S.-India Business Council, testimony before the USITC, June 22, 1999, transcript, pp. 38-39, and Paul Sadler, Asternetics and Associates, Inc., written submission to the USITC, received June 25, 1999. Testimony and submissions received by the Commission are summarized in chapter 3.

waived by the President on December 1, 1998.¹⁷ Empirical analysis of the effects of sanctions prior to the waiver is not possible because the sanctions were not in force long enough.

- The inability to isolate the economic effects of the Glenn Amendment sanctions on the economies of India and Pakistan from other economic events. Such other events include: (1) economic sanctions imposed by Japan and other countries also in response to the nuclear explosions; (2) for Pakistan, the economic crisis already underway in that country; and (3) adverse effects on trade from the Asian financial crisis that began in mid-1997.¹⁸
- Most U.S. economic assistance to Pakistan was terminated in October 1990.¹⁹ Thus, much of the economic impact of Glenn Amendment sanctions on the economy of Pakistan was blunted by the fact that many aspects of the sanctions had been in place for several years.

Overview of U.S. Bilateral Trade with India and Pakistan

1997-98 Trends

India and Pakistan are relatively small trading partners of the United States. Table 1-1 shows that in 1997, the last full year before the Glenn Amendment sanctions on India and Pakistan were triggered, U.S. merchandise exports to India were valued at nearly \$3.5 billion, or 0.5 percent of total U.S. exports; while U.S. merchandise exports to Pakistan were valued at \$1.2 billion, or 0.2 percent of total U.S. exports. In 1997, India ranked as the 32nd largest U.S. export market, behind the Dominican Republic and Egypt but ahead of Turkey and Russia. That year, Pakistan ranked as the 52nd largest export market, behind El Salvador and Kuwait but ahead of Poland and Trinidad and Tobago.

¹⁷ Provisions of the Glenn Amendment sanctions are discussed in greater detail in chapter 2.

¹⁸ These economic events are discussed in greater detail in chapter 4.

¹⁹ The preexisting U.S. sanctions on Pakistan are discussed in greater detail in chapter 2.

Table 1-1
India and Pakistan: total U.S. exports of domestic merchandise, 1995-98 and Jan.-Mar. 1998-99¹

Item	1995	1996	1997	1998	Jan.- Mar. 1998	Jan.- Mar. 1999	Percent change	
							1997- 1998	Jan.-Mar. 1998- Jan.-Mar.1999
<i>Million dollars</i>								
Total U.S. exports of domestic merchandise:								
India	3,149	3,205	3,474	3,383	726	889	-2.6	22.5
Pakistan	927	1,269	1,227	719	200	93	-41.4	-53.5
All other	542,389	577,663	638,521	630,603	160,403	153,303	-1.2	-4.4
World	546,465	582,137	643,222	634,705	161,329	154,285	-1.3	-4.4

¹ Export values are based on f.a.s. value, U.S. port of export.

Source: U.S. Department of Commerce.

In 1998, the year the Glenn Amendment sanctions were triggered, total U.S. merchandise exports to India declined marginally to approximately \$3.4 billion, or 0.5 percent of total U.S. exports, while U.S. merchandise exports to Pakistan declined by nearly one-half to \$719 million, or 0.1 percent of U.S. exports to the world. In 1998, India ranked as the 33rd largest U.S. export market, behind Russia and South Africa but ahead of Turkey and Egypt; Pakistan ranked as the 59th largest U.S. export market in 1998, behind the Bahamas and Paraguay but ahead of the Netherlands Antilles and Algeria.

Figure 1-1 shows that the sectoral composition of U.S. merchandise exports to India remained relatively unchanged from 1997 to 1998. The largest share of U.S. exports to India are electronics and transportation products (43 percent in 1998), followed by energy, chemicals, and textiles (26 percent), minerals, metals, machinery, and miscellaneous manufactures (19 percent), agriculture and forest products (9 percent), and other (3 percent).

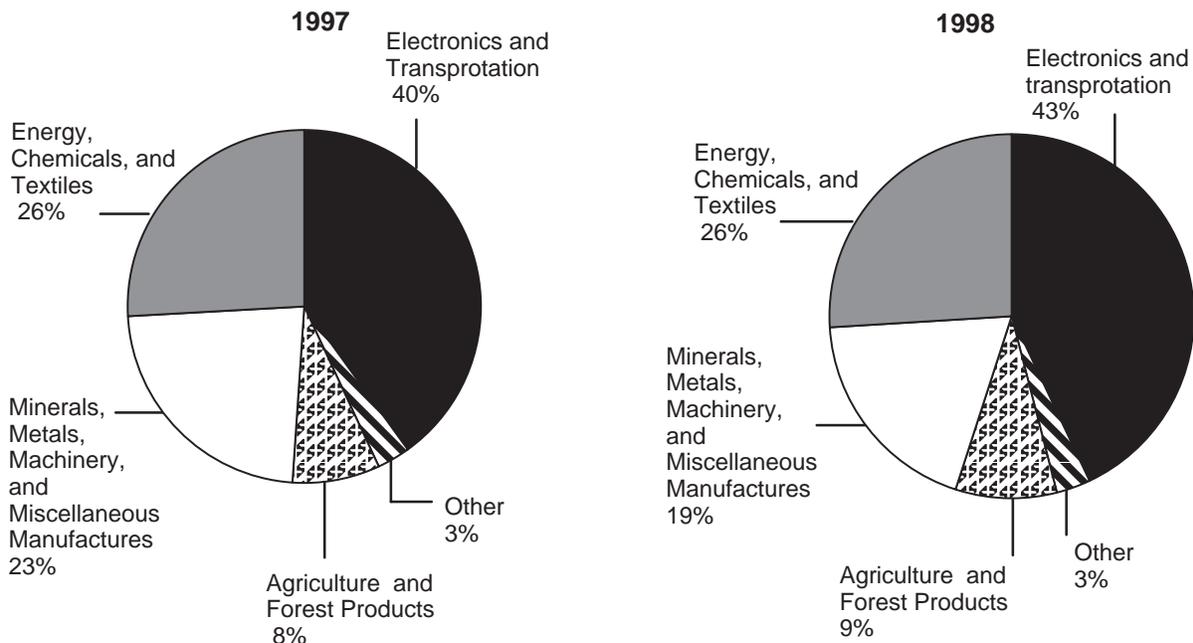
The sectoral composition of U.S. merchandise exports to Pakistan changed considerably from 1997 to 1998 (figure 1-2). U.S. exports of agricultural and forest products declined from 37 percent of the total in 1997 (the largest sector that year) to 29 percent in

1998. U.S. exports of energy, chemicals, and textiles increased from 12 percent of the total in 1997 to 29 percent in 1998 (the largest sector that year). Table 1-2 shows that, in value terms, U.S. exports to Pakistan declined by one-half or more from 1997 to 1998 in three sectors—agricultural and forest products (from \$453 million in 1997 to \$208 million in 1998); minerals, metals, machinery, and miscellaneous manufactures (from \$280 million in 1997 to \$139 million in 1998); and electronics and transportation products (\$322 million in 1997 to \$151 million in 1998).

A recent International Monetary Fund (IMF) report described the general slowdown in world output and trade between 1997 and 1998.²⁰ According to that report, world output slowed from 4.2 percent growth in 1997 to 2.5 percent growth in 1998. Among the factors cited by the IMF as contributing to the global economic slowdown were the lingering effects of the Asian financial crisis, and Japan's prolonged economic recession. Slower world output growth, and consequent decline in domestic activity and reduced demand in a number of countries,

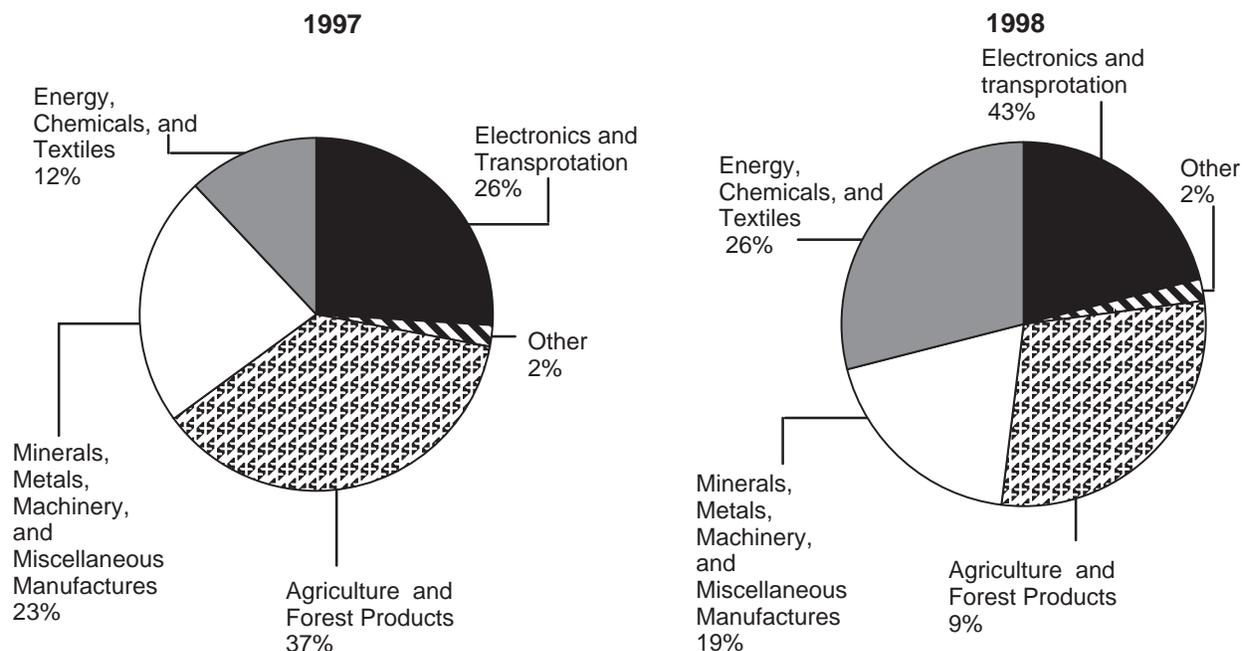
²⁰ International Monetary Fund (IMF), *World Economic Outlook* (IMF: Washington, DC, 1999).

Figure 1-1
India: U.S. exports, by major industry/commodity categories, 1997 and 1998



Source: Data compiled from tariff and trade data from the U.S. Department of Commerce, the U.S. Treasury Department, and the U.S. International Trade Commission.

Figure 1-2
Pakistan: U.S. exports, by major industry/commodity categories, 1997 and 1998



Source: Data compiled from tariff and trade data from the U.S. Department of Commerce, the U.S. Treasury Department, and the U.S. International Trade Commission.

contributed to a slowdown in world trade activity. For the advanced economies, IMF data show that total exports declined from 10.3 percent in 1997 to 3.2 percent in 1998; for developing countries, total exports declined from 11.4 percent in 1997 to 2.2 percent in 1998.²¹

Reflecting these global trends, the value of U.S. worldwide merchandise exports declined by 1.3 percent from 1997 to 1998 (table 1-1). The decline in U.S. exports to India and Pakistan during this period was larger. After several years of continued expansion, U.S. exports to India declined by 2.6 percent from 1997 to 1998. While nearly double the overall decline in U.S. worldwide exports, the 1997-98 decline in U.S. exports to India was small in absolute terms—suggesting that the overall impact of the Glenn Amendment sanctions on U.S. exports to India was small.

U.S. merchandise exports to Pakistan, which generally had been increasing during the 1990s, declined by 41.4 percent from 1997 to 1998 (table 1-1). This large decline in U.S. exports to Pakistan appears to be due to factors that are unrelated to the

Glenn Amendment sanctions. As discussed in more detail in chapter 4, Pakistan implemented an IMF-supported economic reform program in October 1997 that focused on reducing government spending and improving the country's current account balance. One result of that IMF program was a sharp decline in Pakistan's imports from the world during 1998. Pakistan's July-September 1998 imports from all sources were more than 20 percent lower than imports during the same period in 1997.²² On an annual basis, Pakistan's total imports declined from \$11.9 billion in 1997 to \$10.1 billion in 1998, or by 15.1 percent.²³

1999 Trends

A comparison of U.S. merchandise exports to India and Pakistan between the first quarter of 1999, after many of the Glenn Amendment sanctions had

²¹ Ibid., pp. 2-6.

²² Economic Adviser's Wing, Finance Division, Government of Pakistan, "Review of Economic situation During July-September, 1998-99," found at Internet site <http://www.finance.gov.pk/>, retrieved July 5, 1999.

²³ U.S. Department of State telegram, "1999 Trade Act Report for Pakistan," message reference No. 08672, prepared by U.S. Embassy Islamabad, Nov. 23, 1998.

Table 1-2
India and Pakistan: U.S. exports of domestic merchandise, by major industry/commodity categories , 1994-98¹

Item	1994	1995	1996	1997	1998	Change, 1997 from 1998	
						Absolute	Percent
<i>Million dollars</i>							
Agriculture and Forest Products—							
India	201	316	246	278	319	41	14.8
Pakistan	255	467	368	453	208	-245	-54.2
All other	77,280	92,110	93,942	90,528	82,757	-7,771	-8.6
World	77,736	92,893	94,556	91,259	83,284	-7,975	-8.7
Energy, Chemicals, and Textiles—							
India	512	816	602	909	863	-46	-5.1
Pakistan	170	166	233	149	205	56	37.6
All other	81,567	95,033	100,582	111,797	108,636	-3,161	-2.8
World	82,249	96,015	101,417	112,855	109,704	-3,151	-2.8
Minerals, Metals, Machinery, and Miscellaneous Manufactures—							
India	548	943	795	813	656	-157	-19.3
Pakistan	112	123	220	280	139	-141	-50.4
All other	98,671	113,782	119,656	133,145	127,484	-5,661	-4.3
World	99,331	114,848	120,671	134,238	128,279	-5,959	-4.4
Electronics and Transportation—							
India	895	998	1,492	1,393	1,459	66	4.7
Pakistan	161	155	427	322	151	-171	-53.1
All other	206,231	225,335	246,013	284,576	292,808	8,232	2.9
World	207,287	226,488	247,932	286,291	294,418	8,127	2.8

¹ Export values are based on f.a.s. value, U.S. port of export.

Note.—Industry sector data have been adjusted by USITC staff to correspond with this analysis.

Source: U.S. Department of Commerce.

been waived, and the first quarter of 1998 reveals somewhat different patterns. During the first quarter of 1999, U.S. worldwide exports declined by 4.4 percent as compared to the same period in 1998 (table 1-1). In contrast to this global trend, U.S. exports to India increased by 22 percent during the first quarter of 1999 over the same period in 1998. However, U.S. exports to Pakistan continued to decline—falling by almost 54 percent during the first quarter of 1999 as compared to the same period in 1998. As noted above, Pakistan’s domestic economic policies are likely to have influenced these trends.

Organization of the Report

Chapter 2 provides an overview of the Glenn Amendment sanctions. That chapter also describes how the sanctions were implemented, and the components of the sanctions that were waived during 1998.

Chapter 3 presents the methodology and the results of the Commission’s telephone survey of U.S. industries on the economic impact on the United

States of the Glenn Amendment sanctions on India and Pakistan. That chapter also incorporates the testimony of witnesses who appeared at the public hearing and the written submissions received by the Commission with regard to this investigation.

Chapter 4 describes the economic impact of the Glenn Amendment sanctions on India and Pakistan. That chapter includes economic overviews of the Indian and Pakistani economies, summaries of the effects of the sanctions on activities of multinational institutions with projects in India and Pakistan, and a discussion of the economic effects of the sanctions on humanitarian activities in India and Pakistan.

Chapter 5 assesses the likely economic impact on the United States, India, and Pakistan of reimposition of the Glenn Amendment sanctions. The first part of this chapter is based on U.S. industry views expressed at the public hearing and in written submissions received by the Commission with respect to this investigation. This second part of this chapter presents the results from a general equilibrium model that was used to estimate the effects of reimposition of the Glenn Amendment sanctions.

CHAPTER 2

Overview of The Glenn Amendment Sanctions on India and Pakistan

This chapter provides information on the Glenn Amendment sanctions and the specific measures taken pursuant to those sanctions. More general information about U.S. economic sanctions, including a description of relevant public laws and regulations, is provided in the Commission's 1998 report, *Overview and Analysis of Current U.S. Unilateral Economic Sanctions*.¹

Background

Chronology

The President announced the immediate imposition of economic sanctions against India and Pakistan on May 13, 1998, and May 30, 1998, respectively, after both countries detonated nuclear explosive devices. Economic sanctions were mandated by section 102 of the Arms Export Control Act (AECA)—also known as the Glenn Amendment.²

On June 18, 1998, the Administration announced details of sanctions it would impose on India and Pakistan, although the executive orders finalizing specific prohibitions against U.S. banks extending loans or credits to the governments of India and Pakistan were never issued. The Congress subsequently authorized the President to exempt from the Glenn Amendment U.S. Department of Agriculture (USDA) credits, credit guarantees, and financial assistance for food and agricultural sales

¹ That report, investigation No. 332-391, publication No. 3124, can be downloaded from the Commission's Website, found at <http://www.usitc.gov>.

² The Glenn Amendment was added to the AECA in 1994 by Public Law 103-236, 108 Stat. 516, and is codified at 22 U.S.C. sec. 2799aa-1. The AECA (P.L. 90-629, 82 Stat. 1320), as amended, was enacted on Oct. 22, 1968, as the Foreign Military Sales Act. The AECA authorizes U.S. Government military sales, loans, leases, financing, and licensing of commercial arms sales to other end users, and coordinates such actions with other foreign policy considerations including nonproliferation.

through September 30, 1999. Congress passed the India-Pakistan Relief Act of 1998 on October 21, 1998, providing the President with authority to waive for up to one year from that date certain aspects of the Glenn Amendment sanctions imposed on India and Pakistan. On December 1, 1998, the President waived the imposition of some of the Glenn Amendment sanctions until October 21, 1999.

Pre-Existing Sanctions

Pakistan was subject to certain U.S. unilateral economic sanctions prior to the imposition of the Glenn Amendment sanctions. Those pre-existing sanctions are summarized below. In addition, India and Pakistan, among other countries, also were subject to certain U.S. export controls and licensing requirements. The U.S. export control and licensing regime is also summarized below.

Sanctions on Pakistan

The United States periodically has imposed and lifted economic sanctions against Pakistan since the 1960s.³ In recent years, most U.S. economic and military assistance to Pakistan was terminated in October 1990,⁴ when the President was no longer able

³ For example, the United States suspended military assistance to Pakistan (and India) during the 1965 Indo-Pakistan war; arms sales were renewed in 1975. In 1979, the United States suspended economic and military assistance to Pakistan pursuant to the Symington Amendment (discussed in more detail below) because of concerns about that country's nuclear program. In 1981, after the Soviet invasion of Afghanistan, the United States provided a \$3.2-billion 6-year military and economic assistance program for Pakistan after Congress waived the Symington Amendment restrictions; the United States provided Pakistan with a \$4 billion economic development and security assistance program (including the sale of F-16 military aircraft) in 1986. Bureau of South Asian Affairs, U.S. Department of State, "Background Notes: Pakistan, November 1997," found at Internet site http://www.state.gov/www/background_notes/pakistan_971100_bgn.html, retrieved Sept. 14, 1999.

⁴ This action was taken pursuant to the Pressler Amendment, section 620E of the Foreign Assistance Act of 1961, P.L. 87-195, 75 Stat 424, which is codified at 22 U.S.C. sec. 2375.

to certify that Pakistan did not possess nuclear weapons or that the provision of further U.S. aid would reduce the risk that Pakistan would come to possess such weapons. As a result, military equipment for which Pakistan had paid was subject to embargo. President Clinton signed the Brown Amendment into law in February 1996,⁵ authorizing the resumption of certain U.S. military assistance for Pakistan.⁶ However, the Symington Amendment,⁷ which prohibits the provision of most U.S. economic assistance to countries determined by the President as having transferred or received nuclear enrichment equipment, materials, or technology, remained in effect with respect to Pakistan.

Export licensing regime

The Bureau of Export Administration (BXA) of the U.S. Department of Commerce, which administers the Export Administration Regulations (EAR),⁸ controls exports relating to national security, foreign policy, nonproliferation, and other interests of the United States. BXA is the primary licensing agency for dual use exports (i.e., commercial items that could have military applications), and it develops export control policies, issues export licenses, and prosecutes violators.⁹ BXA also can impose licensing

⁵ The Brown Amendment modified the Pressler Amendment (sec. 620E of the Foreign Assistance Act of 1961, 22 U.S.C. sec. 2375).

⁶ Specifically, the Brown Amendment authorized the provision of approximately \$368 million of conventional weapons subject to embargo. U.S. House of Representatives, Representative Pallone on arms transfer to Pakistan, *Congressional Record*, (Mar. 21, 1996), p. H2660.

⁷ Section 101 of the AECA, codified at 22 U.S.C. sec. 2799aa. Specifically, the 1977 Symington Amendment applies to the provision of U.S. economic assistance under the AECA, discussed above, and the Foreign Assistance Act of 1961, discussed in more detail below.

⁸ References to the EAR are references to 15 CFR chapter VII, subchapter C. The EAR are issued by BXA under laws relating to the control of certain exports, re-exports, and activities. BXA, "Export Administration Regulations," found at BXA Internet site, <http://www.bxa.doc.gov/>. The EAR are available from the Government Printing Office Internet site, http://www.access.gpo.gov/bxa/ear/about_ear.html. For more detailed information about export controls and licensing, and the U.S. Government departments and agencies with export control responsibilities, see BXA, *Resource Links*, found at Internet site <http://www.bxa.doc.gov/reslinks.htm>.

⁹ All commodities, technology, or software subject to BXA licensing authority are included in the Commerce Control List (CCL), which is found in Supplement 1 to Part 774 of the Export Administration Regulations. Other items subject to BXA's licensing jurisdiction but not specifically described in the CCL, categorized as EAR99,

requirements on exports and re-exports of normally uncontrolled goods and technology where there is an unacceptable risk of use in or diversion to activities related to nuclear, chemical, or biological weapons or missile proliferation, even for non-weapons-related end users.¹⁰

Entity list

The EAR provide that BXA may inform exporters, individually or through amendment to the EAR, that a license is required for exports or re-exports to certain foreign end users who have been determined to present an unacceptable risk of using the exports to develop weapons of mass destruction or the missiles used to deliver those weapons. The EAR contain a list of such users, known as the Entity List,¹¹ and BXA periodically publishes rules adding names to the Entity List.¹² This list puts exporters on notice that any products sold to these end users may present concerns and will require a license from BXA. BXA cautions, however, that "[w]hile this list will assist exporters in determining whether an entity poses proliferation concerns, it is not comprehensive. It does not relieve exporters of the responsibility to determine the nature and activities of their potential customers."¹³ Several Indian and Pakistani end users had been placed on the Entity List prior to the May 1998 triggering of the Glenn Amendment sanctions.¹⁴

⁹—Continued

are not critical to the production of weapons of mass destruction. R. Roger Majak, Assistant Secretary for Export Administration, BXA, U.S. Department of Commerce, written submission to the USITC, received July 1, 1999.

¹⁰ An authoritative description of the BXA is available at the BXA Internet site, <http://www.bxa.doc.gov/>.

¹¹ End users of proliferation concern are listed in Supplement No. 4 to part 744 of the EAR.

¹² The Entity List is available at the BXA Internet site, http://www.bxa.doc.gov/end_users/default.htm.

¹³ *Ibid.*

¹⁴ For example, BXA established a license requirement for certain exports to Bharat Electronics, Ltd. (BEL), a parastatal Indian entity listed in the EAR, beginning in 1997. BXA estimates that it reviewed (on a case-by-case presumption of approval basis) 1,368 license applications for exports to BEL, valued at \$146.9 million, during the period May 1997 through April 1998. R. Roger Majak, Assistant Secretary for Export Administration, BXA, U.S. Department of Commerce, written submission to the USITC, received July 1, 1999. The Commission received written submissions from some U.S. companies that export to BEL; those submissions are summarized in chapter 3.

The Glenn Amendment Sanctions

The Glenn Amendment requires that the President impose the following economic sanctions when a non-nuclear country detonates a nuclear explosive device:

- ❑ **Foreign assistance:** terminate assistance under the Foreign Assistance Act of 1961,¹⁵ except for humanitarian assistance and food or other agricultural commodities;
- ❑ **Public sector trade finance:** deny any credit, credit guarantees, or other financial assistance by any department or agency of the U.S. government—such as assistance from USDA, the U.S. Export-Import Bank (Eximbank), the Overseas Private Investment Corporation (OPIC), and the U.S. Trade and Development Agency (TDA);
- ❑ **Military assistance:** terminate sales of defense articles, defense services, or design and construction services under the AECA, and terminate licenses for the export of any item on the United States Munitions List;¹⁶
- ❑ **Foreign military financing:** terminate all foreign military financing under the AECA;
- ❑ **Multilateral assistance:** oppose the extension of any loan for financial or technical assistance by any international financial institution—such as the Asian Development Bank (ADB), the International Monetary Fund (IMF), and the World Bank—except for humanitarian purposes;

¹⁵ The Foreign Assistance Act of 1961 authorizes U.S. Government foreign aid programs including development assistance, economic support funding, numerous multilateral programs, housing and other credit guaranty programs, Overseas Private Investment Corporation (OPIC), international organizations, debt-for-nature exchanges, international narcotics control, international disaster assistance, military assistance, international military education and training, peacekeeping, antiterrorism, and various regional enterprise funds.

¹⁶ Section 38 of the AECA (22 U.S.C. 2778) authorizes the President to control the import and export of defense articles and services, to provide foreign policy guidance to U.S. importers and exporters, and to promulgate the United States Munitions List constituting what defense articles and services are regulated. The President delegated the authority to promulgate regulations with respect to exports of defense articles and services to the Secretary of State (Executive Order 11958, as amended). The International Traffic in Arms Regulations

- ❑ **Private sector lending:** prohibit U.S. banks from making any loan or providing any credit to the non-nuclear country, except for the purposes of purchasing food or other agricultural commodities;
- ❑ **Dual use exports:** prohibit exports of specific goods and technology having military and other strategic uses, as well as civilian uses, subject to export licensing by the Commerce Department.

The President's determinations following the nuclear detonations by India and Pakistan in May 1998 marked the first time that the Glenn Amendment sanctions had been triggered. There was a time lag ranging from a few weeks to months before implementing regulations were published. The discussion below summarizes the implementation of the above-listed Glenn Amendment sanctions.

Foreign Assistance and Public Sector Trade Financ

On June 18, 1998, the State Department published a fact sheet describing the actions that the United States would undertake in imposing the Glenn Amendment sanctions on India and Pakistan.¹⁷ Immediately, the United States terminated or suspended foreign assistance (except humanitarian assistance, food, and other agricultural commodities) and halted new commitments of U.S. Government credits and credit guarantees by U.S. Government end users such as the USDA Commodity Credit

¹⁶—Continued
(ITAR, 22 C.F.R. Parts 120-130) implement that authority. By virtue of delegations of the authority by the Secretary of State, these regulations are primarily administered by the director of the Office of Defense Trade Controls, Bureau of Politico-Military Affairs, U.S. Department of State.

¹⁷ U.S. Department of State, Bureau of Economic and Agricultural Affairs, "Fact Sheet: India and Pakistan Sanctions," June 18, 1998, found at Internet site http://www.state.gov/www/regions/sa/fs_980618_india_pak.html, retrieved July 29, 1999.

Corporation (CCC),¹⁸ Eximbank,¹⁹ OPIC,²⁰ and TDA.²¹ The State Department noted, however, that the Administration would support legislation to permit an exemption for CCC credits for food and agricultural commodities (discussed in more detail below).²²

Foreign assistance

USAID has provided economic assistance to India since 1951, with assistance of \$152.3 million programmed for India for fiscal year 1999.²³ U.S. foreign assistance for India that was terminated or suspended by the Glenn Amendment sanctions

¹⁸ CCC administers export credit guarantee programs for commercial financing of U.S. agricultural exports. The programs encourage exports to buyers in countries where credit is necessary to maintain or increase U.S. sales, but where financing may not be available without CCC guarantees. CCC does not provide financing, but guarantees payments due from foreign banks. Two programs underwrite credit extended by U.S. banks or exporters to approved foreign banks using dollar-denominated, irrevocable letters of credit to pay for food and agricultural products sold to foreign buyers. The Export Credit Guarantee Program covers credit terms up to three years, and the Intermediate Export Credit Guarantee Program covers longer credit terms up to 10 years. These programs also are referred to as General Sales Manager (GSM) programs GSM-102 and GSM-103, respectively. USDA, Foreign Agricultural Service (FAS), "CCC Export Credit Guarantee Program," found at Internet site <http://www.fas.usda.gov/excredits/exp-cred-guar.html>, retrieved Aug. 2, 1999.

¹⁹ Eximbank provides guarantees of working capital loans for U.S. exporters, guarantees the repayment of loans, and makes loans to foreign purchasers of U.S. goods and services when private financing is unavailable. Eximbank also provides credit insurance that protects U.S. exporters against the risks of non-payment by foreign buyers for political or commercial reasons. Eximbank, "General Fact Sheet, found at Internet site <http://www.exim.gov/general.html>, retrieved Aug. 2, 1999.

²⁰ OPIC sells political risk insurance and long-term financing to U.S. businesses investing in developing countries. OPIC, "CEO's Welcome," found at Internet site <http://www.opic.gov/> retrieved June 9, 1999.

²¹ TDA funds feasibility studies, orientation visits, specialized training grants, business workshops, and various forms of technical assistance, to enable American businesses to compete for infrastructure and industrial projects in middle-income and developing countries. TDA, "Mission Statement," found at Internet address <http://www.tda.gov/abouttda/index.html>, retrieved Aug. 2, 1999.

²² U.S. Department of State, Bureau of Economic and Agricultural Affairs, "Fact Sheet: India and Pakistan Sanctions," June 18, 1998, found at Internet site http://www.state.gov/www/regions/sa/fs_980618_india_pak.html, retrieved Aug. 2, 1999.

²³ USAID, "USAID Assistance: India," found at the USAID website, http://www.info.usaid.gov/regions/ane/newpages/one_pagers/ind.htm, retrieved Aug. 2, 1999.

included \$21 million in economic development assistance and housing guarantee authority, and a \$6 million greenhouse gas program.²⁴ Most foreign assistance to Pakistan has been prohibited since October 1990.²⁵ USAID activities in Pakistan are limited and support primarily the work of non-government organizations such as the Asia Foundation and Agha Khan Foundation.²⁶

Public sector trade finance

India

The U.S. Administration estimated that \$10 billion in projects on the U.S. Department of Commerce's advocacy agenda for India were conceived with assistance from Eximbank, OPIC, or TDA in mind.²⁷ All related activities were frozen on May 13, 1998, when sanctions were imposed, but resumed on December 1, 1998, pursuant to Presidential waiver.²⁸ At the time sanctions were imposed, Eximbank's exposure in India for loans, loan guarantees, or credit insurance totaled \$1.5 billion.²⁹ In addition, it was estimated that six projects in the pipeline but not yet approved for Eximbank financing, were frozen. Those projects, worth a combined estimated value of \$500 million, were in support of such plans as construction of power plants in India and a telecommunications project to provide basic services in Maharashtra and Andhra Pradesh states.³⁰ Prior to implementation of the Glenn Amendment sanctions, India was one of the top five OPIC recipient countries, receiving an average of \$300 million annually in OPIC support. When sanctions were imposed on May 13, 1998, outstanding OPIC financing and political risk insurance commitments in India exceeded

²⁴ Bureau of Economic and Agricultural Affairs, U.S. Department of State, "Fact Sheet: India and Pakistan Sanctions," June 18, 1998.

²⁵ Ibid.

²⁶ U.S. Department of State telegram, "Pakistan: Development Assistance for 1999," message reference No. 07549, prepared by U.S. Embassy Islamabad, Oct. 7, 1998.

²⁷ Testimony on Ambassador David L. Aaron, Undersecretary of Commerce for International Trade, on the Implementation of India-Pakistan Economic Sanctions, House International Relations Subcommittee Hearing on India-Pakistan Nuclear Proliferation, June 18, 1998.

²⁸ Bureau of Economic and Agricultural Affairs, U.S. Department of State, "Fact Sheet: India and Pakistan Sanctions," June 18, 1998. The waiver is discussed in more detail below.

²⁹ Eximbank, "Ex-Im Bank Reopens Export Financing in India and Pakistan," press release, Dec. 14, 1998.

³⁰ Krishna Guha and Amy Louise Kazmin, "India Stands Firm as U.S. Sanctions Start to Bite," *Financial Times*, May 15, 1998, p. 10.

\$1 billion.³¹ TDA had provided about \$1 million in support of feasibility studies for projects in India when sanctions were imposed.³²

The loss of Eximbank and OPIC financing affected two U.S. companies with large projects in India. The Boeing Company reported to the Commission that its planned sale of commercial aircraft to a private airline in India was delayed because of the suspension of Eximbank operations in India.³³ After the December 1, 1998 Presidential waiver, Eximbank approved financing for the Boeing sale.³⁴

Enron International is the largest single foreign investor in India's energy sector.³⁵ Enron obtained \$298 million in loan guarantees from Eximbank and \$100 million in political risk insurance from OPIC in 1996 for the first phase of its now-complete liquefied natural gas power project in Dabhol, India.³⁶ The Glenn Amendment sanctions were triggered just as Enron was negotiating financing for the second phase of the Dabhol power project,³⁷ delaying Enron's ability to complete financing arrangements for the project. After the Glenn Amendment sanctions were waived, Enron applied for, and ultimately secured,³⁸ \$60 million in project finance loans from OPIC for the second phase of the Dabhol project.³⁹

³¹ Bureau of Economic and Agricultural Affairs, U.S. Department of State, "Fact Sheet: India and Pakistan Sanctions," June 18, 1998.

³² *Ibid.*

³³ Boeing's written submission to the Commission is summarized in chapter 3.

³⁴ Eximbank, "Summary of Minutes of Meeting of Credit Committee," Dec. 17, 1998, found at Internet site <http://www.exim.gov/summary/dec98wk3.html>, retrieved July 9, 1999.

³⁵ Enron Corp., "Enron in India," January 1998, found at Internet site http://www.ei.enron.com/presence/projects/dabhol_main.html, retrieved July 5, 1999.

³⁶ Enron Corp., "Dabhol Project Achieves Financial Close; Resumes Construction," press release, Dec. 10, 1996 found at Internet site <http://www.enron.com/pressrel/1996/144dabh.fset.html>, retrieved July 21, 1999.

³⁷ Enron Corp., "Financing Complete, Construction Commences on Second Phase of Dabhol Power Project," press release, May 6, 1999, found at Internet site <http://www.enron.com/pressrel/1999/ene/financerelease.fset.html>, retrieved July 21, 1999.

³⁸ U.S. Department of State telegram, "Sanctions Waiver Update: OPIC, TDA, and EXIM Program Status," message reference No. 10207, prepared by U.S. Embassy New Delhi, Dec. 21, 1998.

³⁹ Enron Corp., "Financing Complete, Construction Commences on Second Phase of Dabhol Power Project," press release, May 6, 1999, found at Internet site <http://www.enron.com/pressrel/1999/ene/financerelease.fset.html>, retrieved July 21, 1999. Among other sources of financing, Fuji Bank (Japan) acted as the agent for a \$433

Pakistan

Effective June 1, 1998, Eximbank officially closed for new business in Pakistan pursuant to the Glenn Amendment sanctions, after having opened in Pakistan for short-and medium-term programs for both public and private sector programs in February 1998.⁴⁰ At the time sanctions were imposed, Eximbank's exposure in Pakistan for loans, loan guarantees, or credit insurance totaled \$429 million, with an additional \$1.1 million letter of interest for a project in Pakistan not yet approved by Eximbank.⁴¹ OPIC, which had just reopened for new business in Pakistan on March 24, 1998, also closed for new business in Pakistan after the Glenn Amendment sanctions were triggered. Because of the limited amount of time that OPIC had been open for business in Pakistan, the loss of OPIC export assistance had minimal impact on Pakistan since few programs were underway. TDA froze applications for new projects in Pakistan after the Glenn Amendment sanctions were triggered.⁴²

USDA export credits and related Glenn Amendment exemption

U.S. public and private sector opposition to the inclusion of USDA export credits and guarantees grew rapidly soon after the Glenn Amendment sanctions were imposed on India and Pakistan. Concerns focused primarily on the impact on U.S. farmers of lost agricultural sales to India and Pakistan, especially in light of an anticipated decline in U.S. agricultural sales to Asia as a result of reduced demand stemming from the Asian financial crisis.⁴³ In addition, there was the concern that "termination of credits for agricultural sales . . . is clearly at odds with the humanitarian provisions of the legislation."⁴⁴ By

³⁹—*Continued*

million export credit loan with the Japanese Export Credit Agency providing \$258 million of this amount, and commercial banks providing \$175 million which was insured by the Japanese Ministry of International Trade and Industry. Raghu Mohan, "India Sews Up Funds for Dabhol Phase-II," *Indian Express*, May 7, 1999, found at Internet site <http://www.financialexpress.com/fe/daily/19990507/fco07028.html>, retrieved July 21, 1999.

⁴⁰ Eximbank, "Ex-Im Bank Closes for New Business in Pakistan," press release, June 1, 1998.

⁴¹ *Ibid.*

⁴² Bureau of Economic and Agricultural Affairs, U.S. Department of State, "Fact Sheet: India and Pakistan Sanctions," June 18, 1998.

⁴³ American Farm Bureau, "Farm Bureau Urges India-Pakistan Sanctions Exemption," news release, June 9, 1998.

⁴⁴ Karl F. Inderfurth, Assistant Secretary for South Asian Affairs, testimony before the Subcommittee for Asia and the Pacific, House International Relations Committee, June 18, 1998.

mid-July 1998, the House, and later the Senate, began consideration of legislation to authorize the President to exempt certain agriculture-related measures from the Glenn Amendment sanctions. On July 14, 1998, President Clinton signed the Agriculture Export Relief Act of 1998.⁴⁵ The act authorized the President to waive until September 30, 1999, the Glenn Amendment sanctions on India and Pakistan concerning USDA credit, credit guarantee, or financial assistance to support the purchase of food or other agricultural commodity, including fertilizer. The President immediately exercised that waiver authority. The act also added medicines and medical equipment to the items permanently exempt from the sanctions.⁴⁶

Prior to the May 1998 triggering of the Glenn Amendment sanctions, India was allocated a \$20 million USDA export credit guarantee line under the CCC programs for fiscal year 1998 that it had not used;⁴⁷ India did not use those export credits during fiscal year 1998 even after USDA export credits were exempted from the Glenn Amendment sanctions.⁴⁸ Pakistan, the third largest wheat export market for the United States,⁴⁹ is an extensive user of USDA export credit programs, especially for white winter wheat from the Pacific Northwest.⁵⁰ Pakistan was allocated a \$250 million USDA export credit guarantee line under the CCC programs for fiscal year 1998, and had drawn on nearly \$162 million of that amount before the Glenn Amendment sanctions were triggered.⁵¹ After USDA export credits were exempted from the

⁴⁵ Public Law 105-194, 112 Stat. 627. The act amended section 102(b)(2)(D)(iii) of the AECA (22 U.S.C. 2799aa-1(b)(2)(D)(iii)).

⁴⁶ U.S. Congress, "Agriculture Export Relief Act of 1998," P.L. 105-194, 112 Stat. 627, July 14, 1998.

⁴⁷ "U.S. Imposes Sanctions on Pakistan," *Washington Trade Daily*, May 29, 1998.

⁴⁸ FAS, "Summary of FY 98 Export Credit Guarantee Program Activity for GSM-102 as of Sept. 30, 1998," found at Internet site <http://www.fas.usda.gov/excredits/Monthly/1998/ecg10-98.htm>, retrieved June 11, 1999, and "USDA Reinstates Credit Guarantee Programs for India and Pakistan," release No. 0285.98, FAS PR 0318-98, July 15, 1998.

⁴⁹ National Association of Wheat Growers, "Economic Sanctions Imposed on India and Pakistan Will Seriously Hurt U.S. Wheat Growers," news release, June 19, 1998.

⁵⁰ "U.S. Imposes Sanctions on Pakistan," *Washington Trade Daily*, May 29, 1998.

⁵¹ FAS, "Summary of FY 98 Export Credit Guarantee Program Activity for GSM-102 as of June 5, 1998," found at Internet site <http://www.fas.usda.gov/excredits/Monthly/1998/ecg6-98.htm>, retrieved June 11, 1999.

Glenn Amendment sanctions, Pakistan ultimately used \$244 million of its allocation during fiscal year 1998.⁵²

Military Assistance and Foreign Military Financing

The Glenn Amendment military assistance sanctions were largely in place by the end of May 1998. On May 20, 1998, a notice from the State Department (1) revoked all licenses and other approvals to export or otherwise transfer defense articles and defense services from the United States to India; (2) prohibited the transfer of any U.S. origin defense articles or services from a foreign location to India, or the temporary import of defense articles from India; and (3) commenced a policy of denying all applications and other requests for approval to export or otherwise transfer or re-transfer defense articles and defense services to India.⁵³ A similar revocation notice was announced for Pakistan on June 17, 1998.⁵⁴

Multilateral Assistance

The United States worked to gain support from the G-7 countries⁵⁵ and Russia to suspend consideration of new assistance from international financial institutions for projects in India and Pakistan. In further explanation of its intended course of action, a U.S. Administration report stated that "once a project comes before the board [of an international financial institution], it is extremely rare for it to be rejected. We believe that the most constructive course for now is to ask that the upcoming projects be held back and not presented to the board."⁵⁶

As it enlisted international support, the U.S. Administration also worked to define the types of projects that would be approved under the "humanitarian" exception—a term that is not further defined in the Glenn Amendment. The Administration stated that it would "consider basic human needs

⁵² FAS, "USDA Reinstates Credit Guarantee Programs for India and Pakistan," release No. 0285.98, July 15, 1998.

⁵³ Bureau of Political-Military Affairs, U.S. Department of State, "Revocation of Munitions Exports Licenses and Other Approvals for India," *Federal Register*, May 20, 1998 (63 FR 27781).

⁵⁴ *Ibid.*

⁵⁵ In addition to the United States, the G-7 countries are Canada, France, Germany, Italy, Japan, and the United Kingdom.

⁵⁶ U.S. Department of State telegram, "IFI Financing for India: Demarche Request," message reference No. 88838, prepared by U.S. Department of State, May 18, 1998.

loans using criteria that the G-7 had used previously in 1990 in the case of China,” when the G-7 countries continued to support multilateral assistance in areas such as education, maternal and child health, water and sewage, low-income housing, and rural development.⁵⁷ On June 18, 1998, the Administration announced that it had gained G-7 and Russian support to postpone consideration of “non-basic human needs” loans for India and Pakistan.⁵⁸ Actions taken by specific international financial institutions with respect to loans to India and Pakistan are discussed in chapter 4.

Private Sector Lending

By June 2, 1998, the U.S. Administration had reached a consensus on how to implement most of the Glenn Amendment sanctions, but questions remained regarding private sector lending.⁵⁹ Much of the concern focused on the lack of clear definitions of key terms in the Glenn Amendment. Stuart Eizenstat, Under Secretary of State for Economic, Business, and Agricultural Affairs, noted the difficulties of trying “to interpret what is in some respects a very vague act,” despite the statutory requirement to impose sanctions.⁶⁰ For example, the Glenn Amendment does not define the terms “bank” (it was unclear if the term applied to non-banking financial institutions), “loan” (it was unclear if the term applied to purchases of foreign government securities to meet statutory reserve requirements), or “government” (it was unclear if the term applied solely to federal and state governments, or if it also applied to government-owned enterprises).

On June 18, 1998, the Administration announced that bank-related sanctions would be implemented “very soon” through an Executive Order.⁶¹ Those regulations were drafted by the Treasury Department,

⁵⁷ Strobe Talbott, Deputy Secretary of State, On-the-Record Briefing on India and Pakistan, June 18, 1998.

⁵⁸ U.S. Department of State, Bureau of Economic and Agricultural Affairs, “Fact Sheet: India and Pakistan Sanctions,” June 18, 1998, found at Internet site http://www.state.gov/www/regions/sa/fs_980618_india_pak.html, retrieved June 11, 1999.

⁵⁹ Bureau of National Affairs, “Decision on India-Pakistan Sanctions could come in \$matter of days’, official says,” *International Trade Daily*, transcript ID 51601002, June 9, 1998.

⁶⁰ Stuart Eizenstat, Under Secretary of State, “Sanctions in US Policy,” testimony before the House International Relations Committee, June 3, 1998, LEGI-SLATE transcript 981540037, June 4, 1998.

⁶¹ U.S. Department of State, Bureau of Economic and Agricultural Affairs, “Fact Sheet: India and Pakistan Sanctions,” June 18, 1998, found at Internet site http://www.state.gov/www/regions/sa/fs_980618_india_pak.html, retrieved June 11, 1999.

but the draft regulations were not officially released and had not been implemented before the President waived the private sector lending component of the Glenn Amendment sanctions on December 1, 1998.

Dual-use Exports

The Glenn Amendment dual-use export sanctions were put in place informally by mid-June 1998. On June 18, 1998, the Administration announced that it would review export licenses for dual-use goods that do not support nuclear or missile-related activities on a case-by-case basis if destined for India and Pakistan.⁶² U.S. industry had expressed concerns that the Administration would deny exports of all dual-use products—which include high-technology items such as computers, machine tools, and software.⁶³

On June 22, 1998, BXA issued guidelines on implementing the Administration’s policy restricting high-technology exports of certain dual-use products.⁶⁴ BXA also indicated it would require export licenses for high performance computers destined for India and Pakistan regardless of end-user.

On November 19, 1998, BXA published an “interim rule” revising the EAR to incorporate sanctions against India and Pakistan.⁶⁵ The revisions to the EAR formalized licensing policies that were adopted on June 22, 1998. They established a license review policy to deny the export and re-export of items controlled for nuclear proliferation reasons to all end-users in India and Pakistan, except for computers. They also included a new license policy to deny the export and re-export of items controlled for missile technology reasons to all end-users in India and Pakistan, except for certain items dealing primarily with equipment for ensuring the safe operation of civil aircraft.

Discretionary Measures by BXA

BXA implemented several discretionary measures against India and Pakistan to supplement the Glenn Amendment sanctions. On November 13, 1998, BXA named 40 Indian and 46 Pakistani end users, along with more than 200 subsidiaries, to be added to the

⁶² Ibid.

⁶³ Inside Washington Publishers, “U.S. Announces Flexible Dual Use, Banking Sanctions for India, Pakistan,” *Inside U.S. Trade*, online database, June 19, 1998, found at Internet site <http://www.insidetrade.com>, retrieved May 18, 1999.

⁶⁴ BXA, “U.S. Sanctions on the Export of Dual-Use Goods to India and Pakistan,” June 22, 1998.

⁶⁵ BXA, “India and Pakistan Sanctions and Other Measures,” *Federal Register*, Nov. 19, 1998 (63 FR 64322).

Entity List.⁶⁶ Three categories of end users were listed: government nuclear and missile end users; parastatals and private companies; and military end users.

In its November 19, 1998 interim rule,⁶⁷ BXA established a presumption of denial for license applications to export or re-export any item subject to the EAR to certain listed Indian and Pakistani government, parastatal, or private end users (those end users were determined to have been involved in nuclear and/or missile activities). BXA adopted a policy of presumption of denial for license applications with regard to all exports to listed parastatal and private end users;⁶⁸ BXA stated that it would review on a case-by-case basis license applications to export to listed parastatal and private end users with whom preexisting business arrangements were in place if the trade did not involve nuclear or missile activities. In addition, BXA adopted a policy of denial for license applications to export any items controlled by the U.S. Department of Commerce to listed Indian and Pakistani military end users. One individual who testified at the Commission's June 22, 1999 hearing for this investigation stated that his company's most significant concerns about U.S. sanctions imposed on India and Pakistan were with respect to these discretionary measures regarding the Entity List.⁶⁹ The Commission also received several

written submissions raising concerns about the Entity List and noting that the listed Indian and Pakistani end users often are able to obtain the same products from European and Asian competitors.⁷⁰

Sanctions Waiver

On October 21, 1998, the Congress passed the India-Pakistan Relief Act of 1998.⁷¹ Section 902 of that Act authorized the President to waive until one year after enactment of the law (i.e., until October 21, 1999) certain components of the Glenn Amendment sanctions with respect to India and Pakistan; other Glenn Amendment sanctions on India and Pakistan would remain in place. The President invoked that waiver authority on December 1, 1998. The waiver applied to (1) prohibitions with respect to Eximbank, OPIC, and TDA assistance for India and Pakistan; (2) the prohibition with respect to the International Military Education and Training programs for India and Pakistan; (3) the prohibition with respect to the provision of loans or credits to the Government of India or Government of Pakistan by U.S. banks; and (4) the extension of any financial or technical assistance to Pakistan by any international financial institution assisting the IMF in regard to Pakistan.⁷² All other Glenn Amendment sanctions remained in full force with the exception of the prohibition of USDA export credits and guarantees, discussed above.

⁶⁶ BXA, "India-Pakistan Sanctions List Published by Commerce Department," press release, Nov. 13, 1998.

⁶⁷ BXA, "India and Pakistan Sanctions and Other Measures," *Federal Register*, Nov. 19, 1998 (63 FR 64322).

⁶⁸ As a result, U.S. exporters were required to submit to BXA license applications for exports and reexports of certain nonstrategic EAR99 items; such items generally are widely available from other countries. R. Roger Majak, Assistant Secretary for Export Administration, BXA, U.S. Department of Commerce, written submission to the USITC, received July 1, 1999.

⁶⁹ Frank Folmsbee, Sales and Export Manager, Aries Electronic Inc., testimony before the Commission, June 22, 1999, transcript, pp. 51-52.

⁷⁰ Carl T. Bayer, Allegheny Teledyne, Inc., written submission to the USITC, received June 28, 1999; Ralph E. Binney, REBCO International, written submission to the USITC, received June 15, 1999; Art Markart, TTI, Inc., written submission to the USITC, received June 10, 1999; Paul Sadler, Astermetocs & Associates, written submission to the USITC, received June 25, 1999; and Hughes Electronics Corp, written submission to the USITC, received July 6, 1999.

⁷¹ Public Law 105-277, 112 Stat. 2681, 22 U.S.C. 2799aa-1 note. This Act was passed as part of the Omnibus Consolidated and Emergency Supplemental Appropriations Act, 1999, Public Law 105-277.

⁷² White House, "Memorandum on Pakistan and India," *Presidential Documents*, Week of Dec. 7, 1998, Presidential Determination No. 99-7, Dec. 1, 1998, pp. 2402-2403.

CHAPTER 3

Effects of the Glenn Amendment Sanctions: Industry Perspectives

This chapter summarizes findings from a telephone survey that Commission staff conducted to determine the economic effects on U.S. industry of the Glenn Amendment sanctions on India and Pakistan. These findings are presented for each of five major industry categories—agriculture and forest products; energy, chemicals, and textiles; minerals, metals, machinery, and miscellaneous manufactures; electronics and transportation; and services.

Methodology and Approach

The Commission conducted an informal telephone survey between May 17, 1999 and June 4, 1999 to obtain industry opinions on the effects of the Glenn Amendment sanctions on India and Pakistan.¹ A total of 269 U.S. firms and professional/trade associations were contacted during the course of the investigation.² The firms and associations contacted were selected on the basis of USITC expertise, and information provided by the United States–India Business Council (USIBC) and the Bureau of Export Administration (BXA) of the U.S. Department of Commerce. Further, the Commission focused on contacting companies that did business with India and Pakistan in product categories³ of the U.S. Harmonized Tariff Schedule that showed a marked decline in U.S. exports to these two countries during 1997-98. A decrease in U.S. exports of \$5 million or more and a percentage decline that exceeded the overall decline in total U.S. exports to the two countries were the criteria for selection.⁴ In addition, several U.S. companies

¹ A representative list of companies and associations contacted appears as appendix E. The telephone survey was not based on a statistically derived random sample; therefore, opinions expressed can not be interpreted as representative of U.S. industry.

² A copy of the survey appears as appendix D of this report.

³ As noted in chapter 1, strictly military items were excluded from the analysis in this report.

⁴ Total U.S. exports to India and Pakistan during 1997-98 declined by approximately 3 percent and 41 percent, respectively. These data are shown in table 1-1, and are discussed in more detail in chapter 1.

that applied for export licenses with the BXA and were subsequently denied also were contacted.⁵

Although the survey attempted to quantify various economic effects, certain factors were not measurable. Respondents to the telephone survey were requested to provide information on the effects of U.S. economic sanctions with respect to India and Pakistan on the firm's exports, imports, investment, production, and other information. Respondents were asked to identify the effects of U.S. sanctions as "minimal" (0 to 5 percent effect), "modest" (6 to 10 percent), or "substantial" (over 10 percent). However, due to the short-term nature of the survey, the limited duration of time the sanctions have been in effect, and the various waivers and delays in implementation, firms contacted were unable to provide measurable indicators of various factors. For instance, the amount of business a firm loses because a country is subject to sanctions, or losses encountered because a company is considered an unreliable supplier, is not measurable. Similarly, it was not possible to quantify the effect of restricted access to financing or loan guarantees from private U.S. banks, government agencies, and international financial institutions, although many respondents noted that such limitations could potentially have an effect on their business.

Scope of the Survey

Most of the firms contacted declined to respond to the survey. Of the 269 firms contacted, 166 (62 percent) declined to respond to repeated phone, facsimile, or electronic mail messages regarding the survey (table 3-1). The Commission received 103 responses, or a rate of 38 percent. Of these, 35 respondents indicated that their firms were not interested in the study and chose not to participate in the survey. Of the remaining firms (68) that responded, 25 indicated that sanctions had no effect on their business or were not likely to have an effect if reimposed. A total of 43 firms (16 percent of

⁵ See chapter 2 for an overview of export license regulations.

Table 3-1
Effects of the Glenn Amendment sanctions: results of USITC telephone survey

Industry categories	Affected by sanctions		Not affected	No interest	No response	Total
	Detailed responses	Minimal responses				
Agriculture and forest products	1	1	1	1	14	18
Energy, chemicals, and textiles	0	0	6	2	19	27
Minerals, metals, machinery, and miscellaneous manufactures	3	4	12	29	62	110
Electronics and transportation	11	9	2	1	43	66
Services	8	6	4	2	28	48
Total	23	20	25	35	166	269
Percentage of total	9	7	9	13	62	(¹)

¹ Not applicable.

Source: Compiled by the U.S. International Trade Commission.

contacted firms and 42 percent of responding firms) were affected or would be affected by U.S. sanctions on India and Pakistan, and these firms supplied responses with comments.

Summary of Findings

Based on trade association and industry representative responses, companies involved in the sale of certain agricultural products; industrial machinery; transportation, construction, and mining equipment; electronics products; and infrastructure development services have been most affected by U.S. sanctions on India and Pakistan. In the agricultural sector, U.S. exporters of wheat to Pakistan reported that their sales have been reduced as a result of sanctions, despite the July 15, 1998 exemption from the Glenn Amendment prohibition on the provision of U.S. Department of Agriculture (USDA) export credits and guarantees.⁶ U.S. firms involved in the export of industrial machinery to both countries stated that actual export losses were between \$13 million and \$15 million as a result of the sanctions. U.S. companies in the transportation, construction and mining industries reported losses of several million dollars in exports because of sanctions. U.S. firms that sell electronics products noted that their sales to India and Pakistan were reduced by approximately \$10 million. Several of the firms cited above reported that much of their sales lost were due to export license denials.⁷ Firms that provide financial, construction, and telecommunications services responded that sanctions have had an adverse effect on their ability to secure project financing or loan guarantees.⁸

Restrictions on company or customer access to project financing or loan guarantees were noted by U.S. companies as hindering their business in India and Pakistan.⁹ A telecommunications services firm reported that sanctions prevented companies from securing World Bank financing, leading to higher costs and delays in project construction and payments

to vendors.¹⁰ A total of seven firms involved in the sale of capital goods or infrastructure development equipment noted similar concerns for future projects, especially if sanctions were reimposed. The seven firms included a power generation equipment company, three aerospace equipment producers, a construction and mining equipment manufacturer, and two electronics firms.

Quantitative estimates of prospective sales lost or adverse effects to a firm's reputation as a reliable supplier were difficult to obtain.¹¹ However, several firms attempted to report an estimate of potential sales lost as a result of sanctions or the reimposition of sanctions. These estimates ranged from several hundred thousand dollars to several hundred million dollars per year. Further, most respondents that conduct business with India or Pakistan expressed concern about the effect of sanctions on their reputation as reliable suppliers. These companies stated that foreign competitors were likely to gain at their expense.

U.S. companies across several sectors also noted adverse effects from sanctions on investment activities. For instance, a construction equipment firm reported that its joint venture in India was now limited to small-scale projects primarily as a result of financing restrictions.¹² Financial services firms stated that sanctions would adversely affect their investment in the two countries. However, these services firms also reported that their operations in India and Pakistan were most affected by uncertainty regarding how the sanctions¹³ would be implemented.¹⁴

⁶ North American Export Grain Association, Inc., response to USITC survey, May 24, 1999. USDA export credits and guarantees are discussed in chapter 2.

⁷ U.S. export license regulations are discussed in more detail in chapter 2. BXA, based on its reviews of licenses, found that the Glenn Amendment sanctions, "have had a rather minimal impact on the U.S. export sector." BXA further states, "the impact on some individual U.S. companies has been much greater." Information received by the Commission appear to support these statements.

⁸ Industry representatives, responses to USITC survey, May-June 1999.

⁹ Provisions of the Glenn Amendment sanctions are discussed in chapter 2.

¹⁰ Industry representative, response to USITC survey, May 25, 1999.

¹¹ See also chapters 3 and 4 of USITC, *Overview and Analysis of Current U.S. Unilateral Economic Sanctions* (USITC Publication 3124, Aug. 1998) for a discussion on the difficulties of obtaining quantitative estimates.

¹² Industry representative, response to USITC survey, June 10, 1999.

¹³ Restrictions specifically pertaining to the provision of banking services to Indian and Pakistani entities were waived before they were implemented. Industry representatives, interviews with USITC staff, Apr. 21, 1999. See also, chapter 2 of this study.

¹⁴ Industry representatives, responses to USITC survey, May-June 1999.

Effects of Glenn Amendment Sanctions on India and Pakistan by Broad Economic Sectors

*Agriculture and Forest Products*¹⁵

India

Based on responses from trade association and industry representatives, the Glenn Amendment sanctions had no effect on U.S. exports of agriculture and forest products to India. Industry representatives stated that other factors, such as reduced demand or erratic purchases, accounted for the decrease in U.S. exports of specific products in 1998. Trade association and industry representatives responded that sanctions had no effect on U.S. exports of soymilk to India¹⁶ although U.S. soymilk exports declined by 24 percent during 1997-98, from \$54 million to \$41 million (table 3-2). According to representatives of certain (bovine and equine) leather goods producers, the 42-percent decline in U.S. exports of such products, from \$12 million to \$7 million, was the result of a reduction in worldwide demand for leather goods. Large inventories of such goods were reported in 1998 due to reduced purchases by consumers in Asia and Eastern Europe,¹⁷ and a decline in the popularity of leather athletic shoes worldwide.¹⁸ Several industry representatives responded that U.S. sanctions on India did not affect their exports of spruce logs but they were opposed to sanctions or any other restrictions on exports.¹⁹ A one-time purchase from one U.S. producer accounted for total U.S. exports of \$5 million of spruce logs to India in 1997; there were no such purchases in 1998.²⁰

¹⁵ Pursuant to the request letter, the Commission sought information from industry sources regarding the likelihood of retaliation if Glenn Amendment sanctions on India and Pakistan are reimposed. The Commission received no responses from agricultural interests regarding this issue.

¹⁶ Betsy Faga, President, North American Millers Association, telephone interview by USITC staff, June 29, 1999 and industry representative, response to USITC survey, June 16, 1999.

¹⁷ Industry representative, telephone interview by USITC staff, June 3, 1999.

¹⁸ The International Journal, "Buyers Have the Upper Hand," *Leather*, Apr. 1999, p. 160.

¹⁹ Industry representatives, telephone interviews by USITC staff, May 21 and June 3, 1999.

²⁰ Industry representative, telephone interview by USITC staff, June 3, 1999.

Pakistan

Among all agriculture and forest product exports to Pakistan in 1998, declines were most significant in certain wheat and soybean products. U.S. wheat industry representatives reported that sanctions had a modest effect on U.S. exports to Pakistan. However, one industry representative reported that a decrease in exports of soybean oilcake appears unrelated to sanctions.

According to the North American Export Grain Association, U.S. exporters of wheat products were directly affected by the Glenn Amendment sanctions.²¹ In particular, the Association estimated that sanctions had a modest effect on U.S. member company exports, which rely on USDA export credits and guarantees,²² but a minimal effect on U.S. imports and investment. In addition, it was reported that the prohibition of USDA export credits and guarantees limited prospective sales.²³ The reputation of U.S. wheat exporters as a reliable source of goods was damaged, likely leading to an increase in purchases from alternate wheat suppliers located in Australia and Canada.²⁴ Trade data tend to confirm industry statements. U.S. exports of certain wheat products to Pakistan totaled \$401 million in 1997 but decreased to \$151 million in 1998 (table 3-3). On a monthly basis, such exports fell to zero during March–July 1998 and exports in subsequent months never reached 1997 levels despite the July 1998 waiver on sanctions for agricultural products. Wheat is by far the leading component of exports to Pakistan, comprising 33 percent of total U.S. exports and 88 percent of all agricultural and forest product exports in 1997 compared with 21 percent and 73 percent, respectively, in 1998.

For soybean oilcake, U.S. exports declined from \$9 million in 1997 to zero in 1998. However, one industry representative reported that sanctions had no effect on U.S. exports of this product.²⁵ The erratic nature of soybean oilcake exports to Pakistan in previous years (zero in 1994 and 1996, \$12,199 in 1995) tends to support the observation that sanctions may have had little to no effect on U.S. exports.

²¹ North American Export Grain Association, Inc, response to USITC survey, May 24, 1999.

²² As discussed in chapter 2, USDA export credits and guarantees were exempted from the Glenn Amendment sanctions on July 15, 1998, through September 30, 1999.

²³ North American Export Grain Association, Inc, response to USITC survey, May 24, 1999.

²⁴ Ibid.

²⁵ Industry representative, response to USITC survey, June 16, 1999.

Table 3-2

India: U.S. exports of domestic merchandise, by selected product categories, 1995-98, Jan.-Mar. 1998, and Jan.-Mar. 1999¹

Item	1995	1996	1997	1998	Jan.-Mar. 1998	Jan.-Mar. 1999	Percent change	
							1997- 1998	Jan.-Mar. 1998- Jan.-Mar.1999
<i>Million dollars</i>								
Agriculture and forest products:								
Corn-soya milk blends (soymilk):								
India	44	45	54	41	10	14	-24.1	40.0
World	68	69	86	84	16	18	-2.3	12.5
Certain leather goods:								
India	10	12	12	7	2	2	-41.7	0.0
World	173	182	220	223	54	55	1.4	1.9
Spruce logs and timber:								
India	0	0	5	0	0	0	-100.0	N/A
World	227	257	250	137	31	41	-45.2	32.3
Energy, chemicals, and textiles:								
Certain petroleum products:								
India	29	31	38	9	2	3	-76.3	50.0
World	1,203	1,098	1,161	1,118	392	309	-3.7	-21.2
Terephthalic acid and its salts:								
India	0	2	9	4	1	0	-55.6	-100.0
World	418	192	191	190	47	30	-0.5	-36.2
Polyethylene:								
India	5	6	7	2	0	1	-71.4	N/A
World	668	607	714	567	145	140	-20.6	-3.4
Propene (propylene):								
India	0	0	18	0	0	0	-100.0	N/A
World	83	111	173	77	25	14	-55.5	-44.0

See note at end of table

Table 3-2—Continued

India: U.S. exports of domestic merchandise, by selected product categories, 1995-98, Jan.-Mar. 1998, and Jan.-Mar. 1999¹

Item	1995	1996	1997	1998	Jan.- Mar. 1998	Jan.- Mar. 1999	Percent change	
							1997- 1998	Jan.-Mar. 1998- Jan.-Mar.1999
<i>Million dollars</i>								
Minerals, metals, machinery, and miscellaneous manufactures:								
Certain compressors and parts:								
India	20	11	53	15	5	2	-71.7	-60.0
World	604	650	794	577	147	211	-27.3	43.5
Certain power generating equipment and parts:								
India	28	22	79	11	5	1	-86.1	-80.0
World	456	863	1,043	945	261	129	-9.4	-50.6
Ferronickel:								
India	0	11	18	5	3	0	-72.2	-100.0
World	7	33	53	11	8	0	-79.2	-100.0
Miscellaneous iron or steel structures and parts:								
India	0	1	10	1	0	0	-90.0	N/A
World	170	207	267	221	56	50	-17.2	-10.7
Certain textile machine parts:								
India	2	0	8	1	1	0	-87.5	-100.0
World	30	18	24	20	7	4	-16.7	-42.9
Certain welding machines and parts:								
India	3	1	7	1	0	0	-85.7	N/A
World	140	138	187	183	42	39	-2.1	-7.1
Shredded steel scrap:								
India	71	52	13	0	0	0	-100.0	N/A
World	410	370	327	152	57	23	-53.5	-59.6
Electronics and transportation:								
Certain diesel and turbine engines and parts:								
India	69	107	193	65	15	17	-66.3	13.3
World	4,404	4,259	5,335	5,705	1,200	1,471	6.9	22.6

See note at end of table

Table 3-2—Continued

India: U.S. exports of domestic merchandise, by selected product categories, 1995-98, Jan.-Mar. 1998, and Jan.-Mar. 1999¹

Item	1995	1996	1997	1998	Jan.- Mar. 1998	Jan.- Mar. 1999	Percent change	
							1997- 1998	Jan.-Mar. 1998- Jan.-Mar.1999
<i>Million dollars</i>								
Electronics and transportation:								
Certain computers and peripherals:								
India	28	40	44	21	6	8	-52.3	33.3
World	3,523	3,903	4,084	3,387	853	711	-17.1	-16.6
Unrecorded magnetic disks:								
India	5	18	32	6	3	0	-81.3	-100.0
World	1,347	1,950	1,906	1,415	364	313	-25.8	-14.0
Electronics and transportation:								
Certain construction equipment								
India	2	1	29	6	3	0	-79.3	-100.0
World	118	165	208	189	45	28	-9.1	-37.8

¹ Export values are based on f.a.s. value, U.S. port of export.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 3-3

Pakistan: U.S. exports of domestic merchandise, by selected product categories, 1995-98, Jan.-Mar. 1998, and Jan-Mar. 1999¹

Item	1995	1996	1997	1998	Jan.- Mar. 1998	Jan.- Mar. 1999	Percent change	
							1997- 1998	Jan.-Mar. 1998- Jan.-Mar.1999
<i>Million dollars</i>								
Agriculture and forest products:								
Certain wheat products:								
Pakistan	278	32	401	151	68	6	-62.3	-91.2
World	5,226	6,088	3,892	3,486	894	685	-10.4	-23.4
Soybean oilcake								
Pakistan	0	0	9	0	0	0	-100.0	N/A
World	986	1,430	1,865	1,604	732	290	-14.0	-60.4
Minerals, metals, machinery, and miscellaneous manufactures:								
Certain parts for industrial machinery:								
Pakistan	7	4	18	3	2	0	-83.3	-100.0
World	363	346	444	348	88	82	-21.6	-6.8
Certain textile machines:								
Pakistan	2	2	15	3	1	0	-80.0	-100.0
World	42	32	45	47	8	9	4.4	12.5
Certain power generating equipment and parts:								
Pakistan	0	4	18	2	1	0	-88.9	-100.0
World	149	654	897	665	197	110	-25.9	-44.2
Parts of oil and gas field machinery:								
Pakistan	1	4	10	5	1	1	-50.0	0.0
World	758	891	794	858	224	138	8.1	-38.4
Electronics and transportation:								
Certain transportation, construction, and mining equipment:								
Pakistan	21	43	129	38	4	12	-70.5	200.0
World	10,560	11,712	14,344	15,595	3,599	3,771	8.7	4.8

¹ Export values are based on f.a.s. value, U.S. port of export.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Energy, Chemicals, and Textiles

Based on the limited responses of trade association and industry representatives, the decrease in U.S. exports of selected energy, chemicals, and textile products to India appear unrelated to the Glenn Amendment sanctions. For Pakistan, U.S. exports of specific products within the energy, chemicals, and textiles industry sector did not fall by \$5 million or more nor have trade associations or industry representatives indicated that sanctions had an effect on such exports, thus no specific products are discussed.

Based on market information and the limited responses of industry representatives, it appears that the 5-percent decline in U.S. exports of energy, chemical, and textile products to India are unrelated to the imposition of sanctions. For instance, the value of U.S. exports of certain petroleum products (specialty motor fuels, lubricants, and additives for lubricants) declined by a combined 76 percent during 1997-98 (table 3-2). However, a significant drop in the price of crude petroleum from an average of \$18 per barrel to \$10 per barrel during the period may explain the decrease in the value of exports.²⁶ No response was received from trade association or industry representatives regarding the effect of sanctions on these products.

Although exports of other certain chemicals, including polyethylene, propene (propylene), and terephthalic acid and its salts, also fell significantly during the period, some industry representatives stated that sanctions had no effect on their business and others declined to respond. Polyethylene industry representatives responded that the decline in exports, from \$7 million to \$2 million during 1997-98, was caused principally by increased local production and price competition from Asian producers, not U.S. sanctions.²⁷ No trade association or industry representatives responded to the telephone survey regarding the effect of sanctions on the decrease of U.S. propene (propylene) exports to India, although such exports declined from \$18 million in 1997 to zero in 1998. A likely explanation for the decrease is the opening and full scale operation of new polymer plants by an Indian producer, Reliance Industries

Limited, in 1998. The opening of the plants increased the domestic supply of propylene and decreased the amount of imports from U.S. and other sources.²⁸ The possible role of U.S. sanctions for the decrease in U.S. exports of terephthalic acid and its salts, from \$9 million in 1997 to \$4 million in 1998, remains unclear as trade association and industry representatives contacted did not respond to the telephone survey.

Minerals, Metals, Machinery, and Miscellaneous Manufactures

India

Trade association and industry representatives for certain power generation equipment, certain compressors and parts, certain welding machine parts, and certain machinery for manufacturing reported that the Glenn Amendment sanctions on India have had or will have an effect on their business. However, other representatives in the sector either did not respond or stated that sanctions on India had no effect.

Based on responses to the survey, sanctions on India have affected, or will likely affect, U.S. firms involved in the production of certain power generating equipment and parts, certain compressors and parts, certain welding machines and parts, and certain machinery for manufacturing. One power generation equipment producer stated that although sanctions have had minimal impact on its current level of exports, imports, investment, prospective sales, employment, and production, the potential exists for more serious economic effects.²⁹ According to this source, future projects could be affected by U.S. sanctions as international financing is important for landing contracts. U.S. companies likely would not be able to participate in large projects if Indian entities were cut off from U.S. and international funding sources. Because all sanctions affect the perceived reliability of a U.S. firm, they reportedly have the potential to discourage future contracts or joint ventures. In addition, when U.S. sanctions are imposed, competitors to U.S. firms, such as those based in the European Union (EU), Japan, and Korea, are likely to secure business that would otherwise have gone to U.S. companies.³⁰ The representative

²⁶ Official statistics of the U.S. Department of Energy, 1997-98.

²⁷ Industry representatives, responses to USITC survey, May 25, 1999. See also INFAC Industry Information Service, *Basic Petrochemicals*, found at <http://www.infac.com/postbasic.htm>, retrieved June 4, 1999.

²⁸ INFAC Industry Information Service, *Basic Petrochemicals*, found at <http://www.infac.com/postbasic.htm>, retrieved June 4, 1999 and Reliance Industries Limited, *Annual Report 1998-99*.

²⁹ Industry representative, response to USITC survey, June 4, 1999.

³⁰ *Ibid.*

also noted that exports to a certain entity were affected by BXA licensing reviews³¹ even though the business relationship existed prior to the implementation of sanctions. Trade data show that much of the decrease in the minerals, metals, machinery, and miscellaneous manufactures industry occurred in certain power generating equipment and parts which fell from \$79 million in 1997 to \$11 million in 1998 (table 3-2).

A U.S. producer of compressors and related parts responded that the sanctions have caused export losses in the amount of \$2.5 million.³² Prospective sales lost for this one firm are estimated at \$3 million. Further, this company stated that its workforce was reduced by two employees directly as a result of the sanctions. Trade data show that U.S. exports to India of these products declined from \$53 million in 1997 to \$15 million in 1998. However, according to trade association and other industry representatives, U.S. sanctions have had a minimal effect on the compressor and related parts business.³³ These contacts stated that the value of such exports to both India and Pakistan comprised less than 1 percent of their total sales.

A U.S. welding machine parts manufacturer stated that the sanctions resulted in an estimated \$250,000 to \$500,000 of sales lost, and would likely affect prospective sales and the company's reputation as a reliable supplier.³⁴ However, a U.S. trade association with member companies that export welding machine parts to India stated that sanctions have had minimal effect on their members' exports and prospective sales, as exports to India are considered not essential to their operations.³⁵ U.S. exports to India dropped from \$7 million in 1997 to less than \$1 million in 1998 in this particular product category.

Three firms that produce machinery used for the manufacture of other goods also responded to the survey. These firms had been affected by BXA license denials³⁶ resulting in over \$11 million of sales lost.³⁷ According to an industry representative, the export denial led to the loss of \$100,000 for one piece of machinery as well as \$100,000 worth of spare parts. In addition, the Indian customer is seeking alternate

sources for spare parts, most likely from Japan.³⁸ According to another industry representative, the export license denial led to a loss of equipment sales totaling over \$10 million and will likely lead to a loss of competitiveness compared with firms based in the EU.³⁹ A third industry representative stated that the BXA license denial resulted in a loss of over \$1 million for a shipment that was delayed, and that a German competitor is likely to benefit.⁴⁰

Other industrial machinery firms may not have been affected by sanctions because the pattern of trade in large industrial machines and parts tends to be erratic as one-time purchases will skew export data. It is likely that such purchases accounted for the decline in U.S. exports of parts for certain textile machines from \$8 million to slightly less than \$1 million during 1997-98.

For certain metals and metal components, the decline in U.S. exports seems unrelated to the imposition of sanctions. Exports to India of ferronickel, shredded steel scrap, and miscellaneous iron or steel structures and parts fell by a combined 88 percent from \$41 million to \$5 million during 1997-98. However, according to industry representatives, exports of ferronickel, which fell from \$18 million in 1997 to \$5 million in 1998, decreased because a major U.S. producer of ferronickel went out of business in 1998.⁴¹ Similarly, the fall in shredded steel scrap exports to India was due to the high price of scrap from the United States, compared with cheaper supplies from Russia, China, and the EU.⁴² For certain iron or steel structures and parts, the decline in exports is not related to sanctions as U.S. producers of these products have stated that sanctions have not affected their business relations with India. One industry representative suggested that the large value of exports in 1997 may have been a misclassification.⁴³

Pakistan

Responses from trade association and industry representatives concerning exports of mineral, metals, machinery, and miscellaneous manufactures to Pakistan were limited to potential effects, if any, from sanctions. An industry representative stated that the reimposition of sanctions on Pakistan may affect

³¹ See chapter 2 for an overview of U.S. export license regulations.

³² Industry representative, response to USITC survey, June 21, 1999.

³³ Industry representatives, responses to USITC survey, May 27, June 7-8, 1999.

³⁴ Industry representative, response to USITC survey, May 21, 1999.

³⁵ Industry representatives, responses to USITC survey, May 17-21, 1999.

³⁶ See chapter 2 for an overview of export license regulations.

³⁷ Industry representatives, responses to USITC survey, May 20, 27, and June 2, 1999.

³⁸ Industry representative, response to USITC survey, May 20, 1999.

³⁹ Industry representative, response to USITC survey, June 2, 1999.

⁴⁰ Industry representative, response to USITC survey, May 27, 1999.

⁴¹ Industry representatives, telephone interviews by USITC staff, May-June, 1999.

⁴² Industry representatives, telephone interviews by USITC staff, May-June, 1999.

⁴³ Industry representatives, responses to USITC survey, May 27, June 1-2, 1999.

future projects involving power generation equipment if U.S. Export-Import Bank (Eximbank) or World Bank financing is restricted.⁴⁴ Producers of certain parts for industrial machinery reported that sanctions had minimal effect on U.S. employment, exports, and investment, and will likely have minimal effect if the sanctions are reimposed.⁴⁵ One representative of a textile machine manufacturer stated that the sanctions had no effect on its business.⁴⁶ No responses were received from producers of parts of oil and gas field machinery, U.S. exports of which fell from a combined \$61 million in 1997 to \$14 million in 1998, or 77 percent (table 3-3).

Electronics and Transportation

India

Although U.S. exports of electronics and transportation products to India increased during 1997-98, from \$1.4 billion to \$1.5 billion, representatives of certain electronics and transportation companies have stated that the effects of sanctions on their exports have been substantial. Trade data at the product level tend to support these statements as U.S. exports of particular commodities within the industry category, such as certain engines and parts, certain construction equipment, and certain electronics products, fell from a combined \$297 million in 1997 to \$97 million in 1998 (table 3-2). Further, many of these firms were affected by BXA export licensing denials⁴⁷ which kept them from selling their products to customers in India.

Six U.S. producers of certain diesel and turbine engines and related parts⁴⁸ responded to the survey and all stated that sanctions on India had negative effects on their business.⁴⁹ They estimated export losses as a result of sanctions ranging from several hundred thousand dollars to several million dollars. Trade data tend to support these statements as U.S. exports of such products to India fell from \$193 million in 1997 to \$65 million in 1998. Three of the six respondents, also involved in the production of other aerospace equipment and parts, noted that if sanctions were reimposed and financing from private banks, Eximbank, and the World Bank were restricted then further sales to India also would be threatened.

⁴⁴ Industry representative, response to USITC survey, June 4, 1999.

⁴⁵ Industry representatives, responses to USITC survey, May 27, June 1-2, 1999.

⁴⁶ Industry representative, response to USITC survey, June 3, 1999.

⁴⁷ See chapter 2 for an overview of export license regulations.

⁴⁸ Included are certain aerospace equipment and parts.

⁴⁹ Industry representative, response to USITC survey, June 10, 1999.

These companies estimated that potential losses could approach a total of several hundred million dollars per year and affect the employment of several thousand employees. Further, two companies were denied BXA export licenses which resulted in a combined \$870,000 loss in export sales and a projected loss of at least \$450,000 per year in future sales. Overall, all six companies believed that sanctions had damaged their reputation as reliable suppliers and that competitors from Europe and Asia would likely benefit.

A representative of a construction equipment manufacturer noted that restricted access to financing from Eximbank and the Overseas Private Investment Corporation (OPIC) would likely have a negative effect on the firm's business as financing from these agencies is used to a great extent.⁵⁰ The representative also noted that any future project cancellations or delays as a result of sanctions could lead to losses in sales and in thousands of jobs. Further, the contact stated that U.S. sanctions on India allow foreign competitors from the EU, Japan, Russia and China to benefit at the expense of U.S. firms. Although the respondent did not reveal specific losses to India as a result of sanctions, trade data show that U.S. exports of certain construction equipment declined during 1997-98, from \$29 million to \$6 million.

Most respondents from the electronics industry noted that sanctions had minimal to substantial effects on their exports to India. A representative of a component manufacturer testified that the BXA's Entity List⁵¹ prohibited exports of its connectors to India, a restriction that resulted in lost sales of at least \$250,000 per year.⁵² The representative estimated that the amount of lost sales also translated into a loss of two to three jobs, or one job for each \$100,000. A distributor of components commented in writing that BXA regulations caused lost sales in the amount of \$1 million per year despite a preexisting business relationship.⁵³ This company further stated that the resistors, capacitors, and connectors that it sells are readily available from competitors located in the EU, Canada, Japan, and Korea. Another distributor of components noted that export regulations resulted in lost exports of \$240,000 to \$360,000 per year and the loss of two jobs.⁵⁴ Further, combined losses from

⁵⁰ See chapter 2 for an overview of export license regulations.

⁵¹ See comments of Frank Folmsbee, Sales and Export Manager, Aries Electronics, Inc. in transcript of public hearing of the USITC, *Overview and Analysis of the Economic Impact of U.S. Sanctions With Respect to India and Pakistan*. Inv. No. 332-391, June 22, 1999.

⁵² Art Markart, General Manager, TTI, written submission to the USITC, June 8, 1999.

⁵³ Industry representative, response to USITC survey, May 25, 1999.

⁵⁴ Industry representatives, responses to USITC survey, June 2-9, 1999.

BXA export license denials totaled approximately \$5 million for four additional companies that are involved in the manufacture and sale of electronic components.⁵⁵ These four companies estimated that prospective lost sales totaled a combined \$14 million.⁵⁶

Six companies that produce analytic, measuring, or testing equipment reported that BXA export license denials⁵⁷ had moderate to substantial effects on their exports to India.⁵⁸ In terms of value, these representatives estimated that export denials cost their firms a combined \$3 million or more. Two of these firms also stated that restrictions on private bank, World Bank, and International Monetary Fund financing would directly affect their firms' operations as many of their customers in India receive government funds or are involved in projects financed by international financial institutions.⁵⁹ One of these companies also stated that restrictions on Eximbank or OPIC financing would negatively affect their operations as most of their sales to these markets are for infrastructure development projects which are partly financed with such funds.⁶⁰ Further, a total of 12 U.S. employees among the 6 companies were let go directly as a result of decreased exports to India. One company also reported that the sanctions would have a substantial effect on potential investment in India.⁶¹ The same company also noted that, in retaliation against the Glenn Amendment sanctions, some Indian firms will no longer purchase from certain U.S. suppliers. All six companies listed foreign competitors that would benefit from lost sales to U.S. firms.

For unrecorded magnetic disks and computer hardware, representatives contacted either stated that sanctions had no effect on their business or no response was received. Representatives contacted in the unrecorded magnetic disk industry stated that sanctions had no effect on their sales or operations.⁶² Reportedly, other factors such as declining prices and the movement of production facilities overseas accounted for the drop in exports from \$32 million in 1997 to \$6 million in 1998. Computer systems manufacturers contacted did not respond to the survey,

⁵⁵ Industry representatives, responses to USITC survey, June 2-9, 1999.

⁵⁶ Industry representatives, responses to USITC survey, May-June 1999.

⁵⁷ U.S. export licensing regulations are discussed in chapter 2.

⁵⁸ Industry representatives, responses to USITC survey, May-June 1999.

⁵⁹ Industry representatives, responses to USITC survey, June 4, 1999.

⁶⁰ Industry representative, response to USITC survey, June 4, 1999.

⁶¹ Industry representative, response to USITC survey, June 4, 1999.

⁶² Industry representatives, telephone interviews by USITC staff, May 19 and 27, 1999.

although U.S. exports to India of certain computer hardware declined from \$44 million to \$21 million during 1997-98.

Pakistan

Based on responses from electronics and transportation industry representatives, U.S. sanctions on Pakistan have had a definite effect on U.S. exports. Three respondents from the transportation, construction, and mining equipment sectors stated that sanctions had or could potentially have substantial effects on their sales to Pakistan. Two representatives of the electronics industry specifically noted that BXA export license denials⁶³ kept them from selling equipment to Pakistan.

Two representatives of U.S. transportation, construction, and mining equipment firms noted that restricted access to financing from the Eximbank and OPIC would likely have a negative effect on their operations as such funding may be used for projects.⁶⁴ Although specific projects were not affected by sanctions on Pakistan, one representative noted that tentative projects valued at several million dollars likely did not move forward as a result of the inability to use Eximbank financing.⁶⁵ The representative also noted that any future project cancellations or delays as a result of sanctions could lead to sales and job losses. A third company involved in the manufacture of transportation, construction, and mining equipment stated that sanctions on Pakistan directly led to canceled orders and projects, but a dollar value was not disclosed.⁶⁶ One of the three companies estimated prospective sales to Pakistan lost as a result of sanctions at \$5 million.⁶⁷ Trade data reveal that U.S. exports of certain transportation, construction, and mining equipment fell from \$129 million in 1997 to \$38 million in 1998 (table 3-3).

Two electronics companies noted that their operations have been affected by U.S. sanctions on Pakistan because their export licenses were denied.⁶⁸ One company stated that only some of its sales to Pakistan have been affected but did not cite a specific dollar amount or a qualitative response. Another company stated that its exports to India and Pakistan, combined, declined by at least \$1 million. Further, restrictions on financing from U.S. government agencies, private banks, and international financial institutions could affect one firm's operations in

⁶³ See chapter 2 for an overview of export license regulations.

⁶⁴ Industry representatives, responses to USITC survey, June 1 and 10, 1999.

⁶⁵ Industry representative, response to USITC survey, June 10, 1999.

⁶⁶ Industry representative, response to USITC survey, June 2, 1999.

⁶⁷ Industry representative, response to USITC survey, June 1, 1999.

⁶⁸ See chapter 2 for an overview of export license regulations.

Pakistan as many of the company's projects are directly or indirectly financed by these sources.⁶⁹

Services

Generally, very large services firms in the major infrastructure industries of construction, financial services,⁷⁰ and telecommunications appear to be most affected by sanctions.⁷¹ According to representatives from these industries, adverse effects of the Glenn Amendment sanctions on India and Pakistan were, or would be, most deeply felt in projects which involved, or may potentially involve, financing from the Eximbank or financial assistance from the World Bank.⁷² According to U.S. construction firms, restrictions on Eximbank financing will have an adverse effect on project financing and final project approval in India. Further, the Glenn Amendment sanctions on India also were reported to have had an adverse effect on the reputation of U.S. construction firms as reliable service providers.⁷³

In the financial sector, firms involved in banking, securities, and asset management reported that the sanctions would adversely affect investment, exports, and the reputation of U.S. firms as reliable service providers. In addition, such firms reportedly have been adversely affected by restrictions placed on Eximbank guarantees and World Bank financial assistance, as these organizations respectively insure trade risk and enable governments to repay loans. However, these firms report that their operations in India and Pakistan were most affected by uncertainty regarding how the sanctions⁷⁴ would be

⁶⁹ Industry representative, response to USITC survey, June 4, 1999.

⁷⁰ The Glenn Amendment sanctions prohibit certain private sector banking activities. That prohibition, and its Dec. 1, 1998 waiver, are discussed in chapter 2.

⁷¹ USITC, *Overview and Analysis of Current U.S. Unilateral Economic Sanctions* (USITC Publication 3124, Aug. 1998), p. 3–10.

⁷² Industry representatives, responses to USITC survey, May–June 1999.

⁷³ Industry representative, response to USITC survey, June 4, 1999.

⁷⁴ As discussed in chapter 2, Glenn Amendment sanctions pertaining to the provision of banking services to Indian and Pakistani entities were waived before they were implemented. Industry representatives, interviews with USITC staff, Apr. 21, 1999.

implemented.⁷⁵ Most of the insurance firms that responded to the survey reported that their companies did not do business in India or Pakistan.⁷⁶ As a result, sanctions on these countries presumably have little or no effect on U.S. insurance firms.⁷⁷

A U.S. provider of telecommunication services in India indicated that the sanctions have affected its investment and production costs. According to this service provider, U.S. sanctions prevented firms from securing World Bank financing. As a result, such firms were forced to obtain more expensive financing, delaying network construction projects and vendor payments.⁷⁸ However, the majority of U.S. telecommunication service firms that responded to the survey reported that their companies either do not conduct business in India or Pakistan, or have not been significantly affected by the sanctions.⁷⁹ The sanctions' limited effect on U.S. telecommunication service firms in India may be a result of government policy. India places substantial limits on foreign participation in its telecommunications market.⁸⁰ Similarly, a majority state-owned firm, Pakistan Telecommunications Corporation, is the monopoly provider of basic telecommunication services in Pakistan.⁸¹

⁷⁵ Industry representatives, responses to USITC survey, May–June 1999. These responses were also reflected in reports from the U.S. diplomatic mission in India. For further information, see U.S. Department of State telegram, "Economic Impact of Sanctions: Cutbacks in External Borrowing; Confusion Among Banks; Flippant Optimism on the Cocktail Circuit," message reference No. 01292, prepared by U.S. Consulate Mumbai, May 20, 1998, and "Periodic Update on Sanctions from New Delhi," message reference No. 04250, prepared by U.S. Embassy New Delhi, May 22, 1998.

⁷⁶ The lack of U.S. participation in the Indian insurance market is a result of a government monopoly in this sector.

⁷⁷ Industry representatives, responses to USITC survey, May–June 1999.

⁷⁸ Industry representative, response to USITC survey, May 25, 1999.

⁷⁹ Industry representatives, responses to USITC survey, May–June 1999.

⁸⁰ For more information regarding restrictions on the foreign provision of telecommunication services in India, see USITC, *Recent Trends in U.S. Services Trade* (USITC publication 3105, May 1998), pp. 4–48 to 4–51.

⁸¹ Office of the United States Trade Representative (USTR), *1999 National Trade Estimate*, p. 332.

CHAPTER 4

Impact of U.S. Sanctions on India and Pakistan

This chapter presents overviews of the recent macroeconomic performance of India and Pakistan, and discusses the impact of the Glenn Amendment sanctions on those countries. The Commission obtained economic data and information to assess the impact of the Glenn Amendment sanctions on macroeconomic activity in India and Pakistan from multiple sources, including information presented at its June 22, 1999 public hearing as well as written submissions received by the Commission in conjunction with this investigation. Other sources included data and reports from U.S. diplomatic missions in India and Pakistan; the U.S. Department of Commerce; the Asian Development Bank (ADB); International Monetary Fund (IMF); the World Bank; the Governments of India and Pakistan; and press reports. Tables 4-1 and 4-2 present comparative macroeconomic data for India and Pakistan.

Summary of Findings

The following are highlights of the key findings in this chapter. More detailed discussions and full reference citations are provided in the subsequent sections of this chapter.

The Glenn Amendment sanctions appear to have had a relatively minimal overall impact on India's relatively large and diverse economy, although it is difficult to isolate the effects of the sanctions from other economic events. India experienced an initial downturn in its financial sector and international credit rating immediately after the Glenn Amendment sanctions were triggered. India's economy is not dependent upon foreign bilateral or multilateral assistance, and thus appears not to have been adversely affected by the postponement of several World Bank loans. There were no ADB or IMF loans for India pending approval or awaiting disbursement when the U.S. sanctions were triggered. The Government of India estimated the overall cost of the Glenn Amendment sanctions to the Indian economy in 1998 to be approximately \$1.5 billion, equivalent to about 0.4 percent of India's gross domestic product (GDP).

The United States was a relatively small provider of aid, trade, and investment for Pakistan even before the Glenn Amendment sanctions were triggered; thus, it is unlikely that U.S. sanctions had a large impact on Pakistan's economy. Pakistan experienced a sharp economic downturn immediately after the Glenn Amendment was triggered, but part of that downturn also can be attributed to domestic economic policies and austerity measures implemented in conjunction with Pakistan's obligations under an IMF loan program. Japan, Pakistan's largest trading partner and aid donor, cut its bilateral aid program to all but humanitarian assistance after Pakistan's nuclear detonations.

Impact on India

Macroeconomic Overview

India's economy encompasses traditional village farming, modern agriculture, handicrafts, services, and a wide range of modern industries including a globally competitive computer software industry fed by a large educated population. Economic reforms since 1991 have helped India achieve a large measure of macroeconomic stability and liberalize its trade, investment, and financial sectors. According to the World Bank, India has made significant advances in eliminating famines, improving literacy, and reducing fertility rates.¹ India's major political parties have declared their support for the overall necessity of continued economic reform, including improving living standards of the poor, but differ on their views of the pace and emphasis of reform.²

Structural economic reforms introduced in India since 1991 include opening many previously restricted sectors to foreign investment, such as heavy industrial manufacturing, banking, civil aviation,

¹ World Bank, "India," (undated), found at Internet site <http://www.worldbank.org/html/extdr/offrep/sas/in2.htm>, retrieved June 9, 1999.

² U.S. Department of State telegram, "1999 Trade Act Report: India," message reference No. 09196, prepared by the U.S. Embassy New Delhi, Nov. 12, 1998.

Table 4-1
India and Pakistan: leading economic indicators, 1998¹

Item	India	Pakistan
Gross domestic product, GDP (<i>billion dollars</i>)	381.5	61.6
GDP growth (<i>percent</i>)	5.6	5.4
Structure of the economy (<i>percent of GDP²</i>):		
Agriculture	27.5	26.0
Manufacturing	30.5	16.8
Services	42.0	8.5
Government	NA	7.5
Population (<i>millions</i>)	962	128
GDP per capita (<i>dollars</i>)	397	482
Investment (<i>billion dollars</i>)		
Gross domestic investment	91.6	9.4
Foreign direct investment	3.3	0.7
Overall budget deficit (<i>percent of GDP</i>)	5.2	7.8
Trade ³		
Exports of goods and services (<i>billion dollars</i>)	35.0	8.5
of which, exports to the United States (<i>billion dollars</i>)	8.2	1.7
Imports of goods and services (<i>billion dollars</i>)	43.5	10.1
of which, imports from the United States (<i>billion dollars</i>)	3.4	0.7
Exports as a percent of GDP (<i>percent</i>)	9.2	13.8
Imports as a percent of GDP (<i>percent</i>)	11.4	16.4
Foreign debt		
Present value (<i>billion dollars</i>)	69.7	21.8
of which, debt due within 1 year (<i>billion dollars</i>)	10.3	3.2
Annual debt service burden (<i>billion dollars</i>)	10.8	4.0
Debt service as a percent of GDP (<i>percent</i>)	2.8	6.5
Foreign exchange reserves and gold (<i>billion dollars</i>)	30	NA
Net official development assistance (<i>million dollars</i>)	876	1,936.2
Foreign aid		
Aid from the United States (<i>million dollars</i>)	141	35 (²)
Bilateral aid from other countries and multilateral aid (<i>million dollars²</i>)	3,200	1,888

¹ Data are for 1998 unless otherwise indicated.

² 1997 data.

³ More detailed data on U.S. exports to India and Pakistan are presented in tables 1-1, 1-2, 3-2, and 3-3 and in figures 1-1 and 1-2.

Sources: World Bank, "Country Data," *1999 World Development Indicators*, table 4a; *India at a Glance*; and *Pakistan at a Glance*, found at Internet site <http://www.worldbank.org/data/countrydata/countrydata.html> and Joint BIS-IMF-OECD-World Bank statistics on external debt, June 15, 1999, found at Internet site <http://www.oecd.org/dac/debt/>. Data also obtained from U.S. Department of State telegram, "1999 Trade Act Report for Pakistan," message reference No. 08672, prepared by U.S. Embassy Islamabad, Nov. 23, 1998, and U.S. Department of State telegram, "Trade Act Report: India," message reference No. 09196, prepared by U.S. Embassy New Delhi, Nov. 12, 1998.

Source: IMF, *World Economic Outlook* (Washington, DC: IMF, 1999), table 6, p. 147.

Table 4-2
India and Pakistan: Real GDP growth, 1995-98

	1995	1996	1997	1998
India	8.0	7.4	5.5	5.6
Pakistan	5.2	4.7	-0.4	5.4

Source: IMF, *World Economic Outlook* (Washington, DC: IMF, 1999), table 6, p. 147.

telecommunications, power generation and distribution, ports, and road construction. As a result, economic distortions have been reduced and internal and external competition have increased.³ Nevertheless, India's central and state governments still regulate pricing policies of many essential products, such as food grains, sugar, basic medicines, energy, fertilizers, water, and a number of industrial inputs.⁴

Despite its macroeconomic strengths and continued encouraging long-term prospects, India remains plagued with chronic large budget deficits and inadequate economic infrastructure. Debt-financed deficit spending during the 1980s boosted economic growth, but resulted in a large increase in India's foreign debt and annual debt service burden. India's foreign debt has declined from a peak of \$99 billion in March 1995 to approximately \$94 billion in March 1998.⁵ The World Bank reports that insufficient power supply constrains India's industrial development.⁶ In a recent opinion survey of U.S. businesses by the U.S. Embassy in New Delhi, respondents stated that bureaucratic red tape and the shortage of electrical power are the top problems of doing business in India.⁷

According to most assessments, India was protected from much of the global fallout of the Asian financial crisis, which began in July 1997, by the country's large domestic market—which meant India did not rely extensively on earnings from exports to the Asian economies.⁸ Moreover, India's staged approach to economic liberalization rendered it less exposed to financial turmoil in global markets.

³ World Bank, "India," (undated).

⁴ U.S. Department of State telegram, "1999 Trade Act Report: India," message reference No. 09196, prepared by the U.S. Embassy New Delhi, Nov. 12, 1998.

⁵ U.S. Department of State telegram, "Indian Economic Update and Political Overview," message reference No. 10010, prepared by U.S. Embassy New Delhi, Dec. 11, 1998.

⁶ World Bank, "India," (undated).

⁷ U.S. Department of State telegram, "Text of 1999 Survey of U.S. Investment in India," message reference No. 03716, prepared by the U.S. Embassy New Delhi, May 13, 1999.

⁸ Asian Development Bank (ADB), "India's Economy is Relatively Unaffected by Asia's Financial Crisis," news release No. 31/99, Apr. 19, 1999, and U.S. Department of State telegram, "1999 Trade Act Report: India," message reference No. 09196, prepared by the U.S. Embassy New Delhi, Nov. 12, 1998.

Indeed, the IMF has observed that "[c]apital controls, while entailing longer-term costs, appear to have helped to limit India's vulnerability to abrupt movements in short-term capital," thus dampening the transmission of foreign investor uncertainties about the Asian emerging markets into India's capital market.⁹ In addition, India has relatively low levels of volatile short-term foreign debt, and Indian banks and financial institutions have little exposure to the country's real estate sector.¹⁰ Nevertheless, an August 1998 IMF report noted that the Indian currency had depreciated by 17 percent against the U.S. dollar between the July 1997 onset of the Asian crisis and the end of August 1998, and that "contagion from the regional crisis and cyclical factors had contributed to the recent slowdown in industrial production and exports."¹¹ The Government of India also reported that "[e]conomic developments in India in 1998-99 have to be viewed against the backdrop of an exceptionally turbulent and unfavorable international economic environment," and noted that "[t]he East Asian crisis and its reverberations on the world economy were an important reason for the slow recovery in [India's] industrial growth and the continuing deceleration in certain sectors."¹²

⁹ IMF, *World Economic Outlook*, (Washington, DC, 1999), p. 85.

¹⁰ U.S. Department of State telegram, "1999 Trade Act Report: India," message reference No. 09196, prepared by the U.S. Embassy New Delhi, Nov. 12, 1998. Asia's buildup of short-term, unhedged debt is often cited as a key factor that contributed to the sudden collapse of confidence in the banking sector of that region during 1997. Moreover, overbuilding in commercial real estate also is frequently cited as a manifestation of that region's inadequate financial regulation, which exacerbated the Asian financial crisis. For further information see, Joseph Stiglitz, senior vice president and chief economist of the World Bank, "The East Asian Crisis and Its Implications for India," New Delhi, India, May 19, 1998, found at the World Bank Internet site, <http://www.worldbank.org/html/extldr/extme/js-0511998/default.htm>, retrieved Mar. 9, 1999.

¹¹ IMF, "IMF Concludes Article IV Consultation with India," public information notice No. 98/75, Sept. 22, 1998.

¹² Ministry of Finance, Government of India, "Economic Survey 98-99," found at Internet site <http://www.nic.in/indiabudget/es98-99/chap1.htm>, retrieved June 9, 1999.

The United States is India's largest trading partner. U.S. exports to India in 1998 totaled nearly \$3.4 billion, down slightly from \$3.5 billion in 1997; U.S. imports totaled \$8.2 billion in 1998, up from \$7.2 billion in 1997. The main U.S. merchandise exports to India in 1998 were aircraft and aircraft parts, fertilizer, machinery for boring or sinking, computers and components, soybean oil, gas turbines, food products of flour or meal, almonds, and telephonic and telegraphic parts and equipment. The main U.S. merchandise imports from India in 1998 were diamonds, jewelry and parts, apparel products, cashew nuts, carpets and rugs, and shrimp.

The United States is the largest source of foreign direct investment in India. U.S. investment in India traditionally has concentrated in India's banking, manufacturing, and financial services sectors, although in recent years U.S. investment increasingly has favored infrastructure development.¹³ U.S. direct investment in India on a historical cost (stock) basis, which had risen steadily from \$1.0 billion in 1994 to \$1.6 billion in 1997, declined marginally to \$1.5 billion in 1998 (table 4-3).¹⁴

Impact of the Glenn Amendment Sanctions

Overall, the Glenn Amendment sanctions appear to have had a relatively minimal medium- to longer-term impact on India's economy. India's financial sector and international credit rating deteriorated immediately after the U.S. sanctions were announced. To a large degree, many of the factors that insulated India from the effects of the East Asian

¹³ U.S. Department of State telegram, "Draft 1999 National Trade Estimate Report for India," message reference No. 00586, prepared by the U.S. Embassy New Delhi, Jan. 22, 1999.

¹⁴ Bureau of Economic Analysis (BEA), U.S. Department of Commerce, "International Investment Data: U.S. Direct Investment Abroad: Country Detail for Selected items, 1994-97," found at Internet site <http://www.bea.doc.gov/bea/di/longctyx.htm>, retrieved June 9, 1999, and http://www.bea.doc.gov/bea/di/diapos_98.htm retrieved July 14, 1999.

Table 4-3
U.S. Direct investment worldwide, in India, and in Pakistan, 1994-98

(Million dollars)

	1994	1995	1996	1997	1998
All countries	612,893	699,015	795,195	865,531	980,565
India	1,030	1,105	1,353	1,684	1,480
Pakistan	389	425	465	630	NA

Source: Bureau of Economic Analysis, U.S. Department of Commerce, "U.S. Direct Investment Position Abroad on a Historical-Cost Basis," found at Internet site http://www.bea.doc.gov/bea/di/diapos_98.htm, and <http://www.bea.doc.gov/bea/di/longctyx.htm>, retrieved July 9, 1999.

financial crisis, described above, also helped insulate India from most of the economic impact of the U.S. sanctions. In addition, India's relatively large economy does not rely extensively on U.S. Government or multilateral assistance. In a forthcoming publication, the Institute for International Economics (IIE) estimates the total dollar value of the Glenn Amendment sanctions on India in 1998 to be \$554 million, equivalent to just 0.15 percent of India's gross national product (GNP).¹⁵ As discussed in chapter 1, U.S. exports to India declined by 2.6 percent from 1997 to 1998, and increased by 22 percent during the first quarter of 1999 over the same period in 1998. This small economic impact of the Glenn Amendment sanctions explains in part how India's economy was able to expand by 5.6 percent in 1998, a slight improvement over the 1997 economic growth rate.

The most immediate effects of the Glenn Amendment sanctions were reflected in India's financial markets. The Mumbai (Bombay) Stock Exchange 30 blue chip index declined by 4.01 percent—its largest point loss in the year—on May 13, 1998, the day President Clinton announced his determination that economic sanctions would be activated against India.¹⁶ Despite India's excellent

¹⁵ Institute for International Economics (IIE), *Economic Sanctions Reconsidered*, 3rd edition (forthcoming), found at Internet site <http://www.iie.com/HOTOPICS/sanctions/India3.htm>, retrieved June 17, 1999. To calculate the economic costs of the sanctions, IIE estimated the annual cost to India (a similar methodology was used for Pakistan) of the loss of individual U.S. assistance programs, and summed the results. For example, for Eximbank and OPIC programs, a welfare loss was estimated at 10 percent of average annual funding for India during 1995-97, resulting in an estimated a cost of \$36 million; for suspended military and economic assistance, a welfare loss was estimated at 90 percent of average annual U.S. transfers to India during 1994-97, resulting in a cost of \$35 million.

¹⁶ "Nuke Rebukes Spook India," CNNfn, May 13, 1998, found at Internet site <http://cnnfn.com/markets/9805/13/india/>, retrieved June 9, 1999.

debt servicing record prior to May 1998, record high level of foreign exchange reserves,¹⁷ and relatively small proportion of short-term debt in its total foreign debt obligations, international assessments of India's creditworthiness turned less favorable in the second half of 1998. Moody's Investors Service (Moody's) downgraded its risk assessment for India's foreign currency-denominated debt (reflecting the risk that India might default on its foreign debt) from investment grade to speculative grade in June 1998,¹⁸ and Standard & Poor's Rating Service downgraded India's foreign currency debt risk assessment from BB+ (below investment grade) to BB (one level above the highest speculative grade) in October 1998.¹⁹ A lack of investor interest initially prompted several Indian corporations to defer bond issues in late 1998,²⁰ and some foreign banks reportedly suspended the issuance of letters of credit for India,²¹ leading to concerns that rising interest rates for less creditworthy Indian debt would create a credit squeeze and reduce India's access to foreign financing.²²

Despite this immediate financial sector downturn in India, foreign institutional investors, including Morgan Stanley Dean Witter and Merrill Lynch Asset Management, continued to list India among the top markets for foreign investment opportunities in 1998 and 1999.²³ Moreover, India successfully raised \$4.2 billion in international markets with its new Resurgent India Bonds (RIBs) in August 1998.²⁴ Aimed to

encourage investment by non-resident Indians and overseas corporate bodies, RIBs were to be used to generate funds for Indian infrastructure projects.²⁵ Capital inflows from the RIBs also are credited for helping stabilize the Indian exchange rate in late 1998.²⁶

According to one report, the Government of India estimated the overall annual cost of the Glenn Amendment sanctions to the Indian economy to be approximately \$1.5 billion.²⁷ Indian officials reportedly were most concerned that the sanctions would adversely affect the national budget and further complicate conflicting budget objectives—such as whether to provide a fiscal stimulus to counteract the sanctions and slower economic growth, to increase defense spending in light of rising tensions with Pakistan, or to raise taxes to help increase general revenues.²⁸ Concerning India's domestic economic policies, one witness at the Commission's public hearing for this investigation testified that the Glenn Amendment sanctions may have slowed India's decision to further liberalize its financial sector,²⁹ because further opening would render India more vulnerable to future economic sanctions as well as increase India's exposure to the transmission of global economic crises.

The impact of the Glenn Amendment sanctions on foreign investment in India was less clear cut. According to one report, many individuals expressing concerns about the effects of the sanctions thought India's international trade flows might be adversely affected for several months.³⁰ Some reports speculated that multinational corporations operating in India may be positioned to conduct trade with and invest in India through their overseas

¹⁷ Embassy of India in Washington, DC, "India's Foreign Currency Assets Increase to a Record Level at the End of 1998," *India: Economic News*, December 1998, p. 2.

¹⁸ "Moody's Downgrade Pounds Bank Scripts," *Indian Express*, June 23, 1998, found at Internet site <http://expressindia.com/fe/daily/19980623/17455774.html> retrieved June 9, 1999.

¹⁹ U.S. Department of State telegram, "1999 Trade Act Report," message reference No. 09196, prepared by U.S. Embassy New Delhi, Nov. 12, 1998.

²⁰ U.S. Department of State telegram, "Economic Impact of Sanctions: Cutbacks in External Borrowing," message reference No. 01292, prepared by the American Consulate Mumbai, May 20, 1998.

²¹ U.S. Department of State telegram, "Economic Impact of Sanctions: Cutbacks in External Borrowing; Confusion Among Banks; Flippant Optimism on the Cocktail Circuit," message reference No. 01292, prepared by U.S. Consulate Mumbai, May 20, 1998.

²² U.S. Department of State, "Economic Impact of Sanctions: Cutbacks in External Borrowing; Confusion Among Banks; Flippant Optimism on the Cocktail Circuit," message reference No. 01292, prepared by U.S. Consulate Mumbai, May 20, 1998.

²³ Embassy of India in Washington, DC, *India Economic News*, September-October 1998, p. 2; August 1998, p. 2; and April 1999, p. 2.

²⁴ Ministry of Finance, Government of India, "Economic Survey 98-99," found at Internet site <http://www.nic.in/indiabudget/es98-99/chap1.htm>, retrieved June 9, 1999.

²⁵ "M3 Scales to New High on Resurgent Bond Inflows," *Indian Express*, Sept. 22, 1998, found at Internet site <http://www.financialexpress.com/fe/daily/19980922/26555474.html> and Embassy of India in Washington, DC, "Non-Resident Indians," *India Economic News*, May-June, 1998, p. 2.

²⁶ U.S. Department of State telegram, "Indian Economic Update and Political Overview," message reference No. 10010, prepared by U.S. Embassy New Delhi, Dec. 11, 1998.

²⁷ "Sanctions, Slowdown Cloud Sinha's Budget," *Indian Express*, June 1, 1998, found at Internet site <http://expressindia.com/ie/daily/19980601/15250654.html> retrieved June 9, 1999.

²⁸ *Ibid.*

²⁹ Michael T. Clark, Executive Director, U.S.-India Business Council, testimony before the USITC, June 22, 1999, transcript p. 30.

³⁰ N. Vasuki Rao, "India Sees Short-Term Damage From Sanctions," *Journal of Commerce*, May 15, 1998, p. 3A.

affiliates—effectively circumventing the sanctions.³¹ One U.S. businessperson was quoted as stating that the sanctions were “punishment, but . . . not the end of trade.”³² Of investment, another said, “Most companies came in [to invest in India] for the long haul . . . but the haul is longer than they expected it to be.”³³

Effects on Activities of Multilateral Institutions with Projects in India

Approximately \$1.2 billion in new loans for India were postponed as a result of the Glenn Amendment sanctions,³⁴ as discussed below. While these project-specific loans would have improved India’s economic infrastructure, the postponement of these loans does not appear to have had an adverse effect on India’s economy.

Asian Development Bank

India received \$250 million in loans from the ADB in 1998 before the U.S. sanctions were triggered, representing 4.2 percent of ADB lending that year.³⁵ While there were no ADB projects scheduled for India at the time the Glenn Amendment sanctions were triggered,³⁶ coordinated efforts on the part of the G-7 countries³⁷ effectively has blocked

³¹ Fara Warner, “Ford Doesn’t See Sanctions Hurting Indian Operations,” *Wall Street Journal*, May 15, 1998, p. A4. The Government of India reported that imports of capital goods (machine tools, mechanical and electrical machinery, and project goods) increased “substantially” (by 7 percent) during April-November 1998 over the same period in 1997 (a decline of 16.6 percent), while foreign direct investment in India declined. Ministry of Finance, Government of India, *Economic Survey 98-99*, (undated), found at Internet site <http://www.nic.in/indiabudget/es98-99/chap1.htm>, retrieved June 9, 1999.

³² Michael S. Lelyveld, “India Reports Flurry of Investments, Indicating Little Fallout from U.S. Curbs,” *Journal of Commerce*, June 23, 1998.

³³ Molly Moore, “Bomb Tests Wound India’s Economy,” *Washington Post*, June 20, 1998, p. A1.

³⁴ Bureau of Economic and Agricultural Affairs, U.S. Department of State, “Fact Sheet: India and Pakistan Sanctions,” June 18, 1998.

³⁵ ADB, “Crisis Dominated ADB Activity, 1998 Annual Report Shows,” news release No. 29/99, Apr. 26, 1999.

³⁶ U.S. Department of State telegram, “IFI Financing for India: Demarche Request,” message reference No. 88838, prepared by U.S. Department of State, May 18, 1998.

³⁷ In addition to the United States, the other G-7 countries are Canada, France, Germany, Italy, Japan, and the United Kingdom.

new ADB loans not pertaining to basic human needs. On December 3, 1998, the ADB approved a \$250 million basic human needs³⁸ loan for the cities of Ajmer, Bikaner, Jaipur, Jodhpur, Kota, and Udaipur, in India’s Rajasthan province, to improve water supply and sanitation facilities.³⁹ According to press reports, ongoing coordinated G-7 action to enforce sanctions against India stands to jeopardize loans valued at \$1.6 billion in 1999.⁴⁰

World Bank

At the request of some executive directors, consideration of several non-basic human needs loans, which were scheduled to be presented in the last quarter of fiscal 1998, was postponed by the World Bank and its institutions.⁴¹ India had been scheduled to receive approximately \$3 billion in loans from the World Bank in fiscal year 1998 (which ended June 30, 1998); approximately \$1 billion of that amount was disbursed before the Glenn Amendment sanctions were triggered in May 1998.⁴² The projects slated to be postponed included a proposed \$130 million program to support India’s renewable energy program, a \$450 million loan to develop India’s power grid into a national grid operation and transmission service company, a \$275 million loan to improve the highway network in the state of Haryana, and a \$10 million International Finance Corporation loan to an Indian motor vehicle parts manufacturer.⁴³ The World Bank subsequently indefinitely postponed two loans to India—a \$130 million loan for an agriculture project and a \$76 million loan for a health care project.⁴⁴ In June 1998, the United States did not oppose a \$543 million World Bank basic human needs loan package to provide resources for health, education, nutrition, and rural development in the Indian state of Andhra Pradesh.⁴⁵

³⁸ The term “basic human needs” is discussed in the section on “multilateral assistance” in chapter 2.

³⁹ ADB, “ADB Loan Will Bring More Water to India’s Desert Cities,” news release No. 83/98, Dec. 3, 1998.

⁴⁰ “ADB to Lend India Up to \$1.65 Billion If Sanctions Lifted,” *Asia Pulse*, Mar. 29, 1999.

⁴¹ World Bank, “South Asia,” *Annual Report 1998*, found at Internet site <http://www.worldbank.org/html/extpb/annrep98/south.htm>, retrieved Aug. 9, 1999.

⁴² “World Bank Indefinitely Postpones Two Loans to India,” *Wall Street Journal*, June 3, 1998, p. A 15.

⁴³ “Loans to India Postponed,” World Bank Group, news release No. 98/177/SAS, May 26, 1998.

⁴⁴ “World Bank Indefinitely Postpones Two Loans to India,” *Wall Street Journal*, June 3, 1998, p. A 15.

⁴⁵ “U.S. Backs World Bank on Loan to Poor India State,” *Wall Street Journal*, June 26, 1998, p. B6.

Impact on Pakistan

Macroeconomic Overview

Pakistan's economy is approximately one-sixth that of India. As with India, more than one-fourth of Pakistan's economy is agriculture-based (table 4-1), although a diverse manufacturing sector produces a wide range of goods such as soda ash, cement, paints and varnishes, motor vehicles, electronics, and consumer goods. Pakistan continues to suffer from the effects of a damaging foreign exchange crisis stemming from years of unrestrained fiscal policies that exacerbated inflation and allowed the public debt, money supply, and current account deficit to expand virtually unchecked. Internal political instability and sectarian, ethnic, and tribal conflicts also have acted to constrain Pakistan's economic growth,⁴⁶ deter investment, and exacerbate such structural economic problems as a high debt service burden and inadequate economic infrastructure to support agricultural and industrial expansion.⁴⁷ Agricultural production provides basic inputs for Pakistan's key industries—textiles and sugar.⁴⁸ Although social welfare indicators have improved in recent years, progress remains slow and uneven. A significant share of Pakistan's population suffers from acute poverty,⁴⁹ while the Pakistani Government's resources for socioeconomic development are limited.⁵⁰

Pakistan is heavily dependent on foreign aid, particularly because the country receives relatively little foreign investment (table 4-1). Since the withdrawal of most U.S. aid to Pakistan in October 1990,⁵¹ Japan has emerged as Pakistan's largest bilateral aid donor. In 1997, Pakistan received \$35 million in economic assistance from the United

⁴⁶ Central Intelligence Agency (CIA), *The World Factbook*, 1998, found at Internet site <http://www.cia.gov/cia/publications/factbook/pk.html>, retrieved June 9, 1999.

⁴⁷ World Bank, "Pakistan," (undated) found at Internet site <http://www.worldbank.org/html/extdr/offrep/sas/pk2.htm>, retrieved June 9, 1999.

⁴⁸ Foreign Agricultural Service (FAS), U.S. Department of Agriculture, "Pakistan: Agricultural Situation 1999," *Global Agriculture Information Network (GAIN) Report*, Jan. 1, 1999, found at Internet site http://www.fas.usda.gov/scripts/g...splay_report.exe?Rep_ID=254034655.0, retrieved June 9, 1999.

⁴⁹ World Bank, "Pakistan."

⁵⁰ Bureau of South Asian Affairs, U.S. Department of State, "Background Notes: Pakistan," November 1997, found at U.S. Department of State Internet site, http://www.state.gov/www/background_notes/pakistan_971100_bgn.html, retrieved June 9, 1999.

⁵¹ Preexisting U.S. sanctions on Pakistan are discussed in more detail in chapter 2.

States,⁵² and an estimated \$431 million from Japan.⁵³ With concessional loan and grant assistance from international financial institutions such as the ADB, the World Bank, and other bilateral aid donors, Pakistan received a total of approximately \$2 billion of economic aid in 1997 (table 4-1).⁵⁴ Increasingly, however, assistance to Pakistan has shifted away from grants towards loans repayable in foreign exchange.⁵⁵

Pakistan's foreign debt stands at nearly \$32 billion,⁵⁶ creating a high foreign debt burden relative to the size of the Pakistani economy. Debt service consumes approximately 10 percent of Pakistan's annual GDP. Nevertheless, Pakistan traditionally has maintained an excellent record for honoring its foreign debt service obligations even during periods of strained financial resources.⁵⁷ Despite the country's already high current foreign debt burden, additional foreign capital remains important to bridge the country's financing gap. The IMF recently estimated that for the period 1999-2001, Pakistan will need a total of \$12 billion in "residual" external financing; \$1.6 billion of that financing need was forecast to come from the IMF, \$1.4 billion from the World Bank, \$1 billion from the ADB, \$400 million from bilateral creditors, and \$7.7 billion from "exceptional financing" such as debt rescheduling and roll-over of Pakistan's short-term liabilities.⁵⁸

⁵² U.S. Department of State telegram, "1999 Trade Act Report for Pakistan," message reference No. 08672, prepared by U.S. Embassy Islamabad, Nov. 23, 1998.

⁵³ Amir Zia, "More Sanctions Pressure Pakistan's Economy," Reuters, found at Internet site <http://www.pathfinder.com/money/latest/tr/RB/1998May 29, 273.html>, retrieved June 9, 1999. According to Japanese statistics, Pakistan's leading aid donors in 1996 were: Japan (\$282 million), the United Kingdom (\$61 million), and Spain (\$22 million). Embassy of Japan in Pakistan, found at Internet site http://www.japanemb.org.pk/eco_rel.html, retrieved July 19, 1999. In March 1998, Japan announced a \$266 million "soft term" loan for Pakistan for balance of payments support and road construction. Embassy of Japan in Pakistan, "Rs 12.326 Billion (U.S. \$266 million) Japanese Assistance for Pakistan," press release, March 10, 1998, found at Internet site <http://www.japanemb.org.pk/press1.html>, retrieved July 19, 1999.

⁵⁴ U.S. Department of State telegram, "1999 Trade Act Report for Pakistan," message reference No. 08672, prepared by the U.S. Embassy Islamabad, Nov. 23, 1998.

⁵⁵ Bureau of South Asian Affairs, U.S. Department of State, "Background Notes: Pakistan," November 1997, found at U.S. Department of State Internet site, http://www.state.gov/www/background_notes/pakistan_971100_bgn.html, retrieved June 9, 1999.

⁵⁶ U.S. Department of State telegram, "1999 Trade Act Report for Pakistan," message reference No. 08672, prepared by the U.S. Embassy Islamabad, Nov. 23, 1998.

⁵⁷ Ibid.

⁵⁸ IMF, "IMF Concludes Article IV Consultation with Pakistan."

Pakistan's major trading partners are Japan, the European Union, and the United States. Pakistan is a net agricultural importer, and annually imports approximately \$2 billion of agricultural commodities, including wheat, edible oils, sugar, pulses (peas and beans), and high-value consumer-ready food products.⁵⁹ Pakistan requires an estimated 2 million metric tons of wheat imports annually to supplement domestic supplies in order to meet domestic consumption and reserve requirements. Pakistan's main suppliers of wheat are the United States and Australia.⁶⁰

U.S. merchandise exports to Pakistan in 1998 totaled \$719 million, down by over 40 percent from \$1.2 billion in 1997; U.S. merchandise imports from Pakistan totaled \$1.7 billion in 1998, up from \$1.4 billion in 1997. The main U.S. exports to Pakistan in 1998 were wheat and meslin, fertilizers, aircraft parts, cotton, gas turbines, boring or sinking machinery, and parts of furnace burners. Faced with an increasing trade deficit, the Government of Pakistan has attempted to diversify the country's industrial base and to strengthen export industries, but has achieved only limited success.⁶¹ U.S. imports from Pakistan in 1998 were mainly apparel products, kitchen and bath linens, and carpets and textile floor coverings.

Economic liberalization and deregulation in Pakistan since 1990 have resulted in an economy that generally is open to foreign investment. U.S. and other foreign direct investment in Pakistan is relatively low, but is increasing. U.S. investment in Pakistan increased from \$389 million in 1994 to \$630 million in 1997, the latest year for which data are available (table 4-3).⁶² The low level of foreign investment may be explained by "inadequate infrastructure, lack of ideal foreign investment environment, perceptions of political instability, law and order difficulties, policy inconsistencies, and resistance to the new policies by some elements of the bureaucracy."⁶³ For example, the U.S. Embassy in Islamabad reported that "during 1998, [the Government of Pakistan] pursued a campaign of harassment and intimidation against the heavily foreign invested independent power producers which

⁵⁹ FAS, U.S. Department of Agriculture, "Pakistan: Agricultural Situation 1999."

⁶⁰ Ibid.

⁶¹ Bureau of South Asian Affairs, U.S. Department of State, "Background Notes: Pakistan."

⁶² U.S. direct investment position on a historical-cost (stock) basis. Bureau of Economic Analysis (BEA), U.S. Department of Commerce, "International Investment Data: U.S. Direct Investment Abroad: Country Detail for Selected Items, 1994-97," found at Internet site <http://www.bea.doc.gov/bea/di/longctyx.htm>, retrieved June 9, 1999.

⁶³ Bureau of South Asian Affairs, U.S. Department of State, "Background Notes: Pakistan."

broadly and severely damaged the climate for both private direct and portfolio investment."⁶⁴

Pakistan entered an economic downturn during 1996, with real GDP growth declining by 0.4 percent in 1997 (table 4-2). To revive the economy, the Pakistani Government introduced an economic reform program in March 1997 and, in October 1997, secured a 3-year, \$1.6 billion IMF economic structural adjustment loan to support the reform measures. The terms for the IMF loan required Pakistan to implement an adjustment program that focused on reducing government spending and improving the country's current account balance.⁶⁵ One result of that IMF program was a sharp decline in Pakistan's imports from the world during 1998. The Government of Pakistan reported that the country's imports declined by more than 20 percent between July and September 1998 compared to July-September 1997.⁶⁶ On an annual basis, Pakistan's imports declined from \$11.9 billion in 1997 to \$10.1 billion in 1998, or by 15.1 percent.⁶⁷

By May 1998, with the first \$208 million allotment of the IMF loan disbursed, Pakistan had made significant headway towards reducing its external deficit and raising the GDP growth rate. Further aided by favorable 1997-98 agricultural harvests and low international prices for key imports of petroleum and wheat, Pakistan was poised for economic recovery in early 1998.⁶⁸ However, ramifications of the East Asian financial crisis delayed Pakistan's full economic recovery. Pakistan's fully convertible currency may have made it vulnerable to capital flight as international investors lost much of their confidence in Asian markets during 1997-98.⁶⁹

⁶⁴ U.S. Department of State telegram, "1999 Trade Act Report for Pakistan," message reference No. 08672, prepared by U.S. Embassy Islamabad, Nov. 23, 1998.

⁶⁵ The IMF program targeted a reduction of Pakistan's external current account deficit from 6.4 percent of the 1996-97 GDP to 4.0-4.5 percent of the 1998-97 GDP. IMF, "IMF Approves Combined ESAF/EFF Financing for Pakistan," press release No. 97/48, Oct. 20, 1997, found at Internet site <http://www.imf.org/external/np/sec/pr1997/PR9748.HTM>, retrieved June 30, 1999.

⁶⁶ Economic Adviser's Wing, Finance Division, Government of Pakistan, "Review of Economic Situation During July-September, 1998-99," found at Internet site <http://www.finance.gov.pk/>, retrieved July 5, 1999.

⁶⁷ U.S. Department of State telegram, "1999 Trade Act Report for Pakistan," message reference No. 08672, prepared by U.S. Embassy Islamabad, Nov. 23, 1998.

⁶⁸ Economic Adviser's Wing, Finance Division, government of Pakistan, "Review of Economic Situation during July-September 1998-99," found at Internet site <http://www.finance.gov.pk/>, and World Bank, "Pakistan Economic Report," Apr. 7, 1999.

⁶⁹ IMF, "IMF Concludes Article IV Consultation with Pakistan," public information notice No. 99/4, Jan. 27, 1999.

The East Asian financial crisis also resulted in lower demand—and reduced earnings—for Pakistani exports to important Asian markets.⁷⁰

Impact of the Glenn Amendment Sanctions

The Glenn Amendment sanctions appear to have had a small impact on Pakistan's economy, although concurrent events affecting Pakistan's economy make it difficult to establish the specific effects of the U.S. sanctions, and the economic data do not provide conclusive evidence of the effects of the U.S. sanctions. As discussed above, the United States was a relatively small provider of aid, trade, and investment for Pakistan even before the Glenn Amendment sanctions were triggered.⁷¹ Pakistan experienced a sharp economic downturn immediately after the Glenn Amendment was triggered, but that downturn occurred in part because Japan, Pakistan's largest trading partner and aid donor, joined the United States and other G-7 countries in cutting all but humanitarian aid.⁷² Domestic austerity measures under Pakistan's IMF economic adjustment program, as discussed above, also account for part of Pakistan's economic downturn and the sharp decline in U.S. and world exports to Pakistan in 1998 and the first quarter of 1999. The IIE estimates the average annual economic impact of the U.S. sanctions on Pakistan's economy during 1991-98 to be \$405 million, or 1 percent of Pakistan's GNP.⁷³ Despite the international sanctions and economic difficulties it faced during the year, Pakistan's economy expanded by 5.4 percent in 1998, in contrast to an economic contraction the previous year.

After the G-7 countries imposed economic sanctions, the Government of Pakistan implemented emergency economic measures to ward off an anticipated economic crisis. In some instances, these emergency measures exacerbated Pakistan's economic situation. Following a June 26, 1998 currency devaluation to curb imports and bolster exports, the Government of Pakistan declared a state of

emergency⁷⁴ and subsequently announced an economic austerity program on July 21, 1998 that effectively froze foreign currency deposits, increased retail prices of gasoline by 25 percent, and introduced a multiple exchange rate system to prevent extreme currency depreciation.⁷⁵ These measures were intended to minimize any adverse effects of the sanctions on the country's balance of payments—already under pressure from the austerity measures implemented under Pakistan's IMF loan program. However, the measures also discouraged new foreign capital inflows.⁷⁶ The Government of Pakistan appealed to Pakistanis worldwide for donations to help the country offset the impact of sanctions. To facilitate the foreign donations, the Pakistani Government set up two "National Self-Reliance Funds" to receive donations in either foreign currency or in rupees.⁷⁷

Pakistan's financial markets deteriorated sharply as investors' confidence in the economy waned and capital inflows slowed.⁷⁸ In the days after the sanctions were announced, the Pakistani rupee hit a record low of 46.3 to the dollar before the currency was officially devalued and a new multiple exchange rate regime imposed. The Karachi Stock Exchange's 100-share index hit an all-time low of 755 on July 14, 1998, from a peak of over 2,600 in 1994; by late July 1998, the index had recovered to over 900 on news that the United States would partially lift the sanctions.⁷⁹ The major credit rating agencies downgraded Pakistan to significantly lower quality ratings, with Standard & Poor's downgrading its rating of Pakistan's foreign currency bonds to CCC- in October 1998 to reflect a substantial and growing risk of near-term default.⁸⁰ According to the IMF, the

⁷⁴ FAS, U.S. Department of Agriculture, "Pakistan: Agricultural Situation 1999."

⁷⁵ Embassy of Pakistan in Washington, DC, "Economic Package Announced," www.pakistan-embassy.com/ecopackage.htm, retrieved May 15, 1999.

⁷⁶ World Bank, *1999 World Development Indicators*, (World Bank, Washington, D.C., 1999), p. 181.

⁷⁷ Embassy of Pakistan in Washington, DC, "The Prime Minister of Pakistan appeals to Overseas Pakistanis for Donations to Help Offset the Impact of Foreign Sanctions," <http://www.pakistani-embassy.com/donate.htm>, retrieved June 9, 1999.

⁷⁸ FAS, U.S. Department of Agriculture, "Pakistan: Agricultural Situation 1999."

⁷⁹ Hugh Pope, "Pakistan Appears to Mover Away from Defaulting," *Wall Street Journal*, July 24, 1998, p. A12.

⁸⁰ "S&P Cuts Long-Term Pak Rating to Triple-C Minus," *Financial Express*, Oct. 1, 1998, found at Internet site <http://www.expressindia.com/fe/daily/19981013/288655484.p.html>, retrieved June 9, 1999.

⁷⁰ Ibid.

⁷¹ Those sanctions are discussed in chapter 2.

⁷² Ministry of Foreign Affairs, Government of Japan, "Comments by the Chief Cabinet Secretary on Measures in Response to Nuclear Testing Conducted by Pakistan," May 29, 1998.

⁷³ The methodology used by IIE for this estimate calculates the average annual cost of U.S. economic sanctions imposed on Pakistan since 1991. Pre-existing (before the Glenn Amendment) sanctions are summarized in ch. 2 of this report. IIE, *Economic Sanctions Reconsidered*, 3rd edition (forthcoming), found at Internet site <http://www.iie.com/HOTOPICS/sanctions/India3.htm>, retrieved June 17, 1999.

sanctions and ensuing loss of market confidence “have engendered a precarious market situation in 1998-99” in Pakistan.⁸¹

Press reports monitored the economic effects of the Glenn Amendment sanctions on Pakistan’s economy. According to one press report, Pakistan’s Prime Minister Nawaz Sharif put his Islamabad offices, valued at \$20 million, for sale as a sanctions-related austerity measure.⁸² Another report wrote that “[t]here have been few announcements of new business with Pakistan [since the sanctions were triggered] as the country tightens its belt.”⁸³ Foreign exporters, especially in Asia, reportedly refused letters of credit issued by Pakistani local banks and demanded counter guarantees from foreign banks in Pakistan.⁸⁴ The Pakistani business community also expressed the concern that importers of Pakistani cotton and rice would source elsewhere if conditions in Pakistan made supplies uncertain.⁸⁵

Pakistan experienced a foreign debt payments crisis in late 1998. By the end of November 1998, Pakistan’s annual debt service obligations reached \$1.6 billion, while the country’s stock of official reserves had declined to \$450 million—barely enough to cover three weeks of the country’s imports—from \$950 million in July 1998.⁸⁶ Facing a recession and low foreign exchange reserve, the Pakistani Government eventually decided to stop servicing part of its foreign debt and to accumulate debt arrears.⁸⁷ Those defaulted loans reportedly included a USDA loan that had been used to purchase U.S. wheat.⁸⁸

Pakistan received an unanticipated economic benefit from the United States in late 1998. On December 21, 1998, the United States and Pakistan announced an agreement resolving a longstanding legal and diplomatic dispute regarding 71 F-16 military aircraft that Pakistan purchased from the

United States, but which had not been delivered due to the imposition of U.S. economic and military sanctions in October 1990. Under terms of the agreement, Pakistan withdrew and released its claim against the United States for delivery of the aircraft in return for a U.S. payment of \$324.6 million; the United States also agreed to provide Pakistan with an additional payment of \$2.3 million for the prior sale of undelivered equipment associated with the F-16s, \$60 million of white wheat, and \$80 million of additional goods and benefits⁸⁹—producing a significant year-end 1998 windfall for Pakistan’s cash-starved economy.

Effects on Activities of Multilateral Institutions with Projects in Pakistan

No new loans for Pakistan were under consideration from international financial institutions at the time the Glenn Amendment sanctions were triggered.⁹⁰ Most World Bank loans had been disbursed for the fiscal year. The sanctions delayed disbursement of a second installment of a \$1.6 billion IMF loan under a 3-year economic assistance for Pakistan; as a sign of its support, the United States abstained from—but did not oppose—the vote for the loan.

International Monetary Fund

Pakistan was scheduled to consult with the IMF in mid-1998 to determine whether the country was meeting its economic reform commitments, with the goal of receiving a second IMF disbursement later that year. Consultations with the IMF were delayed, however, as the United States and other G-7 countries debated the merits of providing the loan after Pakistan’s May 1998 nuclear detonations. As Pakistan’s economic situation appeared to deteriorate sharply in late 1998, the G-7 partners eventually agreed to relax their multilateral sanctions to allow the IMF to negotiate a support program for Pakistan.⁹¹ On November 7, 1998, the United States announced, as part of its decision to undertake measures to ease the Glenn Amendment sanctions against India and

⁸¹ IMF, “IMF Concludes Article IV Consultation with Pakistan.”

⁸² Christopher Kremmer, “PM’s New Building Becomes a Liability,” *Sunday Morning Herald*, July 18, 1998, found at Internet site <http://www.smh.com.au/news/9807/18/text/world9.html>, retrieved June 9, 1999.

⁸³ Michael S. Lelyveld, “India Reports Flurry of Investments, Indicating Little Fallout from U.S. Curbs,” *Journal of Commerce*, June 23, 1998.

⁸⁴ N. Vasuki Rao, “Pakistan Nuke Test Has Impact on Trade,” *Journal of Commerce*, June 3, 1998, p. 4A.

⁸⁵ *Ibid.*

⁸⁶ IMF, “IMF Concludes Article IV Consultations with Pakistan.”

⁸⁷ FAS, U.S. Department of Agriculture, “Pakistan: Agricultural Situation 1999.”

⁸⁸ Cindy Snyder, “Grain Producers See Few Ups This Year,” *Ag Weekly, Online Edition*, Dec. 19-25, 1998, found at Internet site <http://www.magicvalley.com/agweekly/archives/Dec.98/12.19.98/weeksa/agrain.shtml>, retrieved July 10, 1999.

⁸⁹ Office of the Press Secretary, The White House, “Statement by the Press Secretary,” Dec. 21, 1998.

⁹⁰ Bureau of Economic and Agricultural Affairs, U.S. Department of State, “Fact Sheet: India and Pakistan Sanctions,” June 18, 1998.

⁹¹ Office of the Press Secretary, The White House, “Statement by the Press Secretary Easing of Sanctions on India and Pakistan,” Nov. 7, 1998.

Pakistan, that it would work with the G-7 countries to support lending from multilateral development banks to support an IMF agreement on a credible reform program for Pakistan,⁹² including support for ADB and World Bank lending for Pakistan.⁹³ Pakistan's consultations with the IMF resumed in late 1998, by which time Pakistan had accumulated over \$1.5 billion of debt arrears "and stood on the edge of a general payments default."⁹⁴ The IMF approved the disbursement of \$575 million for Pakistan on January 14, 1999, with the United States abstaining from—but not opposing—the vote.⁹⁵ At that time, the IMF noted:

After the nuclear explosions of May 1998 and the imposition of economic sanctions, Pakistan's economy was affected adversely due to an erosion in investor confidence and a decline in private capital flows. In response, the government took several measures to contain the impact on the balance of payments and to sustain domestic economic activity. These included fiscal and exchange rate measures in addition to exchange restrictions. Nevertheless, Pakistan's economy remained vulnerable, capital outflows were registered, official external reserves declined, and external payments arrears were accumulated.

In May 1999, IMF approved an additional \$51 million disbursement, signaling its satisfaction with Pakistan's progress towards economic reform.⁹⁶

World Bank

Since 1952, the World Bank has approved 95 loans and 140 credits for Pakistan, totaling more than \$10 billion. During fiscal year 1998, the World Bank programmed 41 projects for Pakistan, totaling \$4.2 billion. The World Bank fiscal year ends June 30; consequently, most World Bank disbursements for Pakistan for fiscal year 1998 had already been made prior to the May 30, 1998 triggering of the Glenn Amendment sanctions—Pakistan had received all of

⁹² Ibid.

⁹³ Office of the Press Secretary, The White House, "Press Briefing by Joe Lockhart," Nov. 9, 1998.

⁹⁴ U.S. Department of State telegram, 1999 Trade Act Report for Pakistan," message reference No. 08672, prepared by the U.S. Embassy Islamabad, Nov. 23, 1998.

⁹⁵ IMF, "IMF Approves Second Annual ESAF Arrangement."

⁹⁶ "IMF Clears \$51 M for Pakistan," *The Times India*, May 26, 1999, found at Internet site <http://www.timesofindia.com/260599/26worl14.htm>, retrieved June 9, 1999.

the \$808 million in aid programmed by the World Bank for fiscal year 1998.⁹⁷ However, the World Bank reported that, at the request of some members, it postponed consideration of several new non-basic human needs loans for Pakistan which were scheduled to be presented in the last quarter of fiscal year 1998.⁹⁸

Effects on Humanitarian Activities in India and Pakistan

The Glenn Amendment requires the United States to terminate certain bilateral assistance programs, and to oppose multilateral loans by international financial institutions. However, the direct effects of the Glenn Amendment sanctions on humanitarian activities in India and Pakistan appear to be minimal because the provision of food and humanitarian assistance is exempt from the sanctions.

U.S. Bilateral Activities

As discussed in chapter 2, the scope of permitted humanitarian activities under the Glenn Amendment was broadened by the Agriculture Export Relief Act of 1998, which was signed by President Clinton on July 14, 1998. That Act authorized the President to waive from the Glenn Amendment through September 30, 1999, provisions with respect to USDA credits and guarantees to support the purchase of food or other agricultural commodities and also excepted from the sanctions fertilizer, medicines and medical equipment, as well as humanitarian assistance.⁹⁹

The Glenn Amendment sanctions also appear to have had a minimal effect on humanitarian activities in India and Pakistan because U.S. bilateral economic aid to both countries was relatively small before the sanctions were implemented. India's economy does not generally depend on U.S. bilateral aid. In the case of Pakistan's more aid-dependent economy—for which Japan provides more than 10 times U.S. annual economic aid—most U.S. economic aid to Pakistan was already restricted to humanitarian assistance when the Glenn Amendment was triggered.¹⁰⁰ Moreover,

⁹⁷ David E. Sanger, "Sanctions Could Badly Bruise Fragile Pakistan," *New York Times International*, May 29, 1998, p. A9.

⁹⁸ World Bank, "South Asia," *Annual Report 1998*, found at Internet site <http://www.worldbank.org/html/extpb/annrep98/south.htm>, retrieved Aug. 9, 1999.

⁹⁹ U.S. Congress, "Agriculture Export Relief Act of 1998," P.L. 105-194, 112 Stat. 627, July 14, 1998.

¹⁰⁰ U.S. economic sanctions in place against Pakistan since October 1990 are discussed in chapter 2.

the United States extended additional humanitarian assistance to Pakistan after the Glenn Amendment sanctions were imposed. On October 13, 1998, the United States announced a Food Aid Initiative for Pakistan under which approximately 100,000 metric tons of U.S. wheat were donated to support humanitarian and developmental projects in Pakistan.¹⁰¹

Multilateral Activities

As discussed in chapter 2, the United States gained the support of the G-7 countries and Russia to postpone consideration by international financial

¹⁰¹ Chidanand Rajghatta, "Loan Blockade to Figure in Indo-U.S. Talks," *Indian Express*, found at Internet site <http://www.indian-express.com/ie/daily/19990128/02850315.html>, retrieved June 9, 1999.

institutions of non-basic human needs loans for India and Pakistan.¹⁰² One concern raised in India was that the definition of "basic human needs" did not include certain economic infrastructure projects such as power plants and roads, which ultimately may affect such needs.¹⁰³ Projects slated for India that were postponed by the ADB and the World Bank after May 1998 are discussed above. In January 1999, as discussed above, the United States did not oppose a \$575 million IMF loan disbursement to Pakistan.

¹⁰² FAS, "United States to Donate Wheat to Pakistan," news release No. 0414-98, Oct. 13, 1998.

¹⁰³ U.S. Department of State, Bureau of Economic and Agricultural Affairs, "Fact Sheet: India and Pakistan Sanctions," June 18, 1998, found at Internet site http://www.state.gov/www/regions/sa/fs_980618_india_pak.html, retrieved June 11, 1999.

CHAPTER 5

Likely Impact on the United States, India, and Pakistan of Reimposition of the Glenn Amendment Sanctions

This chapter has two parts. The first part discusses the likely impact of reimposition of the Glenn Amendment sanctions based on the Commission's informal telephone survey, testimony of witnesses at the Commission's hearing for this investigation, and written submissions received in response to the Commission's *Federal Register* notice. The second part presents the quantitative estimates from the general equilibrium and partial equilibrium models used to analyze the likely economic impact of reimposition of the Glenn Amendment sanctions.

Summary of Findings

Based on reports from the U.S. private sector, the reimposition of the prohibition of USDA export credits and guarantees is likely to adversely affect U.S. wheat exports to Pakistan. U.S. wheat producers in the Pacific Northwest are likely to be most affected, especially if Pakistan shifts to purchase wheat from alternate suppliers in Australia and Canada.

Individuals contacted during this investigation expressed the concerns that the reimposition of the Glenn Amendment sanctions prohibiting financing from the U.S. Export-Import Bank (Eximbank) and the Overseas Private Insurance Corporation (OPIC) might harm U.S. international competitiveness and diminish the perception of U.S. companies as reliable suppliers. These sanctions would make it difficult for U.S. companies to participate in major infrastructure projects in India and Pakistan. U.S. banking and financial service providers reported that the reimposition of sanctions prohibiting U.S. bank loans to the Governments of India and Pakistan is likely to adversely affect their operations.

Reimposition of the Glenn Amendment sanctions prohibiting Eximbank and OPIC financing could delay projects in India and Pakistan until alternate sources of financing are arranged. Pakistan also could be adversely affected if U.S. sanctions with respect to International Monetary Fund (IMF) programs are

reimposed, and the United States and other major countries work to oppose IMF loans for Pakistan.

Based on estimates from the Global Trade Analysis Project (GTAP) model, the overall economic effects of reimposition all of the Glenn Amendment sanctions are likely to be small. For India, the sanctions impose an estimated total cost of \$320 million dollars (about 0.1 percent of India's 1995 gross domestic product, GDP); of that amount, the cost of the sanctions prohibiting USDA export credits and guarantees was estimated to be zero, reflecting the fact that India imports relatively little grain from the United States. For Pakistan, the sanctions impose an estimated total cost of \$57 million (about 0.1 percent of Pakistan's 1995 GDP); approximately \$20 million of that amount was estimated to be due to the cost of reimposing the sanctions prohibiting USDA export credits and guarantees. For the United States, the sanctions impose a total cost of \$161 million (about 0.002 percent of 1995 U.S. GDP). In the GTAP model, reimposing the sanctions prohibiting USDA export credits and guarantees produced a net benefit for the United States (similar to the benefit from removing an export subsidy) of about \$27 million dollars; imposition of other sanctions without prohibiting USDA export credits would have had a total cost to the United States of \$188 million.

Other results of the GTAP model show that the Glenn Amendment sanctions have negligible effects on U.S. employment (losses of less than 0.2 percent in the U.S. grain sector); U.S. wages and the return to capital decline by less than 0.05 percent. The effects on wages and the return to capital in India and Pakistan also are small (decline by 0.1 percent). The major alternative suppliers benefitting from reduced U.S. exports to India and Pakistan under the Glenn Amendment sanctions are Japan; Europe; the rest of Asia; and Australia, New Zealand, and the South Pacific trading partners. The partial equilibrium model confirmed many of these trends, and showed that net welfare loss to Pakistan from the imposition of the sanctions could be as large as \$6 million in the special

industrial machinery and equipment sector, or less than \$500,000 for most of the other sectors examined.

Reimposition of Glenn Amendment Sanctions

As discussed in chapter 2, the Glenn Amendment sanctions imposed on India and Pakistan remain in full force. However, the President temporarily waived certain components of the sanctions after authorization was granted by the Congress. The waived sanctions are those relating to: (1) the prohibition of U.S. Department of Agriculture (USDA) export credits and guarantees; (2) prohibitions with respect to Eximbank, OPIC, and TDA assistance for India and Pakistan; (3) the prohibition with respect to the International Military Education and Training programs for India and Pakistan; (4) the prohibition with respect to the provision of loans or credits to the Government of India or Government of Pakistan by U.S. banks; and (5) the extension of any financial or technical assistance to Pakistan by any international financial institution assisting the IMF in regard to Pakistan. The sanctions with regard to USDA export credits and guarantees were waived until September 30, 1999; the other listed sanctions were waived through October 21, 1999.

Private Sector Views

Impact on the United States

Reimposition of sanctions on USDA credits and guarantees

Based on responses from industry and association representatives presented in chapter 3, the reimposition of the prohibition of USDA export credits and guarantees is likely to adversely affect U.S. wheat exports to Pakistan because Pakistan is a significant user of USDA export credits. Wheat exports to India are likely to be minimally affected because India is not a large user of USDA export credits.¹ When the Glenn Amendment sanctions

¹ In fiscal year 1998, Pakistan was allocated \$250 million of USDA export credit (\$60 million in fiscal year 1999), while India was allocated \$20 million (both in fiscal years 1998 and 1999). USDA, "Monthly Summary of Export Credit Guarantee Activity," found at USDA Internet site <http://www.fas.usda.gov/excredits/Monthly/1998/ecg10-98.html>, and <http://www.fas.usda.gov/excredits/Monthly/1999/ecg5-99.html> retrieved July 10, 1999.

were triggered in May 1998, Pacific Northwest white wheat growers in Idaho,² Oregon, and Washington³ were particularly concerned⁴ about their future sales because Pakistan was a major customer for their product.⁵ According to one report, Pakistan purchased nearly one-third of all Pacific Northwest white wheat exported in 1996-97. Another source noted that white wheat is more expensive than other types of wheat, and that Pacific Northwest growers would be hard-pressed to find alternate customers for the product that had been slated for Pakistan.⁶

The USDA estimates that Pakistan will continue to be a major U.S. wheat market in 1998-99 and for the foreseeable future, requiring an average of 2 million metric tons of wheat imports annually to supplement domestic production.⁷ Of Pakistan's 2.4 million metric tons of 1997-98 commercial wheat imports, 78 percent was purchased from the United States and financed with USDA export credits and guarantees (under the GSM-102 program⁸), and 22 percent was purchased from Australia.⁹ USDA also

² Carol R. Dumas, "Sanctions Loom Over PNW Wheat," *Ag Weekly, Online Edition*, June 6-12, 1998, found at Internet site <http://www.magicvalley.com/agweekly/archives/June.98/06.06.98/weeksag/frontpage.shtml>, retrieved July 10, 1999.

³ Senator Slade Gorton (R-Washington), "Clinton Sanctions on Pakistan Threaten Washington Wheat Exports," news release, June 3, 1998.

⁴ Michigan also reportedly grows the same type of white wheat for export. Curt Anderson, "U.S. Scurries to Save Wheat Market in Pakistan," *Seattle Times*, June 12, 1998, found at Internet site http://222.seattletimes.com/news/nation-world/html98/altwh en_061298.html, retrieved July 10, 1999, and "Clinton Oks Pakistan Wheat Bill," Associated Press Farm Writer, June 13, 1998, found at Internet site <http://www.industrywatch.com/apnews/19980613/05/27/188090st.html>, retrieved July 10, 1999.

⁵ Carol R. Dumas, "Asian Crunch Sharpens IMF Debate," *Ag Weekly, Online Edition*, Aug. 8-14, 1998, found at Internet site <http://www.magicvalley.com/agweekly/archives/August.98/08.08.98/weeksag/frontpage.shtml>, retrieved July 10, 1999.

⁶ Carol R. Dumas, "Sanctions Loom Over PNW Wheat," *Ag Weekly, Online Edition*, June 6-12, 1998, found at Internet site <http://www.magicvalley.com/agweekly/archives/June.98/06.06.98/weeksag/frontpage.shtml>, retrieved July 10, 1999.

⁷ Foreign Agricultural Service (FAS), USDA, "Pakistan: Agricultural Situation 1999," *Global Agriculture Information Network (GAIN) Report*, Jan. 1, 1999, found at Internet site http://www.fas.usda.gov/scripts/g...splay_report.exe?Rep_ID=254034655.0.

⁸ That program is described in chapter 2.

⁹ U.S. Department of State, "FY 1998 Country Commercial Guide: Pakistan," prepared by U.S. Embassy Islamabad, http://www.state.gov/www/about_state/business/com_guides/1998/southeast_asia/pakistan98.html, retrieved July 10, 1999.

notes that foreign “[c]ompetitors are offering improved credit terms and financing schemes to market their wheat to Pakistan,”¹⁰ and that Pakistan “will keep its door open for alternative suppliers to minimize reliance on a few sources.”¹¹

Reimposition of public sector trade finance sanctions

Individuals contacted during this investigation expressed the concerns that reimposition of the Glenn Amendment sanctions with respect to Eximbank and OPIC financing would harm U.S. international competitiveness and diminish the perception of U.S. companies as reliable suppliers. A number of respondents to the Commission’s informal telephone survey stated that the loss of Eximbank and OPIC financing, if those sanctions are reimposed, would be detrimental to their operations.¹² At the Commission’s hearing for this investigation, a representative of the National Association of Manufacturers outlined the costs of U.S. companies not participating in major infrastructure projects because of the loss of public sector trade financing. He stated that “infrastructure development projects cannot be tuned on and off like a faucet,”¹³ and he reported that, in addition to the direct costs of not becoming involved in the initial stages of a project, there are “indirect, longer term costs of not participating in major infrastructure projects at the outset” because of missed opportunities to become long-term supply providers.¹⁴ In its written submission to the Commission, Boeing stressed the importance of continued availability of Eximbank financing to support future aircraft sales to India and Pakistan.¹⁵

¹⁰ The U.S. Embassy in Islamabad recently reported that both the Australian Wheat Board and the Canadian Wheat Board offer credit with more competitive interest rates than the United States is able to offer under the GSM program. U.S. Department of State telegram, “GSM Credit Guarantee Program,” message reference No. 03248, prepared by U.S. Embassy Islamabad, Apr. 23, 1999.

¹¹ FAS USDA, “Pakistan: Agricultural Situation 1999,” *Global Agriculture Information Network (GAIN) Report*, Jan. 1, 1999, found at Internet site http://www.fas.usda.gov/scripts/g...splay_report.exe?Rep_ID=254034655.0.

¹² Responses to the Commission’s informal telephone survey are summarized in chapter 3.

¹³ Marino Marcich, Director, International Investment and Finance, National Association of Manufacturers, testimony before the USITC, June 22, 1999, transcript, p. 66.

¹⁴ *Ibid.*, pp. 66-67.

¹⁵ The Boeing Company, written submission to the USITC, received July 8, 1999.

Reimposition of private sector lending sanctions

According to the U.S. private sector, reimposition of the sanctions prohibiting U.S. bank loans to the Governments of India and Pakistan¹⁶ could have a significant impact on activities of U.S. companies currently operating in India, although the extent of such an impact will depend on the scope of the implementing regulations.¹⁷ As reported in chapter 3, firms involved in banking, securities, and asset management contacted by the Commission reported that reimposition of the sanctions is likely to adversely affect their operations in India and Pakistan, as well as the reputation of U.S. firms as reliable suppliers. Those companies also stated that, even though the private sector lending sanctions were not implemented, their operations have been affected by uncertainty about how the sanctions eventually will be implemented.¹⁸

Impact on India and Pakistan

As discussed in chapter 4, India’s relatively large, diverse economy does not rely extensively on U.S. economic assistance or programs such as USDA export credits. Therefore, reimposition of the Glenn Amendment sanctions may have a minimal impact on India. The reimposition of sanctions prohibiting Eximbank and OPIC programs could delay projects that need financing from those agencies, as was the case with the phase 2 construction of Enron’s Dabhol power plant—Enron eventually obtained financing from OPIC and from Japan’s Export-Import Bank.¹⁹

Based on current U.S.-Pakistani trade patterns, reimposition of the Glenn Amendment sanctions prohibiting USDA export credits may have a short-term adverse economic impact on Pakistan, which uses USDA export credits for wheat purchases. However, as discussed in chapter 3, Pakistan most likely would shift to alternate suppliers in Australia and Canada should USDA export credits no longer be available.²⁰

¹⁶ Implementing regulations for these sanctions were never drafted. As discussed in chapter 2, these sanctions were of particular concern to the U.S. business community because of a lack of clear definitions in the sanctions for the terms “bank,” “loan,” and “government.”

¹⁷ Michael T. Clark, Executive Director, U.S.–India Business Council, testimony before the Commission, June 22, 1999, transcript, p. 40.

¹⁸ These views are discussed in more detail in chapter 3.

¹⁹ The Enron project is described in chapter 2.

²⁰ For further discussion, see the section on “Agriculture and forest products” in chapter 3. North American Export Grain Association, Inc., response to USITC survey, May 24, 1999.

Quantitative Estimates

This section presents the Commission's quantitative estimates of the likely impact on the United States, India, and Pakistan, of reimposition of the Glenn Amendment sanctions. The Commission obtained the quantitative estimates for India using a global general equilibrium trade model, the GTAP model, and its corresponding data base. Because of limitations in the GTAP database, a partial equilibrium model also was used to obtain results for Pakistan.²¹

GTAP Model Results

The GTAP model, which uses 1995 as the base year, was used to simulate the reimposition of the Glenn Amendment sanctions on India and Pakistan. More detailed information about the GTAP model is presented in appendix F. The following limitations of the GTAP model were identified with respect to this analysis:

- The GTAP model covers trade only among 45 countries and regions. While India is specified in the GTAP model, Pakistan is not. To conduct this analysis, the Commission used a composite region, the "Rest of South Asia" (referred to as "South Asia/Pakistan" in this report) as a proxy for Pakistan; it was estimated that Pakistan's economy accounts for nearly two-thirds of this composite region. A partial equilibrium model, described below, provided additional estimates specific to Pakistan.
- The GTAP model contains only a limited and highly aggregated representation of the services sector. While it proved feasible to estimate the costs and benefits of the sanctions prohibiting USDA export credits and guarantees, it was not possible in this model to estimate the impact of the reimposition of the Glenn Amendment sanctions with respect to Eximbank and OPIC assistance, bank lending, military assistance, and assistance for IMF programs.²²

²¹ Chapter 4 discusses the results of an analysis by the Institute for International Economics (IIE), which used a different methodology to estimate the annual cost to India and Pakistan of the loss of specific U.S. assistance programs. For further information, see IIE, *Economic Sanctions Reconsidered*, 3rd edition (forthcoming), found at Internet site <http://www.iie.com/HOTOPICS/sanctions/India3.htm>, retrieved June 17, 1999.

²² The Institute for International Economics (IIE) measured the welfare loss for India and Pakistan of the

The GTAP model experiments for this study were conducted in two phases. In the first phase, the Commission estimated the total economic effects of the Glenn Amendment sanctions on the United States, India, and South Asia/Pakistan. For this analysis, the Commission's estimates of the trade-related sanctions were converted into quantitative export restrictions (the approach used is described in appendix F). The resulting quantitative restrictions were then applied using the GTAP model to determine the effects on output, prices, trade, and other economic indicators. For each sector analyzed in the GTAP model, a share of U.S. exports likely to be subject to sanctions was determined, and an import reduction of this share was imposed on the sector. In the second phase, the incremental effect of reimposing the prohibition of USDA export credits and guarantees was estimated separately.

Total economic effects of the Glenn Amendment sanctions

The overall estimated economic effects of the Glenn Amendment sanctions on the United States, India, and Pakistan are small. A common measure of the effects of a policy change on a national economy is the equivalent variation, which is the monetary amount that is equivalent to the cost (or benefit) of the policy change. By this measure, the model results show that the Glenn Amendment sanctions impose an equivalent variation cost of \$320 million dollars on India, \$88.5 million on South Asia/Pakistan, of which about 64 percent—or \$57 million—would be the estimated cost for Pakistan alone, and \$161 million on the United States. In other words, the Glenn Amendment sanctions, as approximated in this analysis, impose an estimated cost to the United States, equivalent to a reduction in the national purchasing power of \$161 million, or about 0.002 percent of the U.S. GDP in 1995.²³ As noted in appendix F, the simulated policy changes likely overstate the actual impact of the sanctions.

²²—Continued

Glenn Amendment sanctions prohibiting Eximbank, OPIC, and other U.S. financial assistance based on estimates of average annual funding for these programs. The IIE estimates and methodology used are discussed in chapter 4. For this analysis, the Commission modeled export credit assistance for agricultural commodities as subsidies in these commodities; other Glenn Amendment financial restrictions (such as those with respect to Eximbank and OPIC assistance, bank lending, military assistance, and IMF assistance) are less commodity-specific, and thus not amenable to treatment in the model.

²³ In a separate experiment imposing sanctions on India alone, the Commission estimated the cost of the Glenn Amendment sanctions for the United States as \$25.1 million less than the cost of imposing sanctions on both India and South Asia/Pakistan. Therefore, the distortion caused by using South Asia/Pakistan as a proxy for Pakistan is probably about 40 percent of \$25 million, or about \$10 million.

Table 5-1 and 5-2 describe the principal results of the GTAP model. They show the percent change in domestic output after imposition of the quantitative export restrictions (used as a proxy for the sanctions) and the percent change in exports to India and Pakistan, respectively.²⁴ Because India and Pakistan are relatively small trading partners of the United States, most of the changes are very small.

Table 5-1 shows the percent change in domestic production in each of 13 sectors (grains are discussed in more detail below) for India, South Asia/Pakistan,²⁵ and the United States, after the

²⁴ Only those products or sectors determined to be subject to the Glenn Amendment sanctions are shown in the tables.

²⁵ Percentage changes for Pakistan can probably be considered to be similar to those provided for the composite region. To analyze Pakistan in the GTAP model, a more aggregate region containing Pakistan was used as a proxy. This region, referred to as the “rest of South Asia” in GTAP (in this report, the term South

imposition of the quantitative export restrictions described in appendix F and table F-1. For most of the listed items, domestic production in India and South Asia/Pakistan increases to partially replace lost imports from the United States, while U.S. output declines very slightly due to reduced export demand. The exception is in the motor vehicles and parts category, in which a large share of U.S. exports consists of automotive parts—domestic production in India and South Asia/Pakistan decreases somewhat, probably due to the reduction in the supply of U.S. automotive parts as a result of the sanctions. In no case does U.S. output decline by more than a small fraction of 1 percent.

²⁵—Continued

Asia/Pakistan is used), includes Pakistan, Bangladesh, Bhutan, Maldives, and Nepal. Weighted by their 1995 gross domestic product, Pakistan makes up about 64 percent of this aggregate grouping. Because South Asia/Pakistan is larger than Pakistan, the effect on the United States of imposing sanctions on this larger aggregate will be slightly overstated.

Table 5-1
India, South Asia/Pakistan, and the United States: GTAP model estimates of percent change in domestic output after sanctions imposed

	(Percent)		
GTAP sector	India	South Asia/Pakistan	United States
Other minerals	0.14	0.21	-0.07
Petrochemicals	0.06	0	(1)
Chemicals and rubber products	0.53	(1)	(1)
Non-metallic mineral	0.07	(1)	0
Iron and steel	0.90	0.99	-0.18
Non-ferrous metals	0.63	0.32	(1)
Fabricated metal products	1.00	-0.27	(1)
Motor vehicles and parts	-0.27	-0.47	(1)
Other transport	0.88	0.55	(1)
Electrical and electronic	3.67	1.17	(1)
Other machinery	0.46	(1)	(1)
Other manufactures	(1)	-0.05	0.05
Grains	(1)	0.76	-0.16

¹ Change less than ± 0.05 percent.

Source: Estimated by the U.S. International Trade Commission.

Table 5-2
Exports to India and South Asia/Pakistan, by GTAP sector and exporting country/region, percentage change due to sanctions

GTAP sector	United States	Sri Lanka	Other NAFTA	South Asia/ Pakistan	Japan	Latin America	Europe	Africa	South Pacific	Asia	Total
<i>Exports to India:</i>											
Other minerals	-74.8	1.4	1.5	1.3	1.4	1.5	1.3	1.4	1.4	1.4	0.0
Petrochemicals	-13.4	0.5	0.5	0.6	0.5	0.5	0.5	0.5	0.5	0.5	-0.3
Chemicals/rubber products	-28.7	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2	-1.5
Non-metallic mineral	-42.7	1.9	2.0	1.9	1.9	1.9	1.9	1.9	1.9	1.9	-1.7
Iron and steel	-99.4	5.9	5.9	5.1	5.9	5.9	5.9	5.9	5.9	5.9	-3.2
Non-ferrous metals	-99.4	2.0	2.1	1.7	2.0	2.0	2.0	2.0	2.0	2.0	-0.1
Fabricated metal products	-60.8	12.0	12.1	11.2	12.0	12.1	12.0	12.0	12.0	12.0	-2.2
Motor vehicles	-70.9	1.8	2.0	0.4	1.8	1.9	1.8	1.8	1.8	1.8	-1.0
Other transport	-47.8	8.4	8.5	0.0	8.4	8.4	8.3	8.3	8.3	8.4	-5.4
Electrical and electronic	-73.0	21.0	21.0	20.0	21.0	21.0	21.0	20.9	20.9	21.0	-2.7
Other machinery	-29.3	3.0	3.1	2.3	3.0	3.0	3.0	3.0	3.0	3.0	-1.2
Other manufactures	-0.8	0.2	0.3	-0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.0
Grains	-35.9	0.0	3.0	0.9	0.0	3.0	3.0	0.0	3.0	3.0	-3.4
GTAP sector	United States	India	Sri Lanka	Other NAFTA	Japan	Latin America	Europe	Africa	South Pacific	Asia	Total
<i>Exports to South Asia/Pakistan:</i>											
Other minerals	-20.7	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.9	-0.2
Petrochemicals	0.0	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	0.0
Chemicals/rubber products	-3.9	-0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.2	-0.1
Non-metallic mineral	-38.1	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2	-0.3
Iron and steel	-95.8	3.7	4.2	4.2	4.2	4.2	4.1	4.1	4.1	4.2	-1.3
Non-ferrous metals	-98.5	0.6	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	-0.1
Fabricated metal products	-60.5	0.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	-0.4
Motor vehicles	-85.8	-0.6	0.6	0.7	0.6	0.6	0.6	0.6	0.6	0.6	-0.1
Other transport	-37.1	2.6	3.2	3.3	3.2	3.2	3.2	3.2	3.1	3.2	-1.1
Electrical and electronic	-75.0	2.7	4.0	4.0	4.0	4.0	4.0	4.0	3.9	4.0	-0.5
Other machinery	-24.7	0.6	1.3	1.3	1.3	1.3	1.3	1.3	1.2	1.3	-0.4
Other manufactures	-80.4	0.9	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	-0.6
Grains	-25.3	20.6	20.1	20.0	0.0	20.1	20.0	20.0	20.0	20.1	-13.1

Source: Estimated by the U.S. International Trade Commission.

Table 5-2 shows the estimated percent change in exports to India and South Asia/Pakistan of products subject to the Glenn Amendment sanctions, by selected trading partners and for the world. Exports to India and South Asia/Pakistan from other countries generally increase after the U.S. sanctions are imposed in the model, so that in most cases overall imports of these goods by India and Pakistan do not decline very much. U.S. exports to India and Pakistan generally decrease by the percentages imposed as quantitative export restrictions (the proxy for sanctions) in the model.²⁶ Table 5-3 shows the value of exports to India and South Asia/Pakistan by commodity before sanctions are imposed. For India, this table shows that the major alternative suppliers benefitting from reduced U.S. exports to that country, based on existing trade patterns, would be Japan, Europe,²⁷ the rest of Asia,²⁸ and the South Pacific²⁹ countries. For South Asia/Pakistan, these same partners dominate trade, exporting total volumes in excess of those exported by the United States.

Table 5-4 shows the changes in import and domestic prices faced by India and Pakistan after the application of sanctions in the model. While import prices increase, by as much as 4 percent in the case of electrical and electronic goods in India, overall domestic price increases are much lower. As expected, disturbances in bilateral trade relations with the United States (such as those caused by the Glenn Amendment sanctions) appear to have only minimal effects on the domestic economies of India and Pakistan because they are relatively small trading partners with the United States, and because other partners are able to supply much of the trade lost by the United States.

Reimposition of sanctions prohibiting USDA export credits and guarantees

In the above analysis, the Commission incorporated the Glenn Amendment sanctions with

²⁶ For example, the Commission estimated that 74.8 percent of U.S. exports of other minerals as subject to Glenn Amendment sanctions (table F-1), corresponding to the 74.8 percent decline in U.S. exports shown in table 5-2.

²⁷ These experiments aggregate the United Kingdom, Germany, Denmark, Sweden, Finland, the rest of the European Union, the European Free Trade Area, the Central European Associates, and the former Soviet Union into the region "Europe".

²⁸ For this analysis, the Rest of Asia comprises the Republic of Korea, Indonesia, Malaysia, Philippines, Singapore, Thailand, Vietnam, China, Hong Kong, and Taiwan.

²⁹ For this analysis, the South Pacific comprises Australia, New Zealand, and the rest of the world.

respect to USDA export credits and guarantees into the GTAP model as a 10 percent price effect—similar to an export subsidy—for grains. The approach used with respect to USDA export credits and guarantees is described in appendix F. Reimposition of the sanctions with respect to USDA export credits would eliminate these export credits.

Table 5-2 shows that the estimated effects of the sanctions prohibiting the export credits for grains, combined simultaneously with the other modeled Glenn Amendment sanctions on India and Pakistan. Overall, they resulted in 36 percent and 25 percent declines in U.S. grain exports to India and Pakistan, respectively, although India's reduction is from a much smaller base. India and Pakistan would continue to import U.S. grain, but pay a higher price for it. Further analysis was not possible because the degree of commodity aggregation required by the model may conceal a great deal of change in the composition of these imports.

The reduction in U.S. grain exports can be attributed strictly to the re-imposed prohibition on USDA export credits for grain in this model, without any detectable spillover effects from the other restrictions. This is shown by an additional analysis using the GTAP model, in which the Commission estimated the separate incremental effect of reimposing the prohibition of USDA credits and guarantees (the effects would be comparable to removing an export subsidy for grains in the model) with other Glenn Amendment sanctions in place. The results of this experiment were negligible in all sectoral effects other than in grain trade, and were identical to the effects of trade in grain reported in tables 5-2 and 5-4.

The additional effect of the sanctions on USDA export credits on each country's equivalent variation cost was very small: zero for India, which imports relatively little grain from the United States, and \$31 million for South Asia/Pakistan—or about \$20 million for Pakistan alone. In other words, of the \$57 million estimated cost to Pakistan alone of imposing all sanctions identified above, \$20 million of that cost is due to the sanctions prohibiting USDA export credits and guarantees.

For the United States, reimposition of the sanctions prohibiting USDA export credits and guarantees for grain exports to India and South Asia/Pakistan produced a net estimated benefit of about \$27 million dollars. That is, reimposition of the Glenn Amendment sanctions prohibiting USDA export credits and guarantees decreases the net estimated cost of the sanctions to the United States from \$188 million to \$161 million.

Table 5-3
Exports to India and South Asia/Pakistan, by GTAP sector and exporting country/region, before sanctions
(Million dollars)

GTAP sector	United States	Sri Lanka	Other NAFTA	South Asia/ Pakistan	Japan	Latin America	Europe	Africa	South Pacific	Asia
<i>Exports to India:</i>										
Other minerals	67.6	0.7	56.8	1.8	10.8	83.6	3,290.5	177.5	507.1	109.4
Petrochemicals	51.9	0.0	2.4	0.0	34.0	15.6	311.1	17.1	133.5	322.4
Chemicals/rubber products	1,275.3	5.5	72.8	55.8	708.6	33.3	2,462.3	937.8	1,422.2	2,065.0
Non-metallic mineral	29.2	0.1	2.3	0.1	71.4	1.6	169.8	0.8	4.6	98.2
Iron and steel	214.8	4.5	92.7	1.8	428.3	138.3	1,520.9	97.0	297.9	223.3
Non-ferrous metals	30.1	0.9	15.7	0.0	66.2	167.4	545.0	158.3	295.8	493.1
Fabricated metal products	174.0	2.2	10.4	1.2	63.0	3.9	362.8	10.2	102.8	223.5
Motor vehicles	28.6	0.0	0.5	0.7	309.0	0.3	243.7	1.5	11.0	170.4
Other transport	262.7	0.0	18.5	0.0	70.5	3.6	443.8	2.2	8.4	293.1
Electrical and electronic	442.0	1.4	30.6	0.0	151.5	0.3	412.6	1.3	48.4	823.7
Other machinery	1,684.8	1.0	67.1	0.5	2,102.2	34.0	7,651.8	14.7	138.1	1,695.0
Other manufactures	104.6	0.3	3.3	0.4	28.9	0.1	118.9	0.4	12.6	256.2
Grains	1.1	0.0	1.1	0.1	0.0	4.6	0.2	0.0	0.0	0.0
Total¹	5,441.8	42.7	658.4	266.6	4,504.1	1,580.6	20,662.1	2,736.5	7,575.2	10,975.3
GTAP sector	United States	India	Sri Lanka	Other NAFTA	Japan	Latin America	Europe	Africa	South Pacific	Asia
<i>Exports to South Asia/Pakistan:</i>										
Other minerals	7.9	45.3	0.9	7.1	3.7	5.8	17.4	6.0	58.3	14.9
Petrochemicals	1.9	0.3	0.0	0.0	4.8	14.5	61.5	19.8	1,306.8	386.3
Chemicals/rubber products	322.4	216.8	6.4	33.9	343.7	33.5	1,766.7	195.1	1,431.1	1,681.8
Non-metallic mineral	6.1	93.7	2.9	0.6	39.8	0.9	122.9	0.2	9.8	269.4
Iron and steel	67.8	64.0	2.3	20.8	361.2	44.5	477.3	58.0	83.8	290.1
Non-ferrous metals	3.9	20.7	1.1	3.7	11.5	7.1	122.6	47.3	76.8	167.8
Fabricated metal products	16.8	13.9	0.7	1.7	103.1	1.6	177.8	4.8	76.4	281.1
Motor vehicles	7.5	120.3	0.2	0.0	709.8	1.3	214.5	1.3	43.5	113.6
Other transport	82.4	39.4	2.3	2.6	57.4	3.3	279.8	17.7	45.6	263.8
Electrical and electronic	49.7	15.5	0.1	12.3	80.9	1.1	449.0	2.5	29.9	336.2
Other machinery	388.5	144.2	2.5	26.3	1,180.5	33.1	2,872.0	6.4	179.9	1,489.4
Other manufactures	7.4	3.3	1.3	0.8	36.6	0.2	51.4	1.2	26.2	246.7
Grains	431.0	20.7	0.0	57.9	0.0	4.0	65.8	0.0	18.6	0.4
Total¹	2,247.1	1,976.0	148.9	361.7	3,226.0	931.0	8,821.2	906.6	5,260.4	10,686.9

¹ Totals include other GTAP sectors not subject to sanctions that are not shown in the table.

Source: Estimated by the U.S. International Trade Commission.

Table 5-4
India and South Asia/Pakistan: GTAP model estimates of percent change in import and domestic prices

(Percent)

GTAP sector	Import price		Domestic price	
	India	South Asia/Pakistan	India	South Asia/Pakistan
Other minerals	0.25	0.19	(¹)	(¹)
Petrochemicals	0.22	0	(¹)	(¹)
Chemicals and rubber products	1.23	0.06	0.09	(¹)
Non-metallic mineral	0.65	0.08	0	0
Iron and steel	1.62	0.96	0.08	0.14
Non-ferrous metals	0.38	0.19	0.08	0.05
Fabricated metal products	2.46	0.30	0.11	0.14
Motor vehicles and parts	0.28	0.07	0.12	0.14
Other transport	1.31	0.41	0.06	0.08
Electrical and electronic	3.97	0.79	0.24	0.15
Other machinery	0.75	0.30	0.12	0.13
Other manufactures	(¹)	0.32	0.06	0.10
Grains	11.45	7.62	-0.10	0.49

¹ Change less than \pm 0.05 percent.

Source: Estimated by the U.S. International Trade Commission.

Effects on employment and investment

Aggregate employment in the GTAP model does not change, but sectoral changes in employment are calculated. For the United States, the grain sector loses about 0.16 percent of its employment, and iron and steel loses about 0.18 percent; no other sectors face employment changes of greater than seven hundredths of one percent. U.S. wages and the return to capital fall by less than 0.05 percent. In India and South Asia, wages and the return to capital fall by 0.1 percent.

Partial Equilibrium Analysis for Pakistan

The Commission's Commercial Policy Analysis System (COMPAS) partial equilibrium model was used to estimate the short run effects of the Glenn Amendment sanctions on Pakistan's economy.³⁰ This provided certain information specifically on Pakistan that was not available in the GTAP model. The Commission first converted the Glenn Amendment sanctions into estimated quotas on U.S. exports to Pakistan (the methodology used is described in appendix F). The resulting quotas then were applied using the COMPAS model to estimate the effects (in percentage change) on the prices and quantities of Pakistan's domestic output, on Pakistan's imports

from the United States, and on Pakistan's imports from the rest of the world. Use of the COMPAS model requires data on the importing country's (Pakistan's) domestic production of specific commodities, as well as imports from the United States and from the rest of the world. The most recent year for which such data appear to be available is 1991.

Table 5-5 summarizes the effects of the COMPAS model for each of the 14 manufacturing sectors in the model. For all 14 sectors, the imposition of the Glenn Amendment sanctions (as estimated by the quota on U.S. exports to Pakistan) resulted in an increase in the domestic price of imports from the United States in the Pakistani market; as was the case with the GTAP model results, the increase in domestic prices in Pakistan was small and less than 1 percent—most likely reflecting the small share of U.S. imports in Pakistan's domestic markets. Like the GTAP model, the COMPAS model results also show that the Glenn Amendment sanctions appear to lead Pakistan to substitute away from U.S. imports and towards domestic output and imports from the rest of the world. In the COMPAS model, Pakistani domestic output and imports from the rest of the world are estimated to increase by as much as 5 percent and 7 percent, respectively, in the case of professional and scientific equipment. On balance, the COMPAS model estimates that the net welfare loss to Pakistan due to the imposition of the sanctions could be as large as \$6 million for the special industrial machinery and equipment sector, or less than \$500,000 for most of the sectors examined.

³⁰ The COMPAS model is discussed in more detail in appendix F. For further information, see Joseph F. Francois and Keith H. Hall, "COMPAS: Commercial Policy Analysis System," USITC staff paper, 1993.

Table 5-5
Pakistan: COMPAS model estimates of effects of imposition of quantitative export restrictions

COMPAS sector	U.S. exports (Shock)	Domestic output		Imports from rest of world		U.S. price		Domestic price		ROW price		Net welfare			
		<i>Percent</i>												<i>Million dollars</i>	
		min	max	min	max	min	max	min	max	min	max	min	max	min	max
Basic industrial chemicals	-10.4	0	0	0	0.1	2.2	3.7	0	0	0	0	(¹)	(¹)		
Iron and steel	-22.2	0.1	0.1	0.1	0.2	5.2	8.8	0	0	0	0	(¹)	-0.8		
Non-ferrous metal	-13.4	0.5	0.6	0.6	0.8	3.1	5.2	0.1	0.1	0	0.1	(¹)	(¹)		
Structural metal products	-52.1	4.2	4.7	5.2	6.0	17.5	30.7	0.5	0.8	0.2	0.5	(¹)	-0.9		
Fabricated metal products	-29.1	0.1	0.1	0.1	0.1	7.2	12.2	0	0	0	0	(¹)	(¹)		
Special industrial machinery and equipment ...	-48.7	1.1	1.2	1.3	1.5	14.7	25.6	0.1	0.2	0.1	0.1	-3.2	-6.0		
Machinery and equipment except electrical ...	-42.8	1.7	1.9	2.1	2.4	12.5	21.6	0.2	0.3	0.1	0.2	-2.3	-4.2		
Electrical industrial machinery and apparatus ..	-88.6	2.8	2.9	3.4	3.7	55.6	109. 1	0.3	0.5	0.1	0.3	-1.4	-3.0		
Radio, television and communication equipment and apparatus	-31.4	1.4	1.5	1.7	2.0	8.3	14.2	0.1	0.3	0.1	0.2	-1.3	-2.4		
Electrical apparatus and supplies	-38.6	0.2	0.3	0.2	0.4	10.3	17.8	0	0	0	0	(¹)	(¹)		
Ship building and repairing	-78.9	2.4	3.4	2.9	4.4	37.8	70.6	0.3	0.6	0.1	0.3	(¹)	(¹)		
Motor vehicles	-20.2	0.1	0.1	0.1	0.1	4.6	7.9	0	0	0	0	(¹)	(¹)		
Professional and scientific equipment	-58.8	3.7	5.2	4.6	6.8	21.1	37.5	0.4	0.9	0.2	0.6	-1.8	-3.4		
Photographic and optical goods	-22.8	0.6	0.9	0.7	1.1	5.6	9.4	0.1	0.2	0	0.1	(¹)	(¹)		

¹ Change less than \$500,000.

Source: Estimated by the U.S. International Trade Commission.

APPENDIX A
Request Letter

OK

NANCY L. JOHNSON, CONNECTICUT
JIM BUNNING, KENTUCKY
AMO HOUGHTON, NEW YORK
WALLY HERGER, CALIFORNIA
JIM MCCRERY, LOUISIANA
DAVE CAMP, MICHIGAN
JIM RAMSTAD, MINNESOTA
JIM NUSSLE, IOWA
SAM JOHNSON, TEXAS
JENNIFER DUNN, WASHINGTON
MAC COLLINS, GEORGIA
ROB PORTMAN, OHIO
PHILIP S. ENGLISH, PENNSYLVANIA
JOHN ENSIGN, NEVADA
JON CHRISTENSEN, NEBRASKA
WES WATKINS, OKLAHOMA
J.D. MAYWORTH, ARIZONA
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RICHARD E. NEAL, MASSACHUSETTS
MICHAEL R. McNULTY, NEW YORK
WILLIAM J. JEFFERSON, LOUISIANA
JOHN S. TANNER, TENNESSEE
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COMMITTEE ON WAYS AND MEANS

U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515-6348

March 16, 1999

A.L. SINGLETON, CHIEF OF STAFF

JANICE MAYS, MINORITY CHIEF COUNSEL

The Honorable Lynn Bragg
Chairman
U.S. International Trade Commission
500 E Street, S.W.
Washington, D.C. 20436

Dear Chairman Bragg:

Last year, the President imposed economic sanctions on India and Pakistan under Section 102 of the Arms Export Control Act ("Glenn Amendment"), which was enacted in 1994 (22 U.S.C. 2799aa(b)-1). Because the Glenn Amendment does not provide Presidential waiver authority, U.S. economic sanctions were imposed automatically once the President determined that India and Pakistan had detonated nuclear explosive devices.

In July, Congress passed Section 902 of the India-Pakistan Relief Act of 1998 (Public Law 105-277), which authorized the President to waive the application of U.S. sanctions to India and Pakistan. On December 1, the President waived the India and Pakistan sanctions, after determining that a waiver of U.S. sanctions would increase the likelihood of progress toward our nuclear non-proliferation objectives (Presidential Determination No. 99-7 issued December 1, 1998). By law, the President's waiver authority ends on October 21, 1999.

In anticipation of Congressional action during 1999 on sanctions reform legislation and consideration of possible renewal of Section 902 of the India-Pakistan Relief Act, I hereby request the Commission conduct a fact-finding investigation under Section 332(g) of the Tariff Act of 1930, 19 U.S.C. 1332(g), to provide an overview and analysis of the economic impact of U.S. sanctions policy with respect to India and Pakistan. Specifically, the Commission's report and analysis should:

- (1) Identify U.S. industries (including U.S. agricultural commodities) which were affected by Glenn Amendment sanctions and the impact on each industry.

- (2) Analyze, to the extent data are available, the economic impact of U.S. sanctions on U.S. exports, U.S. imports, jobs, consumers, and investment in the affected industries.
- (3) Assess the likely economic impact of the expiration of Section 902 of the India-Pakistan Relief Act and future reimposition of U.S. economic sanctions, including the impact on U.S. exports to India and Pakistan. U.S. jobs, investment, and consumers. The report should identify specific U.S. products and sectors which would be significantly affected, the likely impact on each product or sector, and the availability of alternative foreign suppliers for leading U.S. exports. The report should also assess the likely impact of unilateral U.S. sanctions on America's reputation as a reliable supplier of food technology, other products, and on U.S. competitiveness in the affected industries.
- (4) Assess the likely economic impact of expiration of Section 902 of the India-Pakistan Relief Act and reimposition of U.S. economic sanctions on U.S. agriculture, including the likelihood of retaliation, the specific commodities most likely to be affected, potential alternative foreign suppliers, the likely impact on the incomes of U.S. producers of the specific agricultural commodities identified, and the likely impact of unilateral U.S. sanctions on America's reputation as a reliable supplier of agricultural commodities.
- (5) Analyze the likely impact of unilateral U.S. economic sanctions on the Indian and Pakistani economies.
- (6) Summarize the instances where U.S. sanctions have affected humanitarian activities as well as the activities of multinational institutions in India and Pakistan.

The report should be transmitted not later than 6 months following receipt of this request. Thank you for your cooperation. With best personal regards,

Sincerely

A handwritten signature in black ink that reads "Bill Archer". The signature is written in a cursive, flowing style.

Bill Archer
Chairman

APPENDIX B
***Federal Register* Notice**

CVP, California: Proposed amendment of Stony Creek Water District's water service contract, No. 2-07-20-W0261, to allow the Contractor to change from paying for all project water, whether used or not, to paying only for project water scheduled or delivered and to add another month to the irrigation period. Contract awarded January 13, 1999.

Lower Colorado Region

Bureau of Reclamation, PO Box 61470 (Nevada Highway and Park Street), Boulder City, Nevada 89006-1470, telephone 702-293-8536.

Modified Contract Actions

1. Milton and Jean Phillips, Cameron Brothers Construction Co., Ogram Farms, Bruce Church, Inc., and Sunkist Growers, Inc., BCP, Arizona: Water service contracts, as recommended by Arizona Department of Water Resources, with agricultural entities located near the Colorado River for up to 15,557 acre-feet per year total.

2. Arizona State Land Department, State of Arizona, BCP, Arizona: Contract for 6,607 acre-feet per year of Colorado River water for agricultural use and related purposes on State-owned land. Modified to include Kenneth or Ann Easterday and Robert E. Harp, Co., previously in item No. 1.

4. Brooke Water Co. and Havasu Water Co., BCP, Arizona: Contracts for additional M&I allocations of Colorado River water to entities located along the Colorado River in Arizona for up to 2,610 acre-feet per year as recommended by the Arizona Department of Water Resources.

Discontinued Contract Actions

1. Kenneth or Ann Easterday and Robert E. Harp, Co., BCP, Arizona: To be included in Arizona State Lands Department contract, item No. 2.

Completed Contract Actions

1. Clayton Farms, BCP, Arizona: Water service contract, as recommended by the Arizona Department of Water Resources. Completed as Raynor Ranches for Colorado River water for up to 4,500 acre-feet per year total.

4. Town of Quartzsite, BCP, Arizona: Contract for additional M&I allocation of Colorado River water to entities located along the Colorado River in Arizona for up to 1,070 acre-feet per year as recommended by the Arizona Department of Water Resources.

30. Mr. Robert H. Chesney, BCP, Arizona: Amend contract No. 5-07-30-W0321 to increase the cubic-foot-per-second diversion and facilitate the installation of a low-lift pump.

Upper Colorado Region

Bureau of Reclamation, 125 South State Street, Room 6107, Salt Lake City, Utah 84138-1102, telephone 801-524-4419.

New Contract Actions

18. Carlsbad ID, Carlsbad Project, New Mexico: Contract to provide for repayment of the District's 15 percent share of proposed modifications to Avalon Dam under the SOD program.

Modified Contract Actions

1(b) City of Page, Arizona, Glen Canyon Unit, CRSP, Arizona: Long-term contract for 1,000 acre-feet of water for municipal purposes.

1(c) LeChee Chapter of the Navajo Nation, Glen Canyon Unit, CRSP, Arizona: Long-term contract for 1,000 acre-feet of water for municipal purposes.

13. Public Service Company of New Mexico, Navajo Unit, CRSP, New Mexico: New water service contract for diversion of 16,700 acre-feet, not to exceed a depletion of 16,200 acre-feet of project water for cooling purposes for a steam electric generation plant.

Completed Contract Actions

6. Carlsbad ID, Carlsbad Project, New Mexico: Multi-year contract to allow the District to lease water to the New Mexico Interstate Stream Commission to fulfill New Mexico's water obligation to Texas under Supreme Court's Amended Decree in *Texas v. New Mexico* 485 U.S. 288(1988).

Great Plains Region

Bureau of Reclamation, PO Box 36900, Federal Building, 316 North 26th Street, Billings, Montana 59107-6900, telephone 406-247-7730.

New Contract Actions

37. Fort Shaw and Greenfields IDs, Sun River Project, Montana: Contract for additional SOD costs for repairs to Willow Creek Dam. In the process of preparing basis of negotiation for Greenfields ID.

38. Green Mountain Project, Colorado: Reclamation is currently developing a contract for surplus HUP water for municipal/recreational purposes in the Grand Valley. This contract is to benefit the endangered fish recovery.

Modified Contract Actions

3. Ruedi Reservoir, Fryingpan-Arkansas Project, Colorado: Second round water sales from the regulatory capacity of Ruedi Reservoir. Water service and repayment contracts for up to 17,000 acre-feet annually for M&I use; contract with Colorado Water

Conservation Board and the U.S. Fish and Wildlife Service for 21,650 acre-feet for endangered fishes.

32. Savage ID, P-SMBP, Montana: Negotiating a long-term irrigation contract.

36. Fryingpan-Arkansas Project, Colorado: This contract action amends contract No. 9-07-70-W099 with Busk-Ivanhoe, Inc.

Discontinued Contract Actions

30. Public Service Company of Colorado: Agreement to furnish surplus water from the historic users pool at Green Mountain Reservoir for the purpose of generating hydroelectric power at the Grand Valley Powerplant, Palisades, Colorado.

Dated: April 20, 1999.

Wayne O. Deason,

Deputy Director, Program Analysis Office.

[FR Doc. 99-10470 Filed 4-26-99; 8:45 am]

BILLING CODE 4310-94-P

INTERNATIONAL TRADE COMMISSION

[Investigation 332-406]

Overview and Analysis of the Economic Impact of U.S. Sanctions With Respect to India and Pakistan

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation, scheduling of public hearing, and notice of opportunity to submit comments.

EFFECTIVE DATE: April 16, 1999.

SUMMARY: Following receipt on March 19, 1999, of a request under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)) from the Committee on Ways and Means (the Committee) of the U.S. House of Representatives, the U.S. International Trade Commission (the Commission) instituted investigation No. 332-406, Overview and Analysis of the Economic Impact of U.S. Sanctions With Respect to India and Pakistan. The Commission plans to submit its report to the Committee by September 17, 1999.

FOR FURTHER INFORMATION CONTACT:

Information on economic aspects may be obtained from James Stamps, Office of Economics (202-205-3227 or e-mail to jstamps@usitc.gov); industry aspects, from Scott Ki, Office of Industries (202-205-2160); and legal aspects, from William Gearhart, Office of the General Counsel (202-205-3091). The media should contact Margaret O'Laughlin, Office of External Relations (202-205-1819). Hearing impaired individuals are advised that information on this matter

can be obtained by contacting the TDD terminal on (202-205-1810).

BACKGROUND: In its letter, the Committee noted that the President imposed economic sanctions on India and Pakistan in May 1998 under section 102 of the Arms Export Control Act ("Glenn Amendment"), which was enacted in 1994 (22 U.S.C. 2799aa(b)-1); U.S. economic sanctions were imposed automatically once the President determined that India and Pakistan had detonated nuclear explosive devices. In July 1998, Congress passed section 902 of the India-Pakistan Relief Act of 1998 (Pub. L. 105-277), which authorized the President to waive application of U.S. sanctions on India and Pakistan. On December 1, 1998, the President waived the India and Pakistan sanctions, after determining that such a waiver would increase the likelihood of progress toward U.S. nuclear non-proliferation objectives (Presidential Determination No. 99-7). By law, the President's waiver authority ends on October 21, 1999.

In anticipation of Congressional action during 1999 on sanctions reform legislation and consideration of possible renewal of section 902 of the India-Pakistan Relief Act, the Committee requested that the Commission complete a report by September 17, 1999, providing an overview and analysis of the economic impact of U.S. sanctions policy with respect to India and Pakistan. The Committee specifically requested that the Commission's report:

(1) Identify U.S. industries, including U.S. agricultural commodities, which were affected by economic sanctions on India and Pakistan under sec. 102 of the Arms Export Control Act, and the impact on each industry;

(2) Analyze, to the extent data are available, the economic impact of U.S. sanctions on U.S. exports, U.S. imports, jobs, consumers, and investment in the affected industries;

(3) Assess the likely economic impact on the United States if U.S. economic sanctions against India and Pakistan are re-imposed, including the U.S. products and sectors which would be significantly affected, the availability of alternative foreign suppliers for leading U.S. exports, and the likely impact of U.S. sanctions on the reputation of the United States as a reliable supplier of food, technology, other products, and on U.S. competitiveness in the affected industries;

(4) Assess the impact of the reimposition of U.S. economic sanctions against India and Pakistan on U.S. agriculture, including the likelihood of

retaliation, the specific commodities most likely to be affected, potential alternative foreign suppliers, the likely impact on the incomes of U.S. agricultural producers, and the likely impact on the U.S. reputation as a reliable supplier of agricultural commodities;

(5) Analyze the likely impact of unilateral U.S. economic sanctions on the Indian and Pakistani economies; and

(6) Summarize the instances where U.S. sanctions have affected humanitarian activities as well as the activities of multinational institutions in India and Pakistan.

Public Hearing

A public hearing in connection with this investigation will be held in the Commission Hearing Room, 500 E Street, SW, Washington, DC 20436, beginning at 9:30 a.m. on June 22, 1999 (and continuing on June 23, 1999, if necessary). All persons will 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 in writing with the Secretary, United States International Trade Commission, 500 E Street, SW, Washington, DC 20436, no later than 5:15 p.m. on June 8, 1999. Persons testifying at the hearing are encouraged to file prehearing briefs or statements; the deadline for filing such briefs or statements (a signed original and 14 copies) is no later than 5:15 p.m. on June 8, 1999. The deadline for filing posthearing briefs or statements is 5:15 p.m. on July 6, 1999. Any confidential business information included in such briefs or statements or to be submitted at the hearing must be submitted in accordance with the procedures set forth in section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). In the event that, as of 5:15 p.m. on June 8, 1999, no witnesses have filed a request to appear at the hearing, the hearing will be canceled. Any person interested in attending the hearing as an observer or non-participant may call the Secretary to the Commission (202-205-1806) after June 8, 1999, to determine whether the hearing will be held.

Written Submissions

In lieu of or in addition to participating in the hearing, interested persons are invited to submit written statements concerning the matters to be addressed in the report. Commercial or financial information that a party 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 section 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 for inspection by interested persons in the Office of the Secretary to the Commission. To be assured of consideration by the Commission, written statements relating to the Commission's report should be submitted at the earliest practical date and should be received not later than COB July 6, 1999. 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.

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>).

Issued: April 19, 1999.

By order of the Commission.

Donna R. Koehnke,
Secretary.

[FR Doc. 99-10536 Filed 4-26-99; 8:45 am]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 701-TA-383 (Final)]

Elastic Rubber Tape From India

AGENCY: United States International Trade Commission.

ACTION: Termination of investigation.

SUMMARY: On April 19, 1999, the Department of Commerce published notice in the *Federal Register* of a negative final determination of subsidies in connection with the subject investigation (64 FR 19125).

Accordingly, pursuant to § 207.40(a) of the Commission's Rules of Practice and Procedure (19 CFR 207.40(a)), the Commission's countervailing duty investigation concerning elastic rubber tape from India (investigation No. 701-TA-383 (Final)) is terminated.

EFFECTIVE DATE: April 19, 1999.

FOR FURTHER INFORMATION CONTACT: Charles Yost (202-205-3432), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-

APPENDIX C
Summary of Hearing Testimony
and Written Submissions

Summary of Hearing Testimony¹ and Written Submissions

Michael T. Clark, United States-India Business Council (USIBC)

Michael T. Clark of the USIBC testified that U.S. economic sanctions on India have deprived U.S. companies of important short-term economic opportunities, undermined key supply relationships, and impeded the growth of the Indian economy.² The USIBC represents approximately 85 U.S. companies.³ The USIBC was formed in 1975 to strengthen U.S.-Indian relations, to enable Indian and American business decision-makers to conduct a continuing dialogue on bilateral economic relations, to facilitate discussion of commercial and economic policy issues, and to analyze specific issues and develop policy recommendations, among other activities.⁴ Mr. Clark explained the reluctance on the part of U.S. companies to cite specific business relationships in public testimony, but stated he would be willing to provide more specific details if possible. In his testimony, Mr. Clark noted that the economic interests of U.S. exporters and investors should be based on long term considerations as India's economic potential is forecast to increase substantially over 10 years and that the United States and Indian economies are complementary. Further, he stated that Indian development of an information technology industry has increased the Indian Government's concerns for the protection of intellectual property and services, a perspective in line with U.S. policymakers. Mr. Clark suggested that U.S. policymakers should view the Indian Government's evolving stance on intellectual property and services as an opportunity to forge an ally with a leader of the developing world in order to liberalize trade in these and other areas.

¹ See transcript of public hearing of the USITC, *Overview and Analysis of the Economic Impact of U.S. Sanctions With Respect to India and Pakistan*. Inv. No. 332-391, June 22, 1999.

² Michael T. Clark, Executive Director, U.S.-India Business Council (USIBC), testimony before the USITC, June 22, 1999.

³ USIBC, List of Members, Feb. 1999, found at <http://www.usibc.com>, retrieved Apr. 8, 1999.

⁴ USIBC, Mission Statement, found at <http://www.usibc.com>, retrieved Apr. 8, 1999.

Frank Folmsbee, Aries Electronics, Inc.

Mr. Frank Folmsbee⁵ of Aries Electronics testified about his firm's loss of business due to restrictions on U.S. exports to certain Indian entities. Aries Electronics is a manufacturer of connectors based in New Jersey. In his testimony, Mr. Folmsbee noted that Aries Electronics suffered a reduction in sales revenues when sanctions were implemented. He explained that this lost revenue directly translated into the loss of several jobs. He noted that foreign competitors were likely to benefit at his company's expense. He also stressed that the products his company manufactures are low technology items and not subject to product specific export controls. Rather, his company is not allowed to send these products to his Indian customers as these customers are end users subject to a blanket denial for exports. Mr. Folmsbee also noted concerns with the discretionary measures implemented by BXA in conjunction with that agency's November 19, 1998 implementing regulations. He stated that because of these discretionary measures, his company is unable to sell to commercial Indian entities the same items that may be exported to military end users in India.

Muntaha Haddad, Now Aerospace Consulting

Ms. Muntaha Haddad⁶ offered testimony concerning the effects of sanctions on her company's economic viability. According to Ms. Haddad, Now Aerospace is a consulting firm which assists U.S. companies in the export of goods and services to Pakistan. Ms. Haddad testified that her company lost several million dollars worth of contracts for goods and services because of sanctions on Pakistan. She stated that her company is not against sanctions per se, but she supported lifting the sanctions as they have caused her company and other U.S. companies great harm.

⁵ Frank Folmsbee, Sales and Export Manager, Aries Electronics, testimony before the USITC, June 22, 1999.

⁶ Muntaha Haddad, Vice President, Now Aerospace Consulting, testimony before the USITC, June 22, 1999.

In a post-hearing brief, Ms. Haddad addressed specific questions posed by the Commissioners during the hearing. As to a quantitative analysis of the costs of the sanctions to U.S. businesses, Ms. Haddad provided specific information on economic damages to her company as a result of the sanctions.⁷ In response to a question regarding assessments of the impact of sanctions from broader economic trends, Ms. Haddad noted trends in U.S. exports to Pakistan from 1994 to 1998. Specifically, she wrote that U.S. exports to Pakistan of wheat; aircraft and associated equipment and parts, civil engineering and related plant equipment, engines and motors, and textile and leather machinery and parts were particularly affected by the sanctions. Ms. Haddad's written submission also included economic data on Pakistan derived from various sources including the International Monetary Fund.

***R. Roger Majak, Assistant
Secretary for Export
Administration, U.S.
Department of Commerce***

In his written submission, Assistant Secretary Majak explained the role of the BXA, described export regulations enacted due to U.S. sanctions, and estimated the impact sanctions have had on the U.S. economy. BXA is responsible for export license applications on dual-use items that are controlled for national security, foreign policy, or nonproliferation reasons.⁸ According to Assistant Secretary Majak, soon after sanctions on India and Pakistan were imposed in May 1998, BXA enacted an informal policy of denial for license applications involving the export or reexport of items controlled for nuclear proliferation or missile technology reasons to all end users in India and Pakistan. Assistant Secretary Majak noted that on November 19, 1998, these procedures were formally codified as part of a revision to the Export Administration Regulations (EAR). At this time, BXA also established a "presumption of denial" for license applications to export or reexport any item subject to the EAR to certain Indian or Pakistani governmental, parastatal, or private entities specifically listed in the EAR. Further, a similar policy of denial was established by BXA for any item

⁷ Muntaha Haddad, Vice President, Now Aerospace Consulting, written submission to the USITC, received July 6, 1999.

⁸ R. Roger Majak, Assistant Secretary for Export Administration, U.S. Department of Commerce, written submission to the USITC, received July 1, 1999.

on the Commerce Control List (CCL) to be exported or reexported to Indian or Pakistani military end users listed in the EAR.⁹

According to Assistant Secretary Majak, U.S. restrictions on exports of dual-use items to India after the imposition of sanctions have had a "rather minimal" effect on the U.S. export sector as a whole. The BXA estimates that exports to India lost as a direct result of the new export restrictions were in excess of \$150 million during the first full year (May 1998 through April 1999) after the Glenn Amendment sanctions were triggered. This figure is based on both the value of actual export license denials and the estimated value lost by U.S. firms because they "voluntarily" declined to pursue export opportunities, presuming that these applications would be denied—the "chilling effect" he attributes to the current denial policy of BXA. Assistant Secretary Majak reported that actual export license denials totaled \$50.5 million for the period May 1998 through April 1999, an increase from \$5.7 million for the similar period during the year previous. Estimates for the value of exports forgone by companies that decided not to submit license applications was illustrated by using Bharat Electronics Ltd (BEL), an Indian parastatal entity, as an example. According to Assistant Secretary Majak, license applications for U.S. exports to BEL fell sharply from 1,368 applications, valued at \$146.9 million, during May 1997 to April 1998 to 218 applications, valued at \$34.7 million, during May 1998 to April 1999.

Assistant Secretary Majak noted that certain individual U.S. companies have been adversely affected by the sanctions much more than others. For instance, one U.S. manufacturer of aerospace gas turbine engines received denials on export license applications valued at more than \$22 million. Further, he noted that BXA has denied at least four other applications valued in excess of \$1 million since November 1998.

Assistant Secretary Majak wrote that increased administrative burdens also have been placed on U.S. companies because of sanctions. He stated that U.S. exporters are required to submit license applications to BXA for exports or reexports of Export Administration Regulations 99 (EAR99) items to India and Pakistan—items that are not critical to the production of weapons of mass destruction, are not controlled by any multilateral nonproliferation regimes, and are not controlled for export by most U.S. trading partners. The effects on U.S. suppliers and the U.S. economy has been modest so far but any impact is cumulative according to the Assistant Secretary. Indian entities have already turned to companies in other countries, displacing U.S.

⁹ The EAR and the CCL are discussed in chapter 2.

suppliers. Further, efforts by U.S. companies to determine the end use of their products has frequently strained the relationships between U.S. suppliers and their customers.

For Pakistan, Assistant Secretary Majak stated that sanctions have had only a minimal impact on the U.S. export sector as a whole. During May 1998 to April 1999, BXA denied 17 export license applications, from a total of 54, which were valued at \$1.3 million. Nineteen of the 54 applications were approved and the remainder were returned without action.

James P. McGovern, United States House of Representatives and Harold H. Friedman, Teknis Corporation

Noting the difficulties of Teknis Corporation, Congressman McGovern urged the USITC, the Secretary of Commerce, the Secretary of State, and the U.S. Trade Representative to review and reevaluate the current policy of "presumed denial" for potential dual-use products.¹⁰ Teknis Corporation is an export management company which was founded in 1959. The company has specialized in sales to India for over 15 years. Export restrictions on copper and copper alloy plate have significantly affected the firm's sales. Mr. Friedman noted that it is reasonable to deny the export of certain high technology items but not items that his company would like to sell to India. He urged a prompt reevaluation of the overall export licensing policy.

Allegheny Teledyne, Inc. (ATI)

The written submission of Carl T. Bayer stated that several of his company's business units have been negatively affected by U.S. sanctions on India.¹¹ ATI manufactures specialty metals, aerospace, electronic, industrial, and consumer products. According to Mr. Bayer, ATI has been unable to conduct business with certain companies on the U.S. Entity List,¹² and has experienced substantial delays in shipping goods to India because of sanctions-related export licensing requirements.

¹⁰ James P. McGovern (D-Massachusetts) U.S. House of Representatives, written submission to the USITC, received June 21, 1999, and Harold H. Friedman, President, Teknis Corporation, written submission to the USITC, received June 9, 1999.

¹¹ Carl T. Bayer, Vice President, Allegheny Teledyne, Inc., written submission to the USITC, received June 28, 1999.

¹² The Entity List is discussed in more detail in chapter 2.

Asternetics and Associates, Inc.

In his written submission, Paul Sadler objected to how BXA regulations were implemented and interpreted.¹³ Mr. Sadler also reported that the implementation of licensing restrictions on EAR99 items due to sanctions caused economic damage to his company and the United States. Asternetics and Associates, Inc. is a supplier of electronic components. When the Glenn Amendment sanctions were triggered in May 1998, Asternetics and Associates, Inc. reported that they initially thought the sanctions would not affect the company's operations. However, when Export Administration Regulations were issued in November 1998, Asternetics found that much of the company's business had to cease. Mr. Sadler specifically objected to the lack of notice for formal implementation of the regulations and the disregard for existing business relationships. As a result of the November regulations, the company experienced significant sales losses. Further, Mr. Sadler stated that European competitors are not restricted from selling similar goods to India while U.S. companies are experiencing extreme economic effects.

The Boeing Company

In its written submission, Boeing stated that India and Pakistan are two markets that are exceedingly important for exports and for collaboration in such areas as component and machine tool manufacturing, software development, and research and development engineering support. Boeing forecasts that India and Pakistan will require 280 to 550 additional aircraft worth \$25 billion to \$40 billion during the next 20 years.¹⁴ These exports would support upwards of 440,000 high-wage, high-technology U.S. jobs according to the statement. Besides sales of aircraft to India, the market is important as a source of research and development, equipment production, engineering support, and software development. Boeing views these supplier relationships as extremely important to the company's globally competitive position. Boeing estimates that it saves 50 percent each year in production costs as a result of these arrangements, which contribute to the overall financial performance of the company. Also, the loss of Eximbank support pursuant to the Glenn Amendment sanctions jeopardized and complicated major contracts with an Indian carrier. The European manufacturer, Airbus, reportedly gained a significant marketing advantage because of these restrictions on financing.

¹³ Paul Sadler, Asternetics and Associates, Inc., written submission to the USITC, received June 25, 1999.

¹⁴ Paul McNeill, International Programs, The Boeing Company, written submission to the USITC, received July 8, 1999.

Data Device Corporation

In her written submission, Arlene L. Brown stated that Data Device Corporation has experienced negative effects from U.S. sanctions imposed on India. Data Device Corporation manufactures high quality microelectronic data conversion products for avionic, space, and industrial applications.¹⁵ In total, Ms. Brown estimates that Data Device Corporation will lose over \$1 million in sales to India over the next 2 years because of the Glenn Amendment sanctions. Data Device Corporation was forced to cancel actual product orders to India during 1999 valued in excess of \$300,000, according to Ms. Brown. Further, the company may have to cancel additional prospective near term orders and forego orders that customers would like to place but have been unable to do so because of the sanctions. She noted that if sanctions were to continue, then negative consequences for the company were likely to occur. For instance, several of the company's employees would be adversely affected, and foreign competitors would benefit at Data Device Corporation's expense.

MAST Distributors, Inc.

In its written submission, MAST Distributors, Inc., a distributor of electronics parts, provided information on the negative effects the Glenn Amendment sanctions on India have had on that company's business.¹⁶ According to the submission, the company supplies Bharat Electronics Ltd. with electronic components. Because Bharat Electronics Ltd. is on the Entity List, MAST Distributors, Inc. noted that it would be unable to support Bharat which represents a substantial amount of business for the company.

Hughes Electron Dynamics

According to a written submission, Hughes Telecommunications and Space Company, Electronic Dynamics (HED) has experienced substantial negative effects from U.S. sanctions on India. HED, a unit of Hughes Electronics Corporation, designs and manufactures traveling wave tubes (TWTs), traveling wave tube amplifiers (TWTAs), and space ion-propulsion systems.¹⁷ According to the submission, HED is the only domestic manufacturer of TWTs and TWTAs for

¹⁵ Arlene L. Brown, Regional Manager, Customer Service, Data Device Corporation, written submission to the USITC, received July 6, 1999.

¹⁶ Jaime Santiago, President, MAST Distributors, Inc., written submission to the USITC, received July 6, 1999.

¹⁷ Hughes Electron Dynamics, written submission to the USITC, received July 6, 1999.

use in space, and one of only three manufacturers of space TWTs worldwide. Because of sanctions, the company was denied a license to export certain TWTAs to an Indian agency on the Entity List. While HED pursues an appeal on the export license denial, the contract remains delayed. In addition to lost sales, the company reported that it must incur other costs such as work-in-process inventory, costs to rework custom engineered products, the costs from pursuing other sales to compensate for the denial, and other related expenses. The export denial may lead to employee layoffs and alternate foreign suppliers may gain as HED may be characterized as an unreliable supplier.

Hughes Network Systems

Hughes Network Systems (HNS) noted its concern with the potential effects U.S. sanctions may have on exports to and investment in its Indian subsidiaries.¹⁸ HNS, a unit of Hughes Electronics Company, operates businesses in India that develop software, provide data communications services via satellite, and provide basic telecommunications services. In its submission, the company stated that these subsidiaries depend on the free flow of U.S. exports to India, particularly in the area of telecommunications equipment and software. In addition, the company reported that financing of a project was delayed by an inability to secure Eximbank and OPIC country risk guarantees and credit facilities. The project remains in jeopardy because of this delay, according to the submission. Further, HNS noted that failure to deliver exports to these subsidiaries would result in the loss of U.S. jobs. In the long term, if its Indian ventures fail, HNS may potentially lose hundreds of millions of dollars in investment value.

REBCO International

In his written submission, Ralph E. Binney stated that U.S. sanctions on India and Pakistan have limited his company's sales opportunities. REBCO International is a sole proprietorship involved in export management and consulting.¹⁹ All of the products Mr. Binney sells to Indian entities are considered EAR99 items.²⁰ Thus, his sales have diminished and his customers can readily buy these products from foreign competitors that are not restricted by sanctions.

¹⁸ Hughes Network Systems, written submission to the USITC, received July 6, 1999.

¹⁹ Ralph E. Binney, President, REBCO International, written submission to the USITC, received June 17, 1999.

²⁰ Information on the EAR and the U.S. export licensing regime is presented in chapter 2.

Sector Microwave Industries, Inc.

In his written submission, Victor Nelson noted that the Glenn Amendment sanctions on India have resulted in the loss of several contracts which were filled by European competitors.²¹ Sector Microwave Industries, Inc. manufactures satellites and ground stations for the telecommunications industry. Further, he states that export licensing procedures have delayed receipt of revenues for work already conducted.

²¹ Victor Nelson, President, Sector Microwave Industries, Inc., written submission to the USITC, received June 29, 1999

TTI

The written submission of Art Markart of TTI focused on the loss of business that resulted from restrictions on the company's exports to an Indian entity, Bharat Electronics, Limited.²² TTI is a distributor of resistors, capacitors, and connectors. In his submission, Mr. Markart reported that TTI may have to reduce its company's workforce because of sales lost. Further, he noted that the products TTI ships to Bharat are low-end technology items, such as resistors, capacitors, and connectors, that are readily available from alternate sources located in Canada, France, Germany, the United Kingdom, and Korea. Mr. Markart suggested eliminating blanket export restrictions, such as EAR99, in order to allow the export of low-end technology items.

²² Art Markart, General Manager, TTI, written submission to the USITC, received June 10, 1999.

APPENDIX D
Telephone Survey Worksheet

Telephone Survey Worksheet
U.S. International Trade Commission
Telephone Survey Worksheet: Overview and Analysis of
the Economic Impact of U.S. Sanctions with Respect to
India and Pakistan (Inv. No. 332-406)
OMB Approval No. 3117-0191 Granted 5/11/99,
Expires
6/30/99

Company name: _____

Headquarters location: _____

Main Products/Services: _____

Contact Name and Title: _____

Contact Telephone: _____ Fax: _____ E-mail: _____

Introduction

The U.S. International Trade Commission has been requested by the Committee on Ways and Means of the U.S. House of Representatives to conduct a fact-finding investigation to provide an overview and analysis of the economic impact of U.S. sanctions with respect to India and Pakistan. The Commission's report is to be submitted by September 17, 1999. The purpose of this telephone survey is to obtain views of U.S. companies that are affected by those sanctions.

This telephone interview should take no more than 1 hour of your time. Commercial or financial information you desire the Commission to treat as confidential should be sent by mail or fax. Information on submitting confidential information will be provided at the end of this interview.

In accordance with the Paperwork Reduction Act of 1995, the Commission has obtained approval for this survey from the Office of Management and Budget (OMB). OMB approval was granted on May 11, 1999, OMB approval number 3117-0101.

A. Does your company export, invest, or otherwise do business with India and/or Pakistan?

yes (*continue*) no (*terminate, but complete contact information above*)

B. U.S. economic sanctions against India and Pakistan were imposed in May 1998 (sec. 102 of the Arms Export Control Act, or the "Glenn Amendment"). On December 1, 1998, the President waived some of those sanctions until October 21, 1999. Is or was your company affected by U.S. economic sanctions against India and/or Pakistan since May 1998, or will your company be affected by the sanctions if they are reimposed in October 1999?

yes no (*End interview*)

Questions

1. Which product or service was affected by the U.S. sanctions (or will be affected by the sanctions if they are reimposed)? *(List all that apply)*

2. The sanctions require that financing and financial assistance from U.S. government agencies (such as the Export-Import Bank and the Overseas Private Investment Corp.) be denied. Did or will the denial of such financing or financial assistance affect your firm's operations? _____

3. The sanctions prohibit U.S. banks from extending loans or providing credits to the governments of India and Pakistan. Did or will this prohibition affect your firm's operations? _____

4. The sanctions require that the United States vote to oppose any assistance by international financial institutions (such as the International Monetary Fund (IMF) and the World Bank). Did or will such votes by the United States affect your firm's operations?

5. How did the U.S. sanctions affect your firm? *(Where possible and applicable, obtain precise quantification of dollar amounts. If this is infeasible, obtain estimates phrased in the following terminology, (a) minimal impact (i.e., 0-5 percent), (b) modest impact (6-10 percent), or (c) substantial impact (over 10 percent). If no quantification is possible, anecdotal or qualitative information is acceptable. Note and properly mark any confidential information provided.)*

A. Effect on firm's exports to India and/or Pakistan _____

B. Effect on firm's imports from India and/or Pakistan _____

C. Effect on firm's investment in India and/or Pakistan _____

D. Effect on prospective sales to India and/or Pakistan _____

E. Effect on firm's employment _____

a. Workforce reduced attributable to sanction (no. of workers) _____

b. Wages increased/decreased attributable to sanction _____

F. Effect on firm's production and production costs (percent increase/decrease) _____

G. Other _____

6. Did/will the U.S. sanctions affect firm's reputation as a reliable supplier of goods/services?

7. Did/will the U.S. sanctions affect firm's competitiveness compared to foreign companies unrestricted by sanctions?

yes (If yes) List actual or likely alternate suppliers, and their nationality. _____

no

8. Did/will the U.S. sanctions result in economic retaliation against your firm?

yes (If yes) Specify type of retaliation. _____

no

9. A. Has your company or industry made any quantitative estimates or other studies of the effects of U.S. sanctions on India and/or Pakistan? yes no

yes (If yes): Could you provide USITC staff with a copy, if necessary on a confidential basis?

no

B. Would your company/association wish to submit oral or written testimony to the USITC for this study (Hearing on June 22, 1999)?

yes (If yes) Whom should the USITC contact?

no

10. Any other comments?

Commercial or financial information that a party desires the Commission to treat as confidential must be recorded or 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 Sec. 201.6 of the Commission's *Rules of Practice and Procedure* (19 CFR 201.6). To be assured of consideration by the Commission, completed forms should be submitted at the earliest practical date and should be received not later than COB June 8, 1999. All submissions should be addressed to Scott Ki, United States International Trade Commission, 500 E Street SW, Washington, DC 20436 or by fax to: 202-205-2018.

USITC Investigation No. 332-406

OMB No. 3117-0191, Expiration date: 06/30/1999

APPENDIX E
List of Companies
and Associations Contacted

Companies and Associations Contacted

(OMB Authorization OMB No. 3117-0191, May 11, 1999)

Aetna International, Inc.	Consumer Healthcare Products Association
Afognak Native Co.	Copperweld Co.
American International Group, Inc.	Cornell Pump Co.
AirTouch Communications	Corry Steel
Alliance Capital Management	Council of Insurance Agents and Brokers
Alltel	Decorations for Generations
American Cast Iron Pipe	Deepak Talwer and Associates
American Council of Life Insurance	DeMuth Steel Products Co.
American Independent Refiners' Association	Detroit Diesel Co.
American Insurance Association	DeWitt and Co.
American Petroleum Institute	Dow Chemical Co.
Ameritech	Draik Midwest Co., Inc.
Applied Materials	Eastman Kodak Co.
Arch Chemical	EG&G Instruments
AT&T	Electrical Generating Systems Association
Avnet, Inc.	Electronic Components, Assemblies, Equipment, and Supplies Association
Babcock and Wilcox	Electronics Industries Alliance
Banker's Association for Foreign Trade	Enron International
Baltimore AirCoil	ESAB
Bank of America	ETM Electromatic, Inc.
Bank One	Export-Import Bank of the United States
Barnes, Richardson, and Colburn	The Fertilizer Institute
Baron Manufacturing Co.	Fluor Daniel Inc.
BASF Co.	Formosa Plastics Co.
Bechtel Group Inc.	General Electric Co.
Bell Atlantic	G.F.V., Inc.
Bell South	Goldman Sachs
Bicron	Griffin Pipe Products, Inc.
Black & Veatch	GTE
The Boeing Co.	Hartford Steam Boiler Inspection and Insurance Co.
BP Amoco	Hartzell Propeller, Inc.
Capital Resources	Hercules Co.
Caterpillar, Inc.	Hess Engineering, Inc.
Celestron International	Hewlett-Packard Co.
Central Soya Company, Inc.	Hoechst Celanese Co.
Charlotte Pipe and Foundry	Hughes Network Systems, Inc.
Chase Manhattan	Huntsman Co.
Chicago Hardware and Fixture Co.	Hydraulics Institute
Chubb Co.	International Business Machines (IBM)
Citigroup	Independent Lubricant Manufacturers Association
Coalition of Service Industries	Inductotherm Co.
Coherent Laser Group	Ingersoll Milling Machine Co.
Communications and Power Industries	
Compaq Computer Co.	

Ingersoll-Rand Co.
Interchem
International Insurance Council
Investment Company Institute
ITT Industries
Kester Solder
Komag
Kuhlke and Associates
Leather Industries of America, Inc.
Light Helicopter Turbine Engine Co.
Lyondell Co.
Mallinckrodt Pharmaceuticals Group
Marathon Equipment Co.
McDermott International, Inc.
McDonald Steel Co.
MCI WorldCom
McWane International
Meade Instruments Co.
MediaOne
Measurements Group Inc.
Mentor Hose Ramps
Merrill Lynch Asset Management
Microwave Instrumentation Technologies, L.L.C.
Mil-Spec Industries
Mini-Circuits
Modern Venetian Blind Co.
Morgan Stanley Dean Witter
National Association of Pharmaceutical
Manufacturers
National Electrical Manufacturers Association
National Lubricating Grease Institute
National Petroleum Refiners' Association
Nepeva
Nixalite of American, Inc.
Noramco
North American Export Grain Association, Inc.
North American Millers' Association
NS Group/Koppel Tube
NY Life Insurance Co.
Oil Drilling Products, Inc.
Optics Technology, Inc.
Optimum Optical Systems, Inc.
Overseas Private Investment Co.
Oxford Instruments, Inc.
Pacific Consolidated Industries
Parker Steel Co.
The Perkin-Elmer Co.
PE Biosystems

Pharmaceutical Research and Manufacturers of
America
Pioneer
Pratt and Whitney, Division of United
Technologies
Precision Tube Co.
Pride Electronics
Principal Financial Group
Process Systems International, Inc.
Reinsurance Association of America
Ridgeway Manufacturing Co.
Rolls-Royce Allison
SBC Communications
Securities Industry Association
Seattle Curtain Manufacturing Co.
Scanning Systems International
Silicon Graphics, Inc. (SGI)
Sharon Tube
Shell Oil Co.
Siemens Co.
SimsMetal America
SMC South, Division of Sommer Metalcraft Co.
Sprint
SRI International
Stein Seal Co.
Superior Flux and Manufacturing
Synthetic Organic Chemical Manufacturers
Association
Tektronix, Inc.
Templeton
Thomas and Betts Co.
Thompson, Raymond, Co., Inc.
Timken Co.
Torus Technologies
Union Carbide Co.
United States Hide, Skin, and Leather Association
United States-India Business Council
USIC Co.
U.S. Pipe and Foundry
USX/USS Division
Valiant International
Valmont Industries
Vision Metals/Michigan Seamless Division
Vision Metals/Gulf States Tube Division
Weyerhaeuser Co.
Woodward and Dickenson
Zetec, Inc.

APPENDIX F
Technical Notes on the GTAP and
Partial Equilibrium Models

The GTAP Model

The GTAP model is a static general equilibrium model consisting of a documented global data base on international trade, country and regional inter-industry relationships, national income accounts, and a standard modeling framework to organize and analyze the data.¹ It allows for comparisons of the global economy in two environments—one in which the base values of policy instruments such as tariffs or export restrictions are unchanged, and another in which these measures are changed—or “shocked”—to reflect the policies that are being studied. A change in policy makes itself felt throughout the countries or regions depicted in the model. The model says nothing about the speed with which changes occur, about what has happened to various dimensions of the economies in the meanwhile, or what may have happened to change some of the underlying dynamic structures of the economies (such as specific patterns of foreign direct investment or technological changes that may alter the future growth pattern of economies).

Results from the GTAP model are based upon established global trade patterns. This means that the model is unable to estimate changes in trade in commodities that have not been historically traded. That is to say, if zero trade now exists between two countries for a particular commodity, the model will assume that there will always be zero trade in that commodity. Furthermore, patterns of trade may exist for such reasons as the distance between countries or cultural preferences. The GTAP model does not directly account for historically or culturally established trade patterns. In particular, the model will realistically tend to show smaller effects of policy changes operating on smaller trade flows, and larger effects on larger flows.

In the GTAP model, domestic products and imports are consumed by firms, governments, and households. Product markets are assumed to be perfectly competitive (implying zero economic profit for the firm), with imports as imperfect substitutes for domestic products (i.e., consumers are aware of the source of the products, and may distinguish between them based on the foreign or domestic origin), and sectoral production determined by global demand and supply of the output.

¹ For further information, see T.W. Hertel (ed.), *Global Trade Analysis: Modeling and Application*. Cambridge: Cambridge University Press, 1997.

Countries and Regions in the Model

The current GTAP data base covers trade among 45 countries and regions. While India is specified in the data base, Pakistan is not. To analyze Pakistan in the GTAP model, a more aggregate region containing Pakistan was used as a proxy. This region, referred to as the “rest of South Asia” in GTAP (in this report, the term South Asia/Pakistan is used), includes Pakistan, Bangladesh, Bhutan, Maldives, and Nepal. Weighted by their 1995 gross domestic product, Pakistan makes up about 64 percent of this aggregate grouping. In the present analysis, data for the United States, India, Japan, Sri Lanka, and South Asia/Pakistan are identified individually. The remainder of the world is aggregated into eight regions.

GTAP Model Trade Data

The data in the GTAP system covers trade in 50 commodity aggregates, or GTAP sectors. In addition to the data on trade in each of the commodities between each pair of countries or regions in the model, there are data on the domestic production and use of each commodity (including use in the production of other commodities), the supply and use of land, labor, capital, the population, and gross domestic product (GDP). The data base also contains information on tariffs, some non-tariff barriers, and other taxes. However, information on the services sector is limited and highly aggregated. An additional component of the data is a set of parameters which, in the context of the model’s equations, determine its behavior. These are principally a set of elasticity values that determine, among other things, the extent to which imports and domestically produced goods are substitutes for one another.

The base year described by the data is 1995; trade flows and barriers, population, and other data refer to the world in that year. This means that these analyses address a question of the following kind: Had certain economic sanctions (modeled as quantitative export restrictions or subsidy reductions) been in place in 1995, how would trade, output, and

welfare variables have differed from those actually observed in 1995?²

Determining Products Subject to Sanctions

One of the main challenges in this analysis was in the selection of the products that are likely to be directly affected by the Glenn Amendment sanctions (the Glenn Amendment sanctions are discussed in more detail in chapter 2). Apart from defense articles and services controlled by the U.S. Department of State and “dual-use” goods and technologies licensed by the Bureau of Export Administration of the U.S. Department of Commerce, the Glenn Amendment does not enumerate a list of specific goods or technologies subject to export prohibition. The Commission examined legal texts and other policy documents to make a reasonable determination of the scope of the products likely to be subject to the sanctions.

The Commission calculated, for each of the GTAP sectors, the share of trade that is likely to be subject to the Glenn Amendment sanctions. To that end, the Commission used 1995 6-digit Harmonized System (HS-6) data to identify the items most likely to be subject to the sanctions, and calculated their share relative to each GTAP sector. About 3,000 HS-6 product lines were mapped into 31 GTAP sectors using a concordance table obtained from the GTAP Internet site.³ The Commission further identified about 850 of those products as being potentially subject to the sanctions. As expected, these included mainly goods that could possibly be used to contribute, directly or indirectly, to nuclear or missile programs in India and Pakistan. For those products determined to be potentially subject to sanctions, all exports to India and Pakistan are assumed to be prohibited. This most likely represents an upward bias on the extent of the sanctions.

The GTAP sectors identified as being affected by the Glenn Amendment sanctions were: other minerals; petroleum and coal products; chemical, rubber and plastic products; non-metallic mineral products; primary iron and steel products; primary non-ferrous metals; fabricated metal products; transport equipment; other machinery and equipment; and other manufacturing products. For each of these

sectors, the estimated proportion of the potentially prohibited goods was calculated (hence, the resulting figures are probably biased upward).

Table F-1 shows the value of U.S. exports to India and South Asia/Pakistan in 1995 by GTAP sector (only those sectors with products subject to sanctions are shown); the value of exports in each sector estimated by the Commission to be potentially subject to Glenn Amendment sanctions; and, for each sector, the share of total exports potentially subject to sanctions. To model the possible effects of the Glenn Amendment sanctions on the economies of India, Pakistan, and the United States in each listed sector, U.S. exports to India and Pakistan in each of the GTAP sectors were “shocked” by reducing exports by the percentages shown in table F-1. This assumes that trade is eliminated in all goods identified as potentially subject to the sanctions, and that such goods represent a fixed share of the sector. As stated, such an assumption most likely overstates the trade that would in fact be reduced or limited by the Glenn Amendment sanctions on U.S. exports to India and Pakistan. In this respect, the GTAP model estimates of the effects of the sanctions represent “upper bound” estimates.

USDA Export Credits and Guarantees

As discussed in chapter 2, the Glenn Amendment sanctions prohibit USDA export credits, among other things. This prohibition was waived for India and Pakistan in 1998 and is scheduled to be reimposed later in 1999.

Quantifying the effects of reimposing sanctions with respect to USDA export credits and guarantees is complex. Price gap data in the GTAP data base indicate a price subsidy to U.S. exporters of grain to India and Pakistan of about 1.7 percent (i.e., the difference between the price received by exporters and the price paid by Indian or Pakistani importers), and a domestic import subsidy to Indian and Pakistani consumers of about 15 percent. Such price differentials were not evident for other agricultural products. USITC agriculture analysts, based on information received from industry sources, estimated the price effect of this USDA export financing assistance—roughly comparable to an export subsidy—to be about 10 percent. That is, USDA export credits and guarantees reduce the cost of U.S. grain to U.S. exporters by about 10 percent. Therefore, the GTAP model used in this study imposes a price shock equivalent to removal of a 10 percent subsidy on grain exports to India and South Asia/Pakistan. U.S. grain sales to India are very small—in 1995, India imported about \$1.2 million of

² For a discussion of the interpretation of model simulation results, see, for example, USITC, *An Introduction to the ITC Computable General Equilibrium Model: Addendum to the Economic Effects of Significant U.S. Import Restraints*, USITC publication 2423, October 1991.

³ That file was “hsconc.prn,” found at Internet site <http://www.agecon.purdue.edu/gtap/info/concord.htm>

Table F-1
U.S. exports to India and Pakistan by GTAP sector, and estimated value and share subject to Glenn Amendment sanctions

GTAP sector	Exports to India	Exports to South Asia/ Pakistan ¹
Other minerals		
Total subject to sanctions	\$286,599,522	\$509,763
Total	\$383,085,952	\$2,461,995
Percent subject to sanctions	74.8	20.7
Petroleum and coal products		
Total subject to sanctions	\$8,312,300	0
Total	\$61,983,865	\$928,540
Percent subject to sanctions	13.4	0.0
Chemicals, rubber and plastic		
Total subject to sanctions	\$125,658,519	\$5,994,564
Total	\$437,465,316	\$154,205,793
Percent subject to sanctions	28.7	3.9
Non-metallic mineral products		
Total subject to sanctions	\$9,979,218	\$1,634,865
Total	\$23,377,295	\$4,286,160
Percent subject to sanctions	42.7	38.1
Primary iron and steel		
Total subject to sanctions	\$158,278,484	\$27,181,760
Total	\$159,205,869	\$28,382,035
Percent subject to sanctions	99.4	95.8
Primary non-ferrous metals		
Total subject to sanctions	\$96,235,895	\$3,935,772
Total	\$96,781,315	\$3,994,786
Percent subject to sanctions	99.4	98.5
Fabricated metal products		
Total subject to sanctions	\$22,160,894	\$3,156,758
Total	\$36,427,908	\$5,217,567
Percent subject to sanctions	60.8	60.5
Motor vehicle and parts equipment		
Total subject to sanctions	\$49,692,516	\$22,774,558
Total	\$70,099,482	\$26,529,518
Percent subject to sanctions	70.9	85.8
Transport equipment		
Total subject to sanctions	\$98,901,685	\$18,070,998
Total	\$206,749,053	\$48,644,919
Percent subject to sanctions	47.8	37.1

See notes at end of table.

Table F-1—Continued
U.S. exports to India and Pakistan by GTAP sector, and estimated value and share subject to Glenn Amendment sanctions

GTAP sector	Exports to India	Exports to South Asia/ Pakistan ¹
Other machinery and equipment		
Total subject to sanctions	\$321,125,025	\$37,318,549
Total	\$1,096,297,428	\$151,006,252
Percent subject to sanctions	29.3	24.7
Electrical and electronic equipment		
Total subject to sanctions	\$209,862,561	\$7,078,418
Total	\$287,482,950	\$9,437,891
Percent subject to sanctions	73.0	75.0
Other manufacturing		
Total subject to sanctions	\$622,285	\$13,994,879
Total	\$80,563,773	\$17,417,127
Percent subject to sanctions	0.8	80.4

¹ Pakistan is represented in the model by South Asia.

Note.—Only those GTAP sectors identified by USITC staff as having products likely to be subject to the Glenn Amendment sanctions are listed.

Source: Compiled by the U.S. International Trade Commission.

wheat and other grain, while Pakistan imported about \$281 million of U.S. grain. Therefore India's imports of grain are likely to be less vulnerable to the elimination of U.S. export credits.

Partial Equilibrium Model

Because the GTAP model does not include Pakistan separately, the Commission used a partial equilibrium model to provide estimates of the economic effects of the Glenn Amendment sanctions more specific to Pakistan. This model, known as COMPAS, provides useful insights on the effects of trade changes in an importing country's import-competing industries. COMPAS is a computer spreadsheet program developed by the USITC for trade policy analysis.⁴ For a given initial pattern of

Pakistani domestic output and trade flows in a particular industry, the COMPAS model determines the effects, expressed in percentage change, of a policy restriction (for example, economic sanctions that produce quota-like restrictions on trade) on the prices and quantities of Pakistani domestic output, imports from the United States, and imports from the rest of the world. The model various specifications of assumptions on demand and substitution elasticities to produce a range of estimated effects.

The Commission determined the products subject to the Glenn Amendment sanctions for this model in a way similar to that done for the GTAP model described above. Using disaggregated trade data on U.S. exports to Pakistan, the Commission selected the products most likely to be subject to the trade sanctions. The data were then aggregated into 14 industrial sectors based on 4-digit International Standard Industrial Classification (ISIC) categories. The data on Pakistan's domestic production and import, required for the COMPAS model, data are available on an ISIC basis from United Nations International Development Organization. The most recent year for which these data are available is 1991. The share of the products subject to the sanctions were calculated for each ISIC sector, in the same manner that such shares were calculated for the GTAP sectors in the general equilibrium analysis. These

⁴ See J.F. Francois, and H.K. Hall, "Partial Equilibrium Modeling," in J.F. Francois and K.A. Reinert, eds., *Applied Methods for Trade Policy Analysis, A Handbook* (Cambridge: Cambridge University Press, 1997). The COMPAS spreadsheet assumes well-behaved preferences over a weakly separable category that comprises similar, but not identical products. In the present analysis, these imperfect substitutes are differentiated by their origins: domestic production, imports from the US and imports from the rest of the world.

estimated shares, which range from as low as 10 percent for basic industrial chemicals to as high as 88 percent for electrical industrial machinery (table F-2), are used as exogenous policy change variables—more precisely, as binding quotas on U.S. exports to Pakistan—in the implementation of the COMPAS spreadsheet model. The welfare costs calculated in the partial equilibrium model are partial equilibrium effects; they represent the costs to consumers and producers of the specific product under analysis, without accounting for secondary effects felt through other industries.

As was stated above in the case of the GTAP model, the assumptions that trade is eliminated in all goods identified as potentially subject to the sanctions, and that such goods represent a fixed share of the sector, most likely overstate the trade that would in fact be reduced or limited by the Glenn Amendment sanctions on U.S. exports to India and Pakistan. In this respect, the economic effects of partial equilibrium also most likely represent “upper bound” estimates.

Table F-2
U.S. exports to Pakistan, by COMPAS sector, and estimated value and share of exports subject to Glenn Amendment sanctions

(Percent)

COMPAS sector	Sanction Coverage
Basic industrial chemicals except fertilizers	10.4
Iron and steel basic industries	22.2
Non-ferrous metal basic industries	13.4
Structural metal products	52.1
Fabricated metal products except machinery and equipment	29.1
Special industrial machinery and equipment	48.7
Machinery and equipment except electrical	42.8
Electrical industrial machinery and apparatus	88.6
Radio, television and communication equipment and apparatus	31.4
Electrical apparatus and supplies	38.6
Ship building and repairing	78.9
Motor vehicles	20.2
Professional and scientific, and measuring and controlling equipment	58.8
Photographic and optical goods	22.8

Note.—Only those sectors identified by USITC staff as having products likely to be subject to the Glenn Amendment sanctions are listed.

Source: Compiled by the U.S. International Trade Commission.