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Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

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Acronyms and Abbreviations

Terms	Definitions
AGR	License Exception Agricultural Products
ATM	automated teller machine
bbl/d	barrels per day
BCC	<i>Banco Central de Cuba</i> (Central Bank of Cuba)
BIS	Bureau of Industry and Security (U.S. Department of Commerce)
BNC	<i>Banco Nacional de Cuba</i> (National Bank of Cuba)
BXA	Bureau of Export Administration
CACR	Cuban Assets Control Regulations
CAF	<i>Corporacion Andina de Fomento</i> (Development Bank of Latin America)
CAFTA-DR	Dominican Republic-Central America Free Trade Agreement
CCACI	<i>Corte Cubana de Arbitraje Comercial Internacional</i> (Cuban Court of International Commercial Arbitration)
CCD	License Exception Consumer Communication Devices
CCRC	<i>Cámara de Comercio de la República de Cuba</i> (Chamber of Commerce of the Republic of Cuba)
CDA	Cuban Democracy Act of 1992
CGE	computable general equilibrium
CIM	Center of Molecular Immunology
CMEA	Council for Mutual Economic Assistance
CUC	Cuban convertible peso
CUP	Cuban peso
CWE	carcass weight equivalent
CY	crop year
DR	Dominican Republic
EAR	Export Administration Regulations
ECA	Export Control Act
EFTs	electronic funds transfers
ETECSA	<i>Empresa de Telecomunicaciones de Cuba S.A.</i> (Cuba Telecommunications Company S.A.)
EU	European Union
FAA	Foreign Assistance Act
FAO	Food and Agriculture Organization
FCC	Federal Communications Commission
FCSC	Foreign Claims Settlement Commission of the United States
FDA	Food and Drug Administration
FDI	foreign direct investment
FSIA	Foreign Sovereign Immunities Act
FTA	free trade agreement
GATT	General Agreement on Tariffs and Trade
GDP	gross domestic product
GFT	License Exception Gift Parcels and Humanitarian Donations
GI	geographical indication
GSM	Global System for Mobile Communications
GTA	Global Trade Atlas
GTAP	Global Trade Analysis Project
GTIS	Global Trade Information Services
ha	hectare
HPAI	highly pathogenic avian influenza
ICT	information and communications technology

Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

Terms	Definitions
IDT	IDT Corporation
IEA	International Economic Association
IMF	International Monetary Fund
INHA	<i>Instituto de Nutrición e Higiene de los Alimentos</i> (Institute of Nutrition and Food Safety, Cuban Ministry of Health)
IP	intellectual property
IPPC	International Plant Protection Convention
ISIC	International Standard Industrial Classification of All Economic Activities
ISP	Internet service provider
ITT	International Telephone and Telegraph
LCIA	London Court of International Arbitration
MFN	most favored nation
mt	metric ton
NAFTA	North American Free Trade Agreement
OAS	Organization of American States
OCPI	<i>Oficina Cubana de la Propiedad Industrial</i> (Cuban Industrial Property Office)
OEM	original equipment manufacturer
OFAC	Office of Foreign Assets Control (U.S. Department of the Treasury)
OIE	World Organization for Animal Health
ONEI	<i>Oficina Nacional de Estadística e Información</i> (National Office of Statistics and Information)
OPEC	Organization of the Petroleum Exporting Countries
PADD	Petroleum Administration for Defense District
PDVSA	<i>Petróleos de Venezuela S.A.</i>
PE	partial equilibrium
PSD	Production, Supply, and Distribution database (U.S. Department of Agriculture)
R&D	research and development
S.A.	<i>sociedad anónima</i> (stock company/partnership; corporation)
SASA	<i>Servicio Automotriz, Sociedad Anónima</i> (Automotive Services Inc.)
SCP	License Exception Support of the Cuban People
SMEs	small and medium-sized enterprises
SOE	state-owned enterprise
SPS	sanitary and phytosanitary
STC	specific trade concern
TCA	Tariff Classification Act
TIMSA	<i>Telecomunicaciones Internacionales de México S.A.</i>
TRIPS	Trade-Related Aspects of Intellectual Property Rights (WTO)
TSRA	Trade Sanctions Reform and Export Enhancement Act of 2000
UECAN	<i>Unión de Empresas Combinado Avícola Nacional</i> (Union of Companies of the National Poultry Conglomerate)
UK	United Kingdom
UN	United Nations
USAID	U.S. Agency for International Development
USDA	U.S. Department of Agriculture
USDEC	U.S. Dairy Export Council
USITC	U.S. International Trade Commission
USTR	U.S. Trade Representative
WIPO	World Intellectual Property Organization
WTO	World Trade Organization
ZED Mariel	<i>Zona Especial de Desarrollo Mariel</i> (Mariel Special Economic Development Zone)

Preface

This report is in response to two request letters sent by the Senate Committee on Finance (the Committee) to the U.S. International Trade Commission (Commission). The Commission received the first letter on December 17, 2014, and the second, expanding the scope of the report, on August 19, 2015.

In the first letter, under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)), the Committee requested that the Commission institute an investigation and provide a report giving an overview of recent and current trends in Cuban imports of goods and services, including from the United States. The Committee also asked the Commission to provide an analysis of U.S. restrictions affecting such purchases, including restrictions on U.S. citizen travel to Cuba. To the extent possible, this analysis was to include an overview of Cuba's imports of goods and services from 2005 to the present, including major supplying countries, products, and market segments, and a description of how U.S. restrictions on trade and travel affect Cuban imports of U.S. goods and services. In addition, for sectors where the impact is likely to be significant, the analysis was to include a qualitative and, to the extent possible, quantitative estimate of U.S. exports of goods and services to Cuba in the event that the United States lifts statutory, regulatory, or other trade restrictions on U.S. exports of goods and services, as well as travel by U.S. citizens to Cuba.

In the second letter, the Committee requested that the Commission's report include a qualitative analysis of existing Cuban nontariff measures, Cuban institutional and infrastructural factors, and other Cuban barriers that inhibit or affect the ability of U.S. and non-U.S. firms to conduct business in and with Cuba. It also requested a qualitative analysis of the effects of these measures, factors, and barriers in the event of changes to the U.S. restrictions, including, but not limited to, restrictions on trade and investment; property rights and ownership; customs duties and procedures; sanitary and phytosanitary measures; state trading; protection of intellectual property rights; and infrastructure as it affects telecommunications, port facilities, and the storage, transport, and distribution of goods. The Committee also asked the Commission to provide, to the extent feasible, a quantitative analysis of the aggregate effects of Cuban tariff and nontariff measures on the ability of U.S. and non-U.S. firms to conduct business in and with Cuba.

In its letter of August 19, 2015, the Committee asked the Commission provide the completed report no later than March 17, 2016, and that it contain no confidential business information.

Executive Summary

This report examines Cuban imports of goods and services from 2005 to the present; the effects of U.S. restrictions on trade with and travel to Cuba; and Cuban nontariff measures, institutional and infrastructural factors, and other barriers that may inhibit or otherwise affect the ability of firms to conduct business in and with Cuba. It also presents a qualitative and quantitative sectoral analysis of potential U.S. exports of goods and services to Cuba in the event that U.S. restrictions are lifted and Cuban import barriers are reduced.

The U.S. International Trade Commission (Commission or USITC) conducted this investigation at the request of the U.S. Senate Committee on Finance. To produce this report, the Commission used information from a variety of sources, including publicly available literature and data, interviews and fieldwork, and the Commission's public hearing. The Commission used qualitative and quantitative measures to analyze the effects of U.S. restrictions and to estimate the potential for increased U.S. exports of goods and services to Cuba in the event that statutory, regulatory, or other trade and travel restrictions are lifted.

Information used by the Commission to identify U.S. goods and services sectors that could be significantly affected by the removal of U.S. restrictions on trade with and travel to Cuba included Cuban import statistics; U.S. production and export data; information about Cuban market conditions; publicly available industry information; and anecdotal evidence obtained through fieldwork, the Commission's public hearing, written submissions, and contact with U.S. producers, exporters, and trade associations.

Findings

U.S. restrictions on trade with and travel to Cuba have reportedly shut U.S. suppliers out of a market in which they could be competitive on price, quality, and proximity. Inability to offer credit, travel to or invest in Cuba, and use funds sourced and administered by the U.S. government are cited as the most problematic U.S. restrictions.

Cuban nontariff measures and other factors may limit U.S. exports to and investment in Cuba if U.S. restrictions are lifted. These measures and factors include Cuban government control of trade and distribution, legal limits on foreign investment and property ownership, and politically motivated decision making regarding trade and investment.

Absent U.S. restrictions, U.S. exports in several sectors would likely increase somewhat in the short term, with prospects for larger increases in the longer term, subject to changes in Cuban policy and economic growth. U.S. exports could increase further if Cuban import barriers were lowered.

Overall U.S. agricultural exports to Cuba could see significant gains from the removal of U.S. restrictions on trade. Some sectors may see immediate expansion, while others would more likely experience additional sales after Cuban tourism, incomes, and foreign capital have grown. For manufactured goods, exports would likely increase somewhat after the removal of U.S. restrictions, with prospects for larger increases in the longer term, subject to changes in Cuban policy and economic growth. In the services sector, U.S. exports would not likely grow significantly in the near term; however, exports of services could increase given a longer time span, additional economic growth and reforms in Cuba, and closer ties between the United States and Cuba. Features of the Cuban market that are most likely to affect the growth of U.S. exports of goods and services, such as government control of trade and distribution, weak infrastructure, and limitations on investment, are discussed below.

The following section gives an overview of Cuba's imports of goods and services during 2005–14, including a discussion of major supplying countries, products, and market segments. This is followed by a description of possible Cuban barriers to U.S. exports and investment in the absence of U.S. restrictions. Finally, the section discusses the effects of removing U.S. restrictions on U.S. exports of goods and services to Cuba for agricultural goods, manufactured goods, and services.

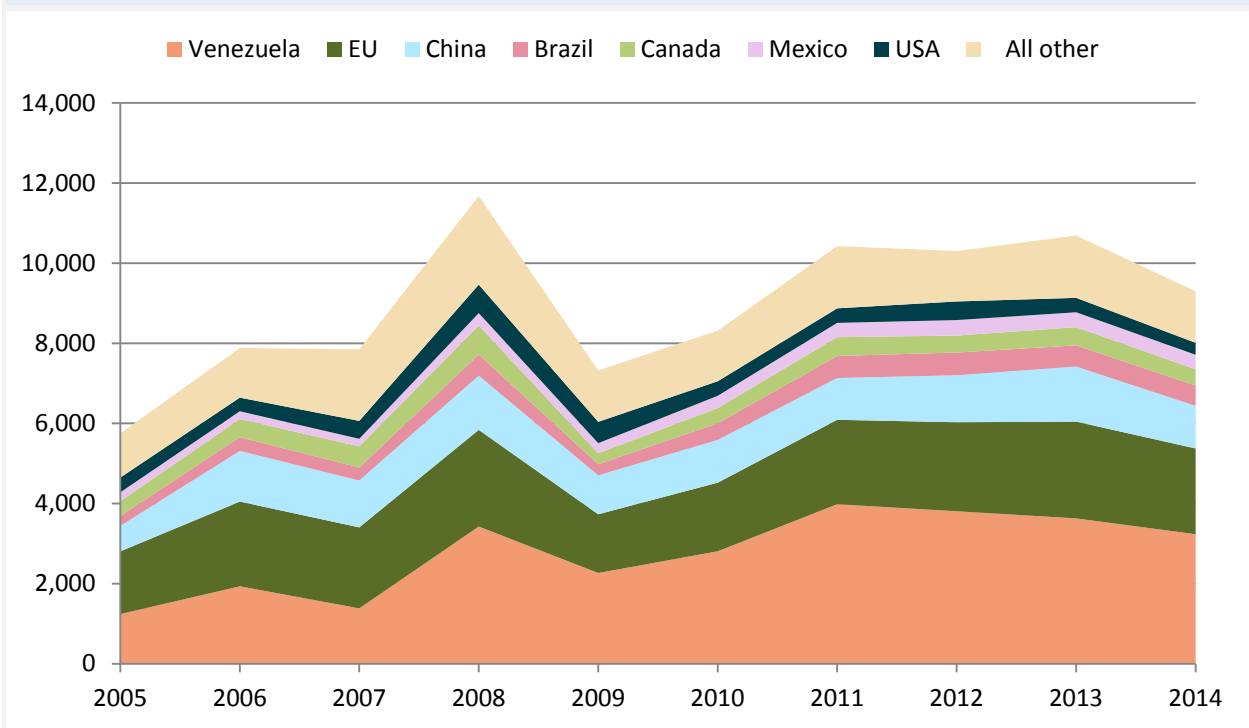
Cuban Imports of Goods and Services

Although the government and economic systems of the United States and Cuba are vastly different, economists, academics, government officials, and businesses all acknowledge that there are natural trade ties between the United States and Cuba and that the two countries are complementary markets. Before initial U.S. restrictions were implemented in 1960, Cuba was a major U.S. trading partner, ranking as the seventh-largest U.S. export market. In 2014, however, it ranked as the 125th-largest U.S. export market, with U.S. exports to Cuba totaling just \$299 million. While the announcement of normalized U.S.-Cuba relations and the liberalization of certain U.S. restrictions was expected to boost U.S. exports to Cuba, U.S. exports in 2015 actually declined by 40 percent to \$180.3 million from 2014. Cuba's primary import suppliers are Venezuela, the European Union (EU), and China, which together accounted for 69 percent of total Cuban imports in 2014, the latest year for which such data are available for Cuba's other trading partners (figure ES.1).

Total Cuban imports of goods peaked at over \$11.7 billion in 2008; dropped sharply in 2009 because of the global recession; climbed to \$10.7 billion in 2013; and fell by 13 percent to \$9.3 billion 2014. Nonagricultural products accounted for the vast majority (79 percent or \$7.3 billion) of total Cuban imports in 2014 (figure ES.2).

Agricultural goods accounted for only 21 percent (\$2 billion) of Cuba's imports from the world in 2014. In contrast, U.S. exports to Cuba consist almost entirely of agricultural products, accounting for 95 to 99 percent of total U.S. exports to Cuba during 2005–14. Such exports totaled \$285 million in 2014.

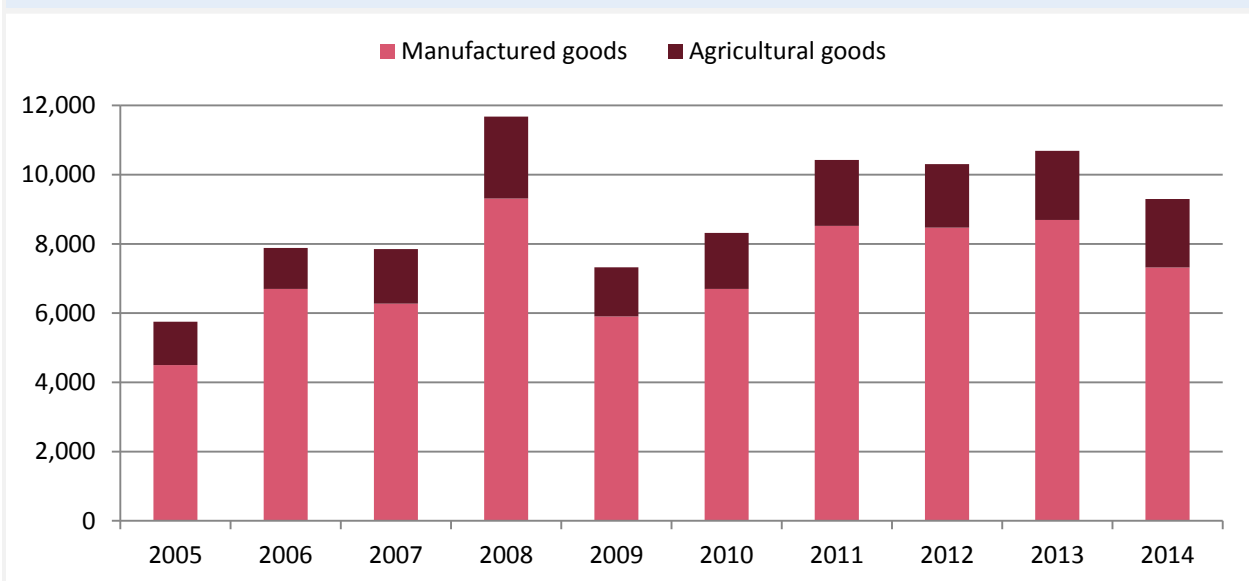
Figure ES.1: Cuban imports from the world by trading partner, 2005–14 (million dollars)



Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

Note: See appendix [table J.1](#).

Figure ES.2: Cuban manufactured and agricultural goods imports from the world, 2005–14 (million dollars)



Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

Note: See appendix [table J.3](#).

Cuba's imports of services are limited, despite more than doubling from \$1 billion in 2005 to \$2.5 billion in 2014. By comparison, Cuba is a strong exporter of services and has run a persistent surplus in the balance of services trade over the past decade. This surplus was valued at \$9.8 billion in 2014, which has partially offset Cuba's trade deficit in manufactured goods and agricultural products.

Effects of U.S. Restrictions on Trade with and Travel to Cuba on Cuban Imports of U.S. Goods and Services

U.S. restrictions have greatly curtailed the amount of U.S. trade that is permitted with Cuba. Even in sectors such as agriculture, in which U.S. exports to Cuba are allowed, market share has been lost to foreign firms that can offer Cuba credit and financing, use government funding to promote their exports, invest in Cuba, and whose staff can travel there freely.

U.S. exporters listed several U.S. restrictions in particular as limiting U.S. exports to Cuba. These rules often raise the cost of doing business enough to make U.S. exports uncompetitive in the Cuban market. Most often mentioned is the U.S. requirement that Cuba pay for most U.S. exports in cash or via financing through third-country sources. Other rules include:

- restrictions on the use of promotional and marketing funds sourced from the U.S. Department of Agriculture or U.S. industry;
- restrictions on business travel to facilitate trade, including travel by Cuban buyers to the United States;
- the ban on U.S. tourist travel, which both directly and indirectly reduces demand for other U.S. goods and services; and
- restrictions on U.S. investment, which limits linkages with customers and shrinks the U.S. business presence in the Cuban market.

Possible Cuban Barriers to U.S. Exports and Investment in the Absence of U.S. Restrictions

Cuba has a number of nontariff measures, institutional and infrastructural factors, and other barriers that affect the ability of foreign partners to trade with or invest in the country. Some of these factors are possible barriers because they are not yet faced by U.S. firms, due to the limited involvement of U.S. firms in the Cuban market; some are possible barriers because they do not necessarily act as barriers to all firms; and others are perceived as barriers, although it is not clear to what extent they might act as such. However, the high degree of state involvement

in all aspects of the economy, and the fact that reforms to open the market are both recent and relatively slow-moving, add to potential foreign partners' uncertainty.

Perhaps because Cuba depends so heavily on imports, many of its trade processes—such as customs duties and procedures, and the sanitary and phytosanitary measures applied to agricultural imports—do not appear to hinder trade. However, Cuba's lack of hard foreign currency and domestic fiscal constraints undercut its ability to import overall. This situation has led to an increase in market share for countries that are willing and able to provide Cuba with generous credit terms. As a result, the Cuban market may not be as open to U.S. goods as it would otherwise be.

The Cuban government has recently loosened some restrictions on foreign investment, and it has been actively seeking investment in areas it believes will eventually allow Cuba to substitute its own products for foreign imports, such as agricultural products and light manufacturing. These changes are too recent to accurately assess their effectiveness. However, because the government has announced that it will need \$2 billion to \$2.5 billion in foreign investment annually to meet targeted growth rates and reduce its dependence on imports, businesspeople and Cuba specialists tend to agree that Cuba's barriers to investment will ease further in the future. The issues are discussed in more detail below:

- **Politics in Cuban trade and investment decisions.** That the Cuban government frequently makes decisions about trade and investment based on political factors rather than on economic rationale was widely cited as the single most important factor affecting the ability of U.S. and foreign companies to do business in Cuba. Political considerations include, among others, an interest in furthering the country's foreign policy agenda; the desire to advance the country's domestic social policies and programs; a preference for diversifying Cuba's trading partners to protect the country from external shocks; and patterns of historical relationships, as well as the trust, or lack thereof, resulting from them.
- **Cuba's investment climate.** Cuba's 2014 foreign investment law provides for foreign direct investment (FDI) through joint ventures, wholly foreign-owned entities, or contract investments (such as contracts for hotel management or the provision of professional services). In practice, however, Cuba's government remains unwilling to approve most FDI projects that include wholly foreign-owned entities. Most approved projects are joint ventures (with at least a 51-percent Cuban equity share) or contract investments. In addition, a package of tax incentives for foreign investors is available only to joint venture projects. Joint venture projects listed in the government's *Portfolio of Opportunities for Foreign Investment* are quickly approved, as are projects that are in the Mariel Special Economic Development Zone or that meet other Cuban government objectives.
- **Physical property rights and other barriers to investment.** The lack of rights to own land and some physical goods in Cuba is reportedly a significant concern for foreign investors in

Cuba. Although long-term leases are available in some cases, most land in Cuba is owned by the state. The inability of foreign entities to own real property related to their investments creates risks for foreign companies conducting business in Cuba. This, combined with numerous other investor concerns—including competing or partnering with state-owned enterprises; the country’s labor system, which can complicate both hiring and laying off workers; onerous approval processes; and licensing procedures—creates an atmosphere that is generally considered challenging to foreign investment in Cuba.

- **Cuban legal system, dispute settlement, and anticorruption efforts.** The Cuban legal system has been a cause for concern, particularly for potential foreign investors in Cuba. Cuban lawyers are all employees of the Cuban government; there is no private practice of law in Cuba. The domestic arbitration system lacks transparency, so there is little information available to determine whether the system is fair to foreign investors or favors the state. While some industry sources say it is difficult or impossible to find favorable resolutions of disputes against the Cuban government, others suggest that in commercial matters, the system is fair and often finds against the government. In matters relating to national security, however, or those with political implications, it is generally agreed that the Cuban government will prevail. The Cuban government’s recent willingness to allow international arbitration clauses in contracts may indicate a desire to create a friendlier environment for foreign investment.
- **Intellectual property (IP) rights.** Many of Cuba’s IP laws and institutions have evolved to address the requirements of the World Trade Organization’s (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). In the area of trademarks and patents, for example, Cuba has modern laws and functioning administrative systems. By contrast, Cuba’s copyright law has not been modified to comply with TRIPS or to address the digital environment. Copyright infringement reportedly is widespread and pervasive. Notwithstanding the wide gaps in legal protections, U.S. and other foreign IP owners are registering their rights in Cuba and exploring market access and collaboration opportunities. While modernization of the Cuban copyright regime to address these problems could provide opportunities for U.S. and Cuban creators of copyright-sensitive products, the removal of U.S. restrictions would not be expected to have a large impact on U.S. firms in the near term, given the need for legal reforms and current economic conditions in Cuba.
- **Dual currency and exchange rates.** Cuba currently uses two currencies, the Cuban peso (CUP) and the convertible peso (CUC), neither convertible outside of Cuba. Pegged to the U.S. dollar, the CUC is used for foreign trade, the tourism sector, some restaurants and *paladares* (private restaurants), high-end stores, and much of the private sector. The CUP is used by the Cuban population for most domestic transactions, and all wages to Cubans are

paid in CUP, regardless of the sector in which they work. Cuba also has multiple exchange rates. An official exchange rate of 1 CUP: 1 CUC is used by the government and all state-owned entities, while exchange centers use a rate of 24 CUP: 1 CUC or 25 CUP: 1 CUC, depending on whether the currency is being bought or sold. The multiple currencies and exchange rates have created serious distortions in the Cuban economy. The government announced plans to merge the two currencies by April 2016, but the merger appears to be delayed, and official information on the process has yet to be released. For foreign investors, Cuba's dual currency and exchange rates add a layer of confusion to an already complex business environment. Unification will ultimately ease business operations, but the uncertainties associated with the process concern investors.

- **State trading, storage, and distribution.** The Cuban government currently controls most aspects of international trade and domestic distribution. Most imports and exports go through Cuban state-owned entities, and distribution is controlled by the government. To encourage foreign investment, the government has allowed some foreign firms to import and export directly, but the growing private sector and cooperatives in Cuba have little to no ability to source or access the foreign inputs they need if they are to grow. Further, an inefficient distribution process causes supply bottlenecks throughout the country. One result of these limitations is that an increasing flow of the goods needed for the private and cooperative sectors, valued as high as \$3.5 billion yearly, is entering Cuba via travelers from the United States. If U.S. restrictions are removed, growth in U.S. exports to Cuba likely will continue to depend on the purchasing decisions of Cuban importing entities. The degree of government control over storage and distribution channels may further limit potential U.S. exports to Cuba and deter potential investors.
- **Customs duties and procedures.** As a member of the WTO, Cuba adheres to global guidelines simplifying customs duties and procedures. Cuba's average applied duty as a percentage of value is 10.6 percent, well below the average bound rate of 21 percent that it has committed to. Furthermore, Cuba is the only Latin American signatory to the International Convention on the Simplification and Harmonization of Customs Procedures (the Kyoto Convention). Because so few Cuban firms are allowed to import and export directly, it is difficult to assess Cuban customs procedures. However, the country depends heavily on food imports and equally heavily on exports to generate much-needed foreign currency. It is therefore unlikely that Cuban customs procedures, while bureaucratic, significantly hinder trade.
- **Sanitary and phytosanitary measures (SPS).** As a WTO member, Cuba is subject to the WTO's Agreement on the Application of Sanitary and Phytosanitary Measures. SPS is one of the few Cuban trade measures not visibly affected by political considerations, likely because

of Cuba's heavy reliance on food imports, which supply 60 to 80 percent of total food consumption. Only a few cases of SPS problems have been reported in U.S.-Cuba trade since 2000. Although these were minor incidents, any expansion in bilateral trade involves the potential for additional or more problematic issues. However, with U.S.-Cuban diplomatic relations restored, it may be easier to exchange information to resolve trade conflicts involving SPS.

- **Infrastructure.** Cuba's infrastructure needs both repair and further development. In recent years, however, there have been successful upgrades to Cuban infrastructure, including the new port of Mariel, the railway expansion to the new port, and telecommunications improvements in certain areas, among others. Because the Cuban government manages most imports and handles the distribution of imported goods within the country, it is difficult to estimate the extent to which poor infrastructure affects trade. Nevertheless, telecommunications connections are still poor, both within the island and to the rest of the world; this is viewed as an obstacle to doing business that affects all foreign firms.

Effects of the Removal of U.S. Restrictions on U.S. Exports of Goods and Services to Cuba

This report uses both qualitative and quantitative analysis to evaluate the likely effects of removing U.S. restrictions on U.S. exports of goods and services to Cuba. It provides qualitative and/or quantitative analysis on U.S. export potential in 9 agricultural sectors, 22 manufactured goods sectors, and 3 services sectors. These sectors are not all-inclusive, and a number of other sectors may also experience increased exports if U.S. restrictions are lifted.

Under specific scenarios, the Commission was able to use an economic model to estimate the potential quantitative effect of removal of U.S. restrictions on U.S. exports of goods to Cuba in selected sectors. Additionally, the Commission used the model to estimate the potential combined effects of the removal of U.S. restrictions on trade and a lowering of Cuban import barriers. See [“Effects of the Removal of U.S. Restrictions and the Reduction of Cuban Barriers—Selected Scenarios”](#) below for additional information on the modeling and the modeling results.

For the qualitative assessment, the Commission evaluated the impact of removing U.S. restrictions on U.S. exports of goods and services to Cuba by examining top Cuban imports over the 2005–14 period and identifying those sectors and products that could be supplied by U.S. firms. The qualitative analysis also took into consideration anecdotal information from Cuba specialists and scholars, U.S. and foreign firms with business experience in Cuba, legal experts, and Cuban academic and government officials. In many cases, the qualitative assessment was at a different level of aggregation than that used in the modeling, and therefore the results are not always comparable.

The following sections provide a more detailed look at the qualitative and quantitative analysis evaluating the effects of removing U.S. restrictions on trade in goods and services. The first three sections present the qualitative assessment on the potential effects for (1) agricultural goods, (2) manufactured goods, and (3) services. The last section provides the results from the quantitative analysis for selected agricultural and manufactured goods.

Agricultural Goods

Cuba is highly dependent on imports to feed its population, with significant imports of many Cuban dietary staples (wheat, rice, corn, soybeans and related products, dry beans, meats, and dairy products). During 2005–14, Cuba’s imports of agricultural, fish, and forestry products rose from \$1.3 billion to \$2.0 billion in value and became increasingly concentrated among a few major suppliers: the EU (particularly France, Spain, and Germany), Brazil, the United States, Argentina, and Canada. After 2008, however, U.S. agricultural exports declined in quantity and variety, becoming more concentrated in a few major products. In 2014, the value of Cuba’s imports of agricultural products from the United States was \$285 million, the lowest level in over 10 years and less than half the peak level of \$701 million in 2008.

U.S. suppliers cite their inability to offer credit and to travel to Cuba in order to facilitate transactions as key challenges stemming from the U.S. restrictions. The restrictions on credit are considered a major factor in the 2009–14 drop in U.S. agricultural exports to Cuba. Because the global recession beginning in 2008 depressed remittances and tourism to Cuba, the Cuban government became more dependent on financing to buy agricultural products, and less willing to pay cash for U.S. goods.

If U.S. restrictions were lifted, the ability to offer credit would put U.S. agriculture exporters on a more level playing field with other foreign suppliers. Further, U.S. producers can offer a wide variety of high-quality goods—such as grain and dairy products, as well as inputs for animal feed—suited to Cuban needs and tastes. U.S. products enjoy a cost advantage because of the production and marketing efficiency of U.S. exporters and the proximity of U.S. ports, resulting in lower transportation costs and faster delivery times (especially important for perishable commodities). U.S. suppliers can also deliver smaller shipments and serve less accessible Cuban ports using smaller ships, as compared with suppliers from more distant countries.

It is unknown, however, whether the lifting of U.S. restrictions would change the Cuban government’s requirement that agricultural imports from the United States be handled exclusively through the state trading entity, Alimport, or whether it would allow other Cuban importing companies to buy such products from the United States. The potential for increased U.S. exports of agricultural goods could also be affected by Cuba’s desire to diversify its supplier base to avoid overdependence on one country, especially on the United States.

Overall Effects

Overall U.S. agricultural exports to Cuba could see significant gains from the removal of U.S. restrictions on trade. However, the small size of Cuba’s economy, coupled with the meager

purchasing power of its residents, would likely limit the overall benefit to U.S. agricultural exporters. Additionally, U.S. exports of some agricultural goods may continue to be subject to the purchasing decisions of Alimport, which could limit the growth of U.S. exports in some sectors.

According to industry representatives, being able to offer Cuba credit to purchase U.S. products would provide the greatest boost to exports if U.S. restrictions were lifted. Sources note that removing travel restrictions would also increase demand for U.S. products, not only directly from U.S. tourists consuming such items, but also by increasing the purchasing power of the Cuban economy through higher tourism revenues. Several industry representatives also mentioned that lifting travel restrictions would increase U.S. agricultural exports to Cuba by allowing on-site inspections and otherwise facilitating business relationships between the two countries.

Selected Sectoral Effects

- **Wheat.** Following the removal of U.S. restrictions, U.S. wheat exports to Cuba could resume and could expand to 2005–09 levels, when U.S. exports averaged \$75 million, after several years. The primary obstacle to U.S. wheat exports to Cuba—the inability to offer credit—would be eliminated. U.S. industry representatives expect the U.S. share of total Cuban wheat imports to increase to 80 to 90 percent from zero in 2012–14. Exports could exceed \$150 million annually.
- **Rice.** Following the removal of U.S. restrictions, U.S. rice exports to Cuba could resume, but may not reach previous levels immediately. The U.S. rice industry, however, expects that within 2 years of lifting the restrictions the United States could supply up to 30 percent of Cuba’s rice imports, valued at up to \$60 million annually. Within 5 years, industry sources indicate that U.S. rice could account for as much as one-half of Cuban rice imports, and up to three-quarters of Cuban rice imports within 10 years. However, although Cuban consumers prefer the quality of U.S. rice, U.S. rice would continue to face competition from Vietnam, which offers credit terms unlikely to be matched by U.S. industry.
- **Corn.** U.S. corn exports to Cuba could expand to previous levels following the removal of U.S. restrictions and the ability to extend credit. Because the United States has a logistical advantage over major competitors, in the long term, exports could exceed 2005–09 levels, when the United States had a majority market share, as Cuban feed demand will expand with its livestock industry.
- **Soybean complex (soybeans and soybean oil and meal).** The United States is already the leading supplier of soybeans and soybean meal to Cuba, and up until 2010 was a leading supplier of soybean oil as well. In the absence of restrictions, U.S. market share could grow for all three products because of the U.S. industry’s competitive product and logistical

advantage. Total U.S. exports to Cuba of soybean oil and meal should see additional overall growth. The United States may also be able to increase its share of the Cuban soybean market; growth in the total size of that market, however, may be constrained by Cuba's limited soybean crushing capacity.

- **Pulses.** The United States has exported no pulses (dry beans, chickpeas, peas, and lentils) to Cuba since 2011. Absent U.S. restrictions, however, these exports could resume and could eventually exceed 2005–11 levels. U.S. exports would almost exclusively consist of dry beans. The U.S. industry, however, would be competing with Argentina and China; Cuban consumers prefer the quality of U.S. dry beans, but Cuba is a price-sensitive, currency-constrained market, and China offers extended credit terms unlikely to be matched by U.S. industry. Furthermore, Alimport has recently shifted to purchasing lower-priced dry peas and lentils, mostly from Canada. Even if U.S. restrictions are removed, Canada likely would continue to be the major source for Cuban dry pea and lentil imports, as Canada is a highly cost-competitive producer of these goods, due in part to a favorable climate.
- **Poultry.** Poultry is Cuba's top agricultural import, and the United States is already the lead supplier. As a result, it is unlikely that the removal of U.S. trade restrictions would lead to significantly more U.S. exports to Cuba in the short term, although it could increase shipping efficiency and reduce transportation costs. In the long term, growth in Cuban incomes and tourism could result in higher U.S. poultry exports to Cuba.
- **Pork.** Although pork accounted for less than 1 percent of all Cuban agricultural imports in 2014, U.S. pork exports to Cuba could grow after U.S. restrictions are lifted. Initially, exports would consist of low-value pork muscle cuts and variety meats, competing with frozen pork from Canada. Over time, exports could expand to include higher-value pork cuts for the hotel, restaurant, and institutional sectors. The efficiency of U.S. pork production and the short shipping distance would be competitive advantages for U.S. pork exports.
- **Beef.** Beef accounted for less than 1 percent of total Cuban agricultural imports by value in 2014. However, the removal of U.S. restrictions could result in more trade opportunities for U.S. beef, particularly lower-priced cuts and frozen offal for consumption by the Cuban domestic population, as well as higher-end beef cuts for tourists. The United States has a logistical advantage vis-à-vis other major beef suppliers (Canada and the EU). Removing restrictions also would allow the U.S. beef industry to conduct market promotion in Cuba, which industry representatives now identify as a major limitation on sales.
- **Dairy.** U.S. dairy exports to Cuba could resume following the removal of U.S. restrictions. In 2014, milk powder was Cuba's second-largest agricultural import; however, the United States has exported no milk powder to Cuba since 2012. U.S. dairy exporters benefit from

lower freight costs relative to other major suppliers. U.S. exports of milk powders would likely see the most immediate growth. Over time, increased U.S. tourism to Cuba and rising Cuban incomes could result in demand for other U.S. dairy products, such as yogurt and cheese. U.S. industry representatives expect that the United States could eventually account for 50 to 75 percent of Cuban imports of lactose, skim milk powder, whey products, and fresh and soft manufactured dairy products, as well as 40 to 60 percent of butter and cheese imports. Potentially, the United States could supply 30 percent of total Cuban dairy imports by the decade's end.

Manufactured Goods

Cuba's manufacturing base deteriorated after the collapse of the Soviet Union, and now Cuba relies heavily on imports for many of the manufactured goods it once produced. Total Cuban imports of manufactured goods grew from \$4.5 billion in 2005 to a peak of \$9.3 billion in 2013 (an increase of 107 percent) before declining 21 percent to \$7.3 billion in 2014. Although Cuba imports a wide variety of manufactured goods, energy and energy-related products accounted for almost one-half of all its imports of manufactured goods in 2014. Imports of manufactured goods from the United States were very low during 2005–14, totaling just \$14.1 million in 2014, reflecting tighter U.S. restrictions on exports of most manufactured goods compared with U.S. restrictions on agricultural exports.

As with agricultural goods, the willingness of U.S. suppliers to offer credit will likely be an important factor affecting potential U.S. exports to Cuba. The higher costs of capital goods, combined with the Cuban government's obligation to spend available foreign currency on imports of basic necessities such as food, mean that financing will play an important part in Cuban purchases of manufactured goods from the United States. Experts state that Cuban buyers will need to develop close and reliable relationships with U.S. suppliers for product support, spare parts, maintenance, and training before U.S. exports in certain sectors can reach significant levels.

Overall Effects

There are likely a number of opportunities for U.S. exporters of manufactured goods in the event that U.S. restrictions on trade with and travel to Cuba are lifted, and the proximity of the United States to Cuba offers additional competitive advantages. The United States can produce many of the products that Cuba currently needs and ship most items at a lower cost than competitors. In the short to medium term, Cuban imports will likely be limited to currently imported products and goods in sectors deemed necessary to Cuba's plans for economic growth. U.S. exports may, however, be hindered by U.S. firms' unwillingness to provide the long-term financing or barter arrangements that Cuba currently enjoys from some of its main trading partners. In the longer term, as Cuban purchasing power increases and Cuban GDP grows, opportunities will likely expand for increased U.S. exports in a wide variety of sectors.

Selected Sectoral Effects

- **Refined petroleum products.** It is unlikely that Cuba will become a major market for U.S. exports of refined petroleum products in the near term, even if U.S. restrictions on Cuba are lifted. Many U.S. refinery products, such as motor fuels, are too high in octane or have other chemical characteristics that make them unsuitable for use in Cuban automobiles, in electric power plants, or for other industrial purposes. Generally, Cuba was a net importer of refined petroleum products during 2005–14, importing certain products while exporting others. Cuba is currently highly dependent on Venezuela for crude petroleum to feed its refineries, a situation that is likely to continue.
- **Fertilizers and pesticides.** Cuba needs fertilizers and pesticides to increase domestic agricultural yields and decrease its dependence on imported food; both goals are explicitly stated government priorities. Because Cuba’s fertilizer and pesticide industry is small and cannot adequately supply the domestic market, there are opportunities for U.S. exports in the event that U.S. restrictions are removed. The U.S. industry could potentially supply these products to Cuba cheaply and efficiently due to the competitiveness of U.S. firms and their proximity to the Cuban market.
- **Construction and agricultural machinery.** The removal of U.S. restrictions is likely to provide immediate export opportunities to U.S. construction and agricultural machinery manufacturers, owing to Cuba’s construction needs and its desire to increase self-sufficiency in agriculture. Recently revised U.S. regulations allow some trade activity in these areas, and this may help some U.S. manufacturers gain early entry into the market.
- **Building materials.** Cuban infrastructure, buildings, and tourist facilities need upgrading, modernization, and expansion. Such needs are imminent and will provide immediate opportunities for U.S. exporters of building materials if U.S. restrictions are lifted.
- **Telecommunications equipment.** Cuba represents a small potential market for U.S. exports of telecommunications equipment. Cuba will need such equipment in order to support increased tourism and provide the infrastructure needed to attract foreign investment. If U.S. restrictions on U.S. exports to Cuba are lifted, U.S. exports are likely to focus first on the enterprise segment of the telecommunications equipment market (i.e., the telecommunications and Internet networking equipment used by businesses and government agencies), followed by the wireless infrastructure segment. U.S. exports are also likely to follow U.S. direct investment in Cuba. Opportunities in other segments, such as Cuba’s core telecommunications network, are likely to be limited by the presence of Chinese and EU firms that have been supplying the Cuban market and that have close relationships with the Cuban government.

- **Medical devices.** Although the United States is the world's largest medical device manufacturer, the level of U.S. medical device exports to Cuba has historically been low. This situation is due, in part, to Cuba's relatively limited access to capital to purchase devices; the conditions on U.S. exports to Cuba of these goods; Cuba's relatively small healthcare market; and the country's government-provided healthcare system. These factors will likely limit U.S. exports to Cuba in the near term if U.S. restrictions are removed, with greater export potential in the longer term, as Cuba has expressed a need for state-of-the-art medical equipment and has identified medical tourism as an area of potential growth.
- **Motor vehicle parts.** Although motor vehicle parts are a key Cuban import sector, the Cuban government's regulations on motor vehicle ownership and retail distribution, and the limited purchasing power of Cuban citizens, would likely limit U.S. industry's chances of exporting significantly more in this market, even with U.S. liberalization. However, some U.S. aftermarket parts manufacturers, such as those producing parts for classic cars, would likely benefit from the opening of the Cuban market in the short term. Longer-range benefits for both original equipment manufacturers and aftermarket suppliers are likely if Cuba ends current barriers to trade and market growth. U.S. parts manufacturers are considered to have several competitive advantages, including the quality of their products, the warranties and aftersales service they offer, and geographic proximity.

Services

Cuba's services imports are quite small relative to its services exports. Cuba's surplus in services trade, owing to strong exports of medical and tourism services, is a crucial source of the foreign currency required to sustain the country's high import levels. While Cuba's tourism sector will likely continue to grow in coming years, and U.S. regulations on U.S. participation in Cuba's telecommunications and financial services sectors have eased, these areas are characterized by heavy state control, and thus are unlikely growth sectors for U.S. exports in the near term. However, in the medium to long term, these and other services sectors may prove to have significant potential for U.S. exports of services, as well as for exports of goods to support the provision of these services.

- **Travel services.** Cuba's travel services imports from the United States are currently negligible, with only around 40,000 Cubans visiting the United States annually. This is not expected to increase with the removal of U.S. restrictions on Cuba. However, tourism is a major source of foreign exchange for Cuba, and the removal of U.S. restrictions would increase Cuba's tourism revenue from U.S. visitors, improving Cuba's ability to pay for imports of U.S. goods and services. U.S. exports of travel services to Cuba could also increase through foreign affiliate sales if highly competitive U.S. firms are allowed to operate in the travel services sector in Cuba.

- **Financial services.** Recent changes to the U.S. restrictions have allowed some new U.S. banking activity to take place in Cuba. For instance, U.S. banks can now open correspondent accounts with Cuban banks; these accounts allow one bank to handle payments or other financial transactions for another bank. Cuban banks are all state owned, so even in the event that all U.S. restrictions are removed, the near-term potential for Cuban imports of U.S. banking services remains small. Cuban imports of other financial services, such as credit card payment processing, have significant potential, particularly if there is an increase in U.S. visitors to Cuba.
- **Telecommunications services.** Despite the underdeveloped nature of the Cuban telecommunication services market, and Cuba's reported new receptiveness to investment in the sector, it is unlikely that U.S. carriers will enter the Cuban market for services beyond mobile roaming agreements and/or direct telephone services. The primary reasons for this reluctance include concerns that payments to the Cuban telecommunications provider (for connecting telephone calls in Cuba) will be garnished to satisfy judgments by winning plaintiffs in U.S. civil lawsuits against the Cuban government; Cuba's longstanding ambivalence towards foreign investment in the telecom sector; and the small, low-income nature of the market.

Effects of the Removal of U.S. Restrictions and the Reduction of Cuban Barriers—Selected Scenarios

The Commission used an enhanced gravity model to estimate the potential effect of removal of U.S. restrictions on U.S. exports of goods to Cuba in sectors where the impact of the removal of restrictions is likely to be significant. The model was also used to estimate the combined effects of removing U.S. restrictions on trade and lowering Cuban import barriers.

The model provides medium-term estimates (approximately five years after the removal of restrictions) and it requires certain assumptions. For example, as with other standard economic models, the Commission's model uses economic factors alone as the basis for estimates of Cuban purchasing decisions. Thus, it cannot account for political or security considerations, which play an important role in trade with Cuba. As a result, the model may overestimate the share of U.S. goods in Cuban imports if U.S. restrictions are lifted. In addition, productivity in all countries, including Cuba, is held constant during the estimation. Therefore, under the selected scenarios, Cuban income is not significantly affected by the removal of U.S. restrictions.

Removal of U.S. Restrictions

The quantitative analysis for segments of the economy for which data were available suggests that if U.S. restrictions on U.S. exports to Cuba were lifted, U.S. exports to Cuba of selected

agricultural sectors¹ and all manufactured products could increase by about \$1.4 billion to approximately \$1.8 billion annually in the medium term (within five years), a 347 percent increase from their 2010–13 average level (table ES.1). As noted above, even if U.S. restrictions are lifted, Cuban government policies, institutional factors, and infrastructural limitations also affect the composition and value of Cuba’s trade with the United States and the rest of the world, as well as domestic and foreign investment in Cuba. If U.S. restrictions were removed and Cuban import barriers were reduced to the level of the calculated average for developing countries, the quantitative analysis suggests that U.S. exports of selected agricultural and manufactured goods could increase by an additional \$442 million, to a total of about \$2.2 billion. Model results show that there may be substantial new trade in many industries, primarily in ones where there is currently little or no trade, such as non-food manufactured goods. This is largely a result of fewer current restrictions on agricultural goods relative to manufactured goods. The results show that most of the new U.S. exports to Cuba would come at the expense of other countries’ exports to Cuba as well as Cuba’s domestic producers.

Table ES.1: Estimated U.S. exports to Cuba in selected sectors without U.S. restrictions and with lowered Cuban import barriers

	Base year (2010–13 average)	Estimated annual value (medium term)	
	Million dollars		Percent change ^a
U.S. restrictions are removed			
Selected U.S. agricultural exports	312.8	797.1	154.8
U.S. manufactured exports	225.0	1,222.7	443.5
U.S. agricultural and manufactured exports ^b	400.8	1,790.2	346.7
U.S. restrictions are removed and Cuban import barriers are lowered			
Selected U.S. agricultural exports	312.8	886.2	183.3
U.S. manufactured exports	225.0	1,631.9	625.4
U.S. agricultural and manufactured exports ^b	400.8	2,232.3	457.0

Source: USITC estimates.

Note: The results include the effects of increased tourism in Cuba due to lifting of U.S. restrictions.

^a Calculations are based on unrounded values.

^b Some food products have been unavoidably included in both agriculture and manufacturing industries. The total excludes overlapping products to avoid double-counting

Total U.S. exports of the nine selected agricultural products to Cuba are estimated to increase up to 155 percent from their 2010–13 average level to \$797 million. This amount represents 68 percent of total Cuban imports of agricultural products. The amount includes the additional demand for U.S. products generated by an increased number of tourists in Cuba once U.S. restrictions are removed. The model estimates that wheat would become the largest of the nine agricultural sectors in the absence of U.S. restrictions, with \$188 million in annual exports, capturing over 50 percent of the Cuban import market. U.S. exports of rice would increase significantly from virtually no exports in the base year to comprising over 40 percent of Cuban imports, valued at \$142 million annually. Poultry, currently the largest U.S. agricultural export

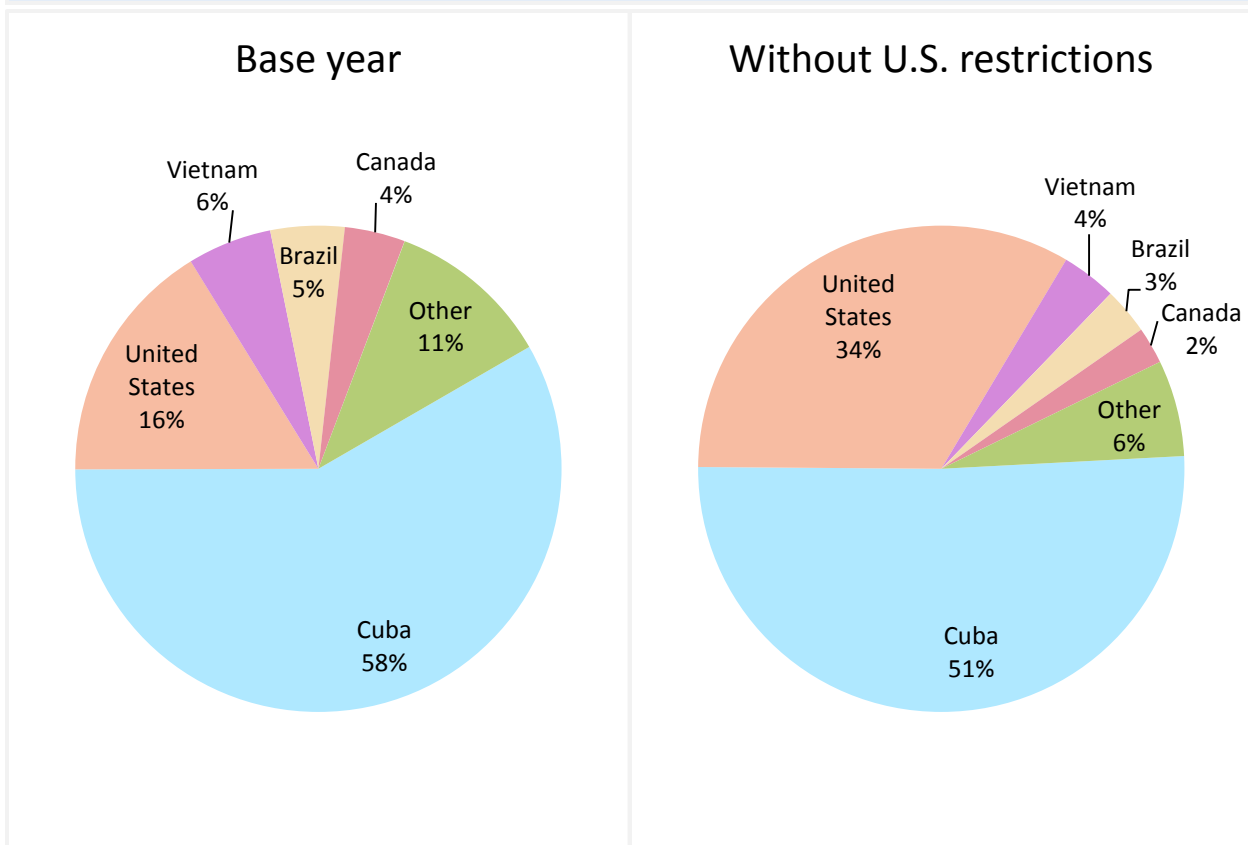
¹ Selected agricultural sectors include wheat, rice, corn, pulses, soybeans, other oilseeds, beef, pork, and poultry.

sector, would see modest growth, with the U.S. market share of Cuban imports increasing from 74 percent to 87 percent, valued at \$175 million.

The model results show that while the U.S. share of Cuba's market for agricultural products would more than double, from 16 percent with restrictions to 34 percent without restrictions (figure ES.3), the shares of other suppliers to the Cuban agricultural market would decline.

Total U.S. exports of manufactured products to Cuba are estimated to increase up to 444 percent from their 2010–13 level to \$1.2 billion. This represents 20 percent of Cuban imports of manufactured goods. The industry with the largest U.S. exports to Cuba in the absence of U.S. restrictions is estimated to be the processed food and beverages industry; the second largest is estimated to be the chemicals and chemical products industry.

Figure ES.3: Cuban market for nine agricultural industries, with (base year) and without U.S. restrictions



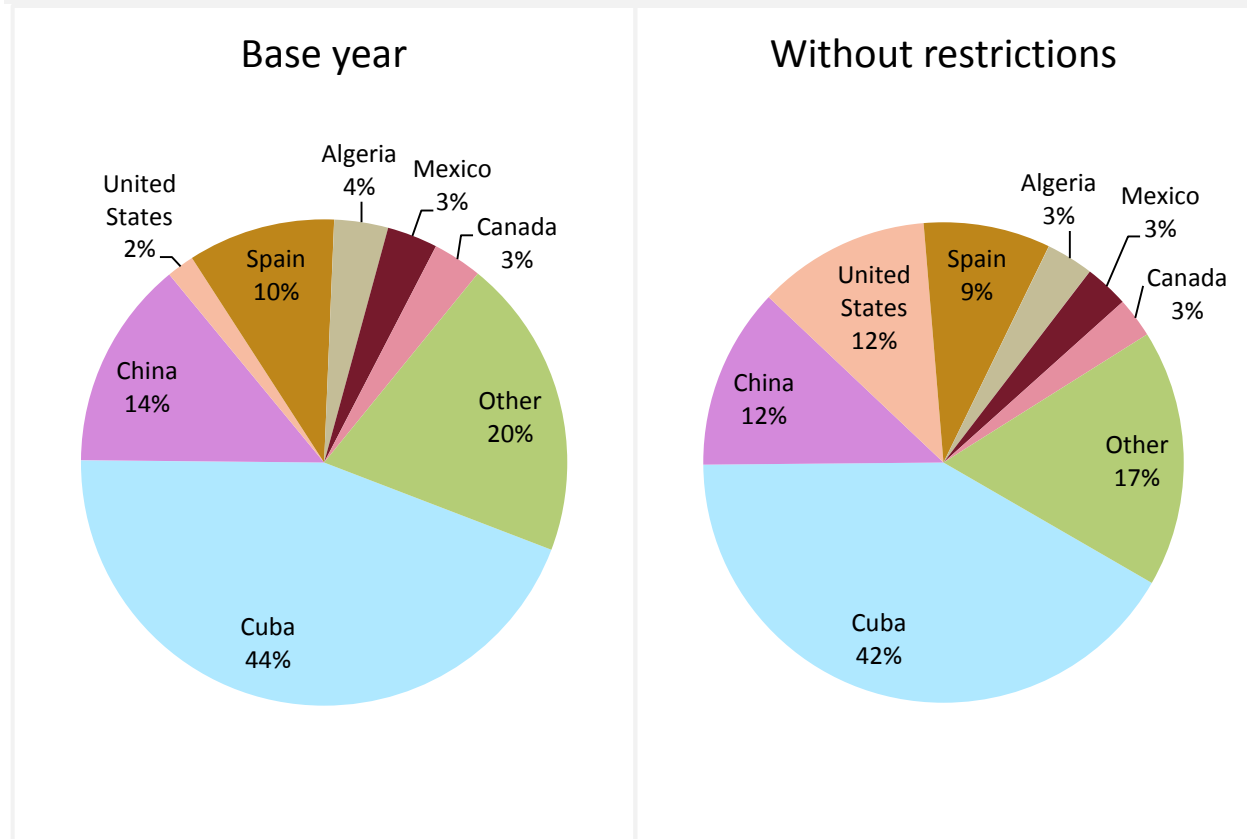
Source: USITC estimates.

Note: Due to rounding, shares may not add to 100 percent.

See appendix [table J.8](#).

The model results show that the U.S. share of Cuba's market for manufactured goods would grow from less than 2 percent with restrictions to 12 percent without restrictions (figure ES.4). China, the largest foreign supplier of manufactured goods to Cuba, would see its share drop from 14 percent to 12 percent.

Figure ES.4: Cuban market for manufactured goods, with (base year) and without U.S. restrictions



Source: USITC estimates.

Note: Due to rounding, shares may not add to 100 percent.

See appendix [table J.9](#).

Removal of U.S. Restrictions and Reduction in Cuban Barriers

If U.S. restrictions are removed and Cuban barriers are lowered to the calculated average level of developing countries, U.S. exports of agricultural and manufactured goods could increase to about \$2.2 billion (compared with \$1.8 billion after removing U.S. restrictions alone). U.S. exports of agricultural products could increase by 183 percent from their 2010–13 average levels; U.S. exports of manufactured goods, by 625 percent. Thus while U.S. exports to Cuba would increase further if Cuban tariff and nontariff measures were decreased, the largest share of the effects on U.S. exports would come from the removal of U.S. restrictions on trade.

Chapter 1

Introduction

Purpose and Scope of the Report

This report is in response to two request letters sent by the Senate Committee on Finance (the Committee) to the U.S. International Trade Commission (Commission). The Commission received the first letter on December 17, 2014, and the second on August 19, 2015, expanding the scope of the request. In the first letter, the Committee asked the Commission to conduct an investigation and prepare a report that provides an overview of recent and current trends in Cuban imports of goods and services, including from the United States, and an analysis of U.S. restrictions affecting such purchases, including restrictions on U.S. citizen travel to Cuba.² In its request letter, the Committee asked that the Commission's report include the following:

- an overview of Cuba's imports of goods and services from, to the extent possible, 2005 to the present, including identification of major supplying countries, products, and market segments;
- a description of how U.S. restrictions on trade, including those relating to export financing terms and travel to Cuba by U.S. citizens, affect Cuban imports of U.S. goods and services; and
- for sectors where the impact is likely to be significant, a qualitative and, to the extent possible, quantitative estimate of U.S. exports of goods and services to Cuba, in the event that statutory, regulatory, or other trade restrictions on U.S. exports of goods and services as well as travel to Cuba by U.S. citizens are lifted.

The Committee also asked that the report include, to the extent possible, state-specific analysis of the impacts described in the report.

In the second letter, the Committee asked that the Commission's report also include:

- a qualitative analysis of existing Cuban nontariff measures, Cuban institutional and infrastructural factors, and other Cuban barriers that inhibit or affect the ability of U.S. and non-U.S. firms to conduct business in and with Cuba. Such measures, factors, and barriers are to include, to the extent feasible, but not be limited to, the following topics: restrictions on trade and investment; property rights and ownership; customs duties and procedures; sanitary and phytosanitary measures; state trading; protection of intellectual property rights; and

² See appendixes A and B, respectively, for the request letters of December 17, 2014 and August 19, 2015, from the Committee and the *Federal Register* notices associated with this report.

infrastructure as it affects telecommunications, port facilities, and the storage, transport, and distribution of goods;

- a qualitative analysis of any effects that such measures, factors, and barriers would have on U.S. exports of goods and services to Cuba in the event of changes to statutory, regulatory, or other trade restrictions on U.S. exports of goods and services to Cuba; and
- to the extent feasible, a quantitative analysis of the aggregate effects of Cuban tariff and nontariff measures on the ability of U.S. and non-U.S. firms to conduct business in and with Cuba.

In its letter of August 19, 2015, the Committee requested that the Commission deliver its report no later than March 17, 2016, and specified that the report should not include any confidential business information.

The request for this report coincided with several significant changes in U.S. policy towards Cuba by the Obama Administration. In December 2014, nearly 54 years after relations were severed, the President announced plans to restore diplomatic ties with Cuba and pursue a new approach to U.S.-Cuba relations.³ The Administration also announced changes to U.S. restrictions on trade with and travel to Cuba, including eased restrictions on remittances, bilateral trade, travel, and banking.⁴ The Department of State lifted Cuba's designation as a state sponsor of terrorism on May 29, 2015.⁵ And on July 20, 2015, the Cuban embassy in Washington, DC, and the U.S. embassy in Havana reopened, using the same buildings that housed the former Cuban and U.S. Interest Sections respectively. In its investigation, the Commission considered these recent changes to the regulatory environment.

Sources of Information and Approach

Sources

This report incorporates information from a variety of sources. It draws on a review of publicly available literature, publications from U.S. and foreign governments, primary research, conference proceedings, publicly available economic data, and other published materials. The trade data used to describe Cuban imports for the period 2005 to the present came primarily from the Global Trade Atlas database (box 1.1) as well as from official statistics of the U.S. Department of Commerce. Additional data sources consulted for the report include the U.S. Census Bureau, the U.S. Bureau of Economic Analysis, the World Bank, the World Trade Organization, United Nations agencies, the Organisation for Economic Co-operation and Development, and the Cuban National Office of Statistics and Information, among others.

³ White House, "Statement by the President on Cuba Policy Changes," December 17, 2014.

⁴ The revisions became effective as of January 16, 2015. See 80 Fed. Reg. 2291 and 2286 (January 16, 2015).

⁵ Cuba was designated as a state sponsor of terrorism on March 1, 1982.

Qualitative information was gathered through a public hearing, written submissions, and interviews and fieldwork conducted in both Cuba and the United States. The Commission held a public hearing in Washington, DC, on June 2, 2015. Witnesses included Senator Amy Klobuchar (D-MN) and 18 representatives of industry, academic institutions, research organizations, nongovernmental organizations, and trade associations.⁶ Written submissions were also provided by a diverse group of sources, such as trade associations and industry representatives.⁷

Box 1.1: Data Sources and Data Challenges

The main source for trade data used throughout this report is the Global Trade Atlas (GTA) database assembled by Global Trade Information Services (GTIS).^a GTIS collects and publishes trade data from countries' statistical reporting agencies and from the United Nations Commodity Trade Statistics Database (UN Comtrade), converting overseas currency values to U.S. dollars. Data provided by Cuba are not available in the GTA and UN Comtrade databases after 2006.

Complete Cuban import data are not readily available, so “mirror data” were used instead. A country's imports are approximately reflected (hence the term “mirror”) by its trading partners' exports to that country. Therefore, mirror data on Cuban imports show the cumulative exports to Cuba reported by other countries in the world. For example, Cuban imports from the United States are represented by the United States' exports to Cuba.

GTA data are not without gaps. For example, a major import of Cuba is crude petroleum from Venezuela. However, Venezuelan exports of crude petroleum reported by GTA do not include Venezuelan government exports of crude petroleum. To remedy this, Commission analysts have compiled supplemental data from a variety of official statistics and industry sources. GTA also does not include data for Vietnam's exports of rice to Cuba for 2011–14. Analysts were able to develop estimates for these exports based on interviews with industry experts and U.S. government officials and calculations based on data from the U.S. Department of Agriculture's Production, Supply, and Distribution (PSD) database.

Aside from the trade data issues, Cuba does not readily publish detailed statistics and disaggregated numbers, and using and interpreting Cuban data can be difficult. For example, Cuba regularly publishes investment data, but does not separate domestic investment from international investment. Additionally, the country's economy functions using two currencies, the national peso (CUP) and the convertible peso (CUC). While the official conversion rate is 1 to 1, in practice these currencies have a conversion rate of 24 or 25 CUP to 1 CUC (with 1 CUC equal to 1 USD). Unfortunately, data collected in the two different currencies are sometimes summed according to the 1-to-1 official exchange rate in national accounts, distorting the results.^b Throughout this report, wherever data are irregular in sectors or areas of the Commission's analysis, that fact has been noted and the alternate source of data or information used has been cited. Chapter 8 and appendix I give more information on the data used in the Commission's quantitative analysis, including methods used to correct for problematic data.

^a GTIS website, www.gtis.com. In addition to GTIS, USITC's DataWeb was used to collect certain U.S. export data. U.S. data in both GTIS and DataWeb come from the same source—the Census Bureau of the U.S. Department of Commerce.

^b See chapter 4 for further discussion of Cuba's dual currency system.

⁶ See appendix C for a list of hearing participants.

⁷ See appendix D for the positions of interested parties.

In addition, Commission staff conducted in-person and telephone interviews with government, industry, and academic representatives from Cuba, the United States, and elsewhere. Commission staff undertook fieldwork in Havana, Mariel, and Varadero, Cuba, interviewing Cuban officials from several government agencies and state-owned trading enterprises as well as representatives of academia and foreign-invested companies. Fieldwork and interviews were also conducted in Miami, FL, and New York, NY. Anecdotal input from Cuban government officials, industry experts, and scholars on the effects of the embargo, doing business in and with Cuba, and U.S. export opportunities was crucial given the paucity of publicly available information on the U.S.-Cuba trade relationship. In accordance with Commission practice, these individuals are referred to according to their specialty rather than by name.

Approach

To address the Committee's request for a description of Cuban imports for the period 2005 to the present, the Commission obtained and evaluated trade data, largely from the Global Trade Atlas database. The Commission's description of the effects of U.S. restrictions on U.S. exports of goods and services to Cuba is based largely on testimony, written submissions, and interviews with U.S. producers and exporters, who relayed their experiences in navigating and complying with U.S. restrictions while selling or attempting to sell to Cuba. Likewise, in responding to the Committee's request for a qualitative analysis of existing Cuban nontariff measures, Cuban institutional and infrastructural factors, and other Cuban barriers that inhibit or otherwise affect the ability of U.S. and non-U.S. firms to conduct business in and with Cuba, the Commission relied heavily on interviews with Cuba specialists and scholars, U.S. and foreign firms with business experience in Cuba, legal experts, and Cuban academics and government officials.

To identify U.S. goods and services sectors and key U.S. states that could be significantly affected by the removal of U.S. restrictions on trade with and travel to Cuba, the report used both qualitative and quantitative methods, as requested by the Committee. The Commission considered several sets of information, including, but not limited to, the Cuban import statistics mentioned above; U.S. production and export data; information about Cuban market conditions and the ability of U.S. companies to compete in the Cuban market; publicly available industry information; and anecdotal evidence obtained through fieldwork, the Commission's public hearing, written submissions, and contact with U.S. producers, exporters, and trade associations.

The Commission analyzed this information in three steps. First, because the composition of Cuba's imports would be unlikely to change significantly in the near term after removal of restrictions, the Commission used recent trends in Cuban imports to initially identify key Cuban import sectors. These trends were next compared to U.S. production and export data to identify sectors in which U.S. firms could be competitive given Cuba's current trading partners, production capabilities, and market conditions. The Commission then supplemented this analysis with the anecdotal information noted above.

As a result of this research, the qualitative sector analysis in the report highlights nine agricultural sectors,⁸ seven manufactured goods sectors,⁹ and three services sectors.¹⁰ The sectors profiled are not an exhaustive list of all those with the potential to be affected by the removal of U.S. restrictions. Rather, they are those that were identified as prominent Cuban import commodities; those with notable export potential in the absence of U.S. restrictions; and those that are of pronounced interest to U.S. producers and exporters. For a number of these sectors, however, further analysis revealed that the potential for U.S. exports may be limited by several obstacles, including Cuban regulations, the competitive position of entrenched suppliers, various economic constraints, and the role of the Cuban government in trade and distribution. Moreover, the analysis chiefly focuses on the likely effects within a few years after the removal of U.S. restrictions. Thus, U.S. exports in a number of other goods and services industries, including digitally traded goods and services, would likely increase given a longer time span, additional economic growth and reforms in Cuba, and a more established U.S.-Cuba relationship.

Modeling

To estimate the effect of policy changes such as the removal of U.S. restrictions on trade and travel with Cuba, the Commission often uses either general or partial equilibrium models. Computable general equilibrium (CGE) models use actual economic data to make a quantitative estimate of the way markets in an overall economy might react to changes in policy, technology, or other factors. Partial equilibrium models look at only one or a few markets within an economy to make such an estimate; other product and input markets are assumed to remain constant.

Estimating U.S. exports to Cuba in the event that U.S. restrictions are removed and Cuban barriers are lowered presents a number of challenges. Two challenges in particular preclude the use of some common types of economic models, including CGE and partial equilibrium models. First, existing U.S. exports to Cuba are zero in many industries. Second, a tariff equivalent for current U.S. restrictions is not known. The enhanced gravity model used in this study is able to address these challenges. It also allows for the reversal of trade diversion and allows productivity and wages to play a role in determining trade.¹¹ The key determinants of trade in the model are trade cost, productivity (which determines comparative advantage), and wages.¹²

The Commission's quantitative analysis covered nine agricultural products (based on the classifications of the Food and Agriculture Organization of the United Nations) and 22 broad

⁸ The agricultural sectors profiled are wheat, rice, corn, soybean complex (soybeans, soybean meal, and soybean oil), pulses (dry beans, peas, and lentils), poultry, pork, beef, and dairy products. See chapter 5.

⁹ The manufacturing sectors profiled are auto parts, building materials, construction and agricultural equipment, fertilizers and pesticides, medical goods, refined petroleum products, and telecommunications equipment. See chapter 6.

¹⁰ The services sectors profiled are financial services, telecommunications services, and travel services. See chapter 7.

¹¹ The reversal of trade diversion is used here to refer to the displacement of Cuban and other countries' products by U.S. products after U.S. restrictions are removed. Not accounting for the reversal of trade diversion could result in estimates of total Cuban imports that are unrealistically high.

¹² Trade cost is defined as the difference between the cost of a good at a production source and in its destination market. See appendix I for a technical discussion of the modeling methodology.

manufacturing sectors (based on the International Standard Industrial Classification). Due to the lack of adequate data, additional agricultural products and the services and mining sectors were not included in the analysis. The quantitative analysis had to be conducted at a higher level of aggregation than the qualitative analysis because (1) only limited disaggregated production data were available for Cuba and other countries used in the model, and (2) there is little worldwide trade in some of the sectors for which a more detailed breakdown was available. The results of the quantitative analysis thus provide only a suggestive estimate of the effects of the removal of U.S. restrictions and Cuban barriers on U.S. exports to Cuba, serving to supplement the detailed qualitative sector analysis. Moreover, several assumptions underlie the quantitative analysis presented, including the assumption that Cuba behaves like a market economy and that it makes purchasing decisions based on price. In reality, as discussed elsewhere in the report, this may not always be the case.

To estimate the aggregate effects of Cuban tariff and nontariff measures on the ability of firms to conduct business in and with Cuba, the Commission used the enhanced gravity model, which produces estimates of trade costs imposed by each country on imports. The Commission reduced the estimated Cuba-specific trade costs in each industry to the level of the calculated average of developing countries. Using these values, the Commission then estimated the value of U.S. exports to Cuba in the event that all U.S. restrictions are lifted and are accompanied by a reduction in Cuban barriers to trade.

Organization of the Report

Chapter 2 provides general background information on Cuba and an overview of Cuban imports of goods and services for the period 2005 to the present, including information on major suppliers and key import sectors. Chapter 3 briefly describes current U.S. restrictions on trade with Cuba and on travel to Cuba by U.S. citizens, as well as summarizes the views of firms and exporters on ways the restrictions have affected U.S. exports of goods and services to Cuba. Chapter 4 presents the qualitative analysis of existing Cuban nontariff measures, Cuban institutional and infrastructural factors, and other barriers that inhibit or otherwise affect the ability of U.S. and non-U.S. firms to conduct business in and with Cuba. Chapters 5–7 provide additional detailed Cuban import data for 2005 to the present; in addition, for certain agricultural, manufacturing, and service sectors, these chapters qualitatively assess the potential effects on U.S. exports of goods and services to Cuba in the event that U.S. restrictions are lifted. Chapter 8 presents the quantitative analysis of the impact on U.S. exports of lifting U.S. statutory, regulatory, or other trade and travel restrictions, as well as the aggregate effects on U.S. exports of ending U.S. restrictions and reducing Cuban tariff and nontariff measures.¹³

¹³ The aggregate effects here include the combined effect of all Cuban tariff and nontariff measures, Cuban institutional and infrastructural factors, and other Cuban barriers, and do not separate the effects of specific barriers or factors.

Chapter 2

Cuban Imports of Goods and Services

Economic Overview

The Republic of Cuba is an island nation located 90 miles (145 kilometers) off the southern coast of Florida and bordered by both the Caribbean Sea and the North Atlantic Ocean. With a land mass of about 42,426 square miles (110,000 square kilometers) and a population of approximately 11.4 million people in 2014,¹⁴ Cuba is roughly the same size and has the same population density as the state of Ohio.¹⁵ Since 1959, Cuba has been a single-party Communist state. It was led by Fidel Castro until 2008, at which time Castro transferred power to his vice president, Raúl Castro, his younger brother.¹⁶ In 2013, Raúl Castro announced that he will serve as the country's president until February 2018; he appointed Miguel Mario Díaz-Canel Bermúdez to be his first vice-president, effectively designating him as his successor.¹⁷

Cuba is a centrally planned, nonmarket economy where prices and wages are largely set by the government. As a result, the country's economic development and growth can be difficult to interpret using traditional measures, and analyzing Cuba's economy, tracking its growth over time, predicting its imports, and comparing its economic indicators with those of other countries are all challenging.¹⁸ With a gross domestic product (GDP) of \$68 billion and a reported GDP per capita of \$6,790 in 2013, Cuba is classified by the World Bank as an upper-middle-income economy.¹⁹ However, other international organizations view Cuba as a developing country or emerging economy, more consistent with the widely reported average wage of most Cubans of approximately \$20 a month.²⁰ Cuba's estimated GDP grew by nearly 3 percent in 2013 over the previous year, just over 1 percent in 2014, and over 4 percent in 2015.²¹

¹⁴ World Bank "Land Area and Population," WDI database (accessed December 23, 2015).

¹⁵ U.S. Census Bureau, U.S. and World Population Clock (accessed December 28, 2015); U.S. Census Bureau, State Area Measurements and Internal Point Coordinates (accessed December 28, 2015).

¹⁶ EIU, Country Report; Cuba, December 2014, 3, 14.

¹⁷ According to the Cuban constitution, the first vice-president assumes the president's duties in cases of absence, illness, or death of the president.

¹⁸ Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 28.

¹⁹ World Bank, "GDP per capita (current US\$)," WDI database (accessed December 23, 2015). Beginning in 2003, Cuba amended its GDP calculation by adding in the value of goods and services provided by the government, including food rations, education, healthcare, and other benefits. Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 22.

²⁰ For example, Cuba is a small island developing state according to the United Nations, is listed as a developing country according to the CIA *World Factbook*, and participates as a developing country in the World Trade Organization (WTO).

²¹ EIU, "Cuba, Economy: Charts and Tables," December 7, 2015.

Measured against its Caribbean neighbors, Cuba is most similar to the Dominican Republic, with which it is often compared (leaving aside the differing government structures between the two nations). Both Cuba and the Dominican Republic have similar population levels (10.4 million for the Dominican Republic in 2014) and per capita incomes (\$6,164 for the Dominican Republic in 2014).²² Both island nations are located relatively close to the United States, which gives the United States a distinct logistical advantage in exporting products to both countries because of comparatively shorter shipping times.²³ Cuba also produces many of the same commodities as the Dominican Republic, including sugar, cement, and tobacco, and both have strong tourism sectors, with Cuba ranking second behind the Dominican Republic among Caribbean countries in number of visitors per year.²⁴

The United States accounted for 41 percent of total merchandise imports by the Dominican Republic in 2014, far more than any other supplier. By comparison, the United States supplied just 3 percent of total Cuban imports in 2014. The United States' dominance among the Dominican Republic's suppliers is a trend of long standing; for example, during 2001–06—the five years before the U.S.-Dominican Republic-Central America Free Trade Agreement (U.S.-CAFTA-DR) began to be implemented—the United States accounted for about 50 percent of the Dominican Republic's total imports from the world.²⁵

Services contribute heavily to the Cuban economy, accounting for about 74 percent of GDP in 2011, the latest year for which data are available. Industry accounted for an additional 21 percent that year, with agriculture making up the remaining 5 percent.²⁶ Tourism in particular is a key source of foreign exchange and an important driver of the economy, generating about \$2.6 billion per year.²⁷ Also crucial to the economy are remittances from abroad, with a significant portion, estimated at \$1.0 billion–\$3.0 billion annually, sent to Cuba from relatives in the United States.²⁸ Such remittances are a vital source of income and purchasing power for approximately 60 percent of Cubans, and it has been suggested that remittances could help boost U.S. exports to Cuba in the event that U.S. restrictions are lifted.²⁹

²² World Bank, "Population" and "GDP per capita (current US\$)," WDI database (accessed December 23, 2015).

²³ The distance from Miami to Havana is about 231 miles, closer than the 826 miles from Miami to Santo Domingo, Dominican Republic.

²⁴ World Bank "International Tourism, Number of Arrivals," WDI database (accessed December 28, 2015).

²⁵ The United States and the Dominican Republic are both members of the U.S.-Dominican Republic-Central America Free Trade Agreement (CAFTA-DR), which entered into force for the Dominican Republic on March 1, 2007. USTR, Statement of U.S. Trade Representative Susan C. Schwab Regarding Entry into Force of the CAFTA-DR for the Dominican Republic, March 1, 2007.

²⁶ World Bank, "Agriculture, Value Added (Percent of GDP)," "Industry, Value Added (Percent of GDP)," and "Services, etc., Value Added (Percent of GDP)," WDI database (accessed June 15, 2015).

²⁷ Rodriguez, "Tourists Flocking to Cuba," March 23, 2015; ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, table 15.11.

²⁸ USITC, hearing transcript, June 2, 2015, 105 (testimony of Marco Palma, Texas A&M University) and 300 (testimony of Rafael Romeu, DevTech Systems); Archibold, "Inequality Becomes More Visible in Cuba," February 24, 2015.

²⁹ USITC, hearing transcript, June 2, 2015, 54, 105 (testimony of Marco Palma, Texas A&M University).

In addition to cash, Americans reportedly send an estimated \$2.0 billion–\$3.5 billion in goods to Cuba each year.³⁰

Since 2010 the Cuban government has implemented a number of economic reforms that may affect imports and investment, including relaxed restrictions on the sale and ownership of land and private property, expanded self-employment options, and liberalized travel rules.³¹ Although Cuba’s centrally planned economy is largely run through state-owned enterprises, Cuba’s self-employed small business operators, known as *cuentapropistas*, are becoming more numerous and represent a visible example of the economic reforms undertaken in the country (box 2.1).³²

One significant reform announced in 2013 but not yet implemented is the elimination of the country’s dual currency system, consisting of the Cuban peso (CUP), used to pay Cuban wages and for everyday purchases in the local economy, and the convertible peso (CUC), used in the tourism industry, in foreign businesses, and for foreign trade. The dual currency system is cited as Cuba’s single most pressing macroeconomic challenge, and eventual unification is recognized in Cuba and globally as a major starting point toward other reforms.³³

³⁰ Cuban academic, interview by USITC staff, Havana, June 15, 2015.

³¹ The period from 2010 to 2012 saw the development and implementation of the Economic and Social Policy Guidelines of the Party and the Revolution (*Lineamientos de la Política Económica y Social del Partido y la Revolución*). The *Lineamientos*, which proposed market-oriented reforms in many sectors of the economy and spurred the loosening of restrictions on entrepreneurial operations, were issued following an announcement by the Cuban government that it would shrink its payrolls by 500,000 employees. Finally, the 2013–14 period was marked by reforms in which the Cuban government aimed to consolidate Cuba’s role in the international political context, particularly in Latin America, as well as the continuation of reforms and action against corruption. Brookings, “Rethinking Cuba” event transcript, Washington, DC, June 2, 2015; Ritter and Henken, *Entrepreneurial Cuba*, 2015, 2; Cuban academic, interview by USITC staff, Havana, June 15, 2015; USITC, hearing transcript, June 2, 2015, 124–125 (testimony of William Messina, University of Florida); DevTech Systems, written testimony to the USITC, June 2, 2015, 11–12. The text of the *Lineamientos* can be found at <http://www.cuba.cu/gobierno/documentos/2011/ing/l160711i.html>.

³² Reportedly, 99 percent of privately owned businesses in Cuba are financed through money sent from family abroad and are therefore de facto joint ventures between Cubans and their foreign relatives. Presenter, Cuba Corporate Council Summit, New York, October 7, 2015; presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

³³ Werner, “Moody’s in Its Fourth Report,” June 2015, 14; Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

Box 2.1: Cuba's Self-employed *Cuentapropistas*

In an effort to engage more directly with the Cuban private sector, the United States government loosened restrictions in December 2014 on U.S. exports to and imports from independent Cuban entrepreneurs or *cuentapropistas*.^a The mechanisms through which Cuban entrepreneurs may import U.S. goods directly are not yet in place; however, as long as the end recipient is a Cuban entrepreneur, U.S. rules allow U.S. exports to go through Cuban state trading entities.^b At present, many Cuban business owners get their materials by traveling to the United States and bringing goods back directly, by receiving goods from family based in the United States, or via “mules”—professional couriers who travel back and forth to procure supplies for others. As the Cuban private sector grows and licensing structures evolve, *cuentapropistas* could be an important (albeit small) market for U.S. exporters, as proximity could make U.S. sourcing a logical choice for many Cuban small businesses.

The Cuban government reports that there are 500,000 self-employed workers in Cuba; other estimates suggest that the total number of Cubans working in the private sector, either officially or unofficially, is closer to 2 million.^c In 2013, the Cuban government expanded the list of occupations in which self-employment is allowed from 178 to 201 (see appendix E for a complete list). The government also removed certain restrictions on private sector activity, such as the prohibition on hiring outside of one's family. Other changes enabled *cuentapropistas* to access banking services, raised maximum restaurant seating to 50, and allowed public-sector employees to moonlight in the private sector. However, many challenges persist for *cuentapropistas*, such as limited access to loans and working capital, a lack of wholesale markets, difficulties accessing critical raw materials, limited rental space, and high taxes.

The *cuentapropistas* are overwhelmingly semiskilled and unskilled labor; of total private sector licenses issued to date, 73 percent were for unskilled or semiskilled positions, while only 21 percent were for skilled positions. Construction, food, and transportation are the dominant sectors: 22 percent of currently licensed *cuentapropistas* work in building and contracting (construction); 12 percent are in food-related businesses (primarily restaurants); 10 percent are in transportation (such as taxis); 5 percent offer room rentals; 5 percent are telecom agents; and the rest cover a range of occupations.^d

The most visible of Cuba's *cuentapropistas* operate *paladares*, or privately owned restaurants, and *casas particulares*, or bed and breakfasts. There are currently roughly 4,000 private restaurants and 28,000 bed and breakfasts, and the numbers of these businesses are growing.^e These small business owners are likely to play an increasingly important role in the Cuban economy as Cuba's tourism numbers rise and in light of the Cuban government's goal of expanding the number of rooms available from about 63,000 at present to 110,000 by 2030.^f

^a Literally, someone working for himself or herself. For more information on U.S. regulations and the products that can be traded with the Cuban private sector, see 80 Fed. Reg. 2289–2291 (January 16, 2015) and 22763 (April 23, 2015). A U.S. exporter must get proof that a Cuban entrepreneur or worker-run cooperative is private and independent from the state; such proof could be in the form of a *cuentapropista* license issued by the Cuban government.

^b USITC, hearing transcript, June 2, 2015, 252 (testimony of Richard Feinberg, Brookings Institution); Cuban government official, interview by USITC staff, Havana, June 18, 2015; USDOC, BIS, “Cuba Frequently Asked Questions,” January 27, 2016.

^c USITC, hearing transcript, June 2, 2015, 251 (testimony of Richard Feinberg, Brookings Institution); Brookings, “Rethinking Cuba” event transcript, Washington, DC, June 2, 2015, 53 (Richard Feinberg, Brookings Institution); Dominguez, “What You Might Not Know,” August 17, 2015.

^d Presenter, CCAA 39th Annual Conference, Miami, November 16, 2015.

^e Presenter, CCAA 39th Annual Conference, Miami, November 16, 2015. Cuban government officials estimate the current number of private sector rooms to be somewhere between 8,000 and 19,000. Cuban government officials, interview by USITC staff, Havana, June 15, 2015.

^f Cuban government officials, interview by USITC staff, Havana, June 15, 2015.

The Cuban government has also implemented new foreign investment policies, recognizing investment (over trade) as a key element to sustaining bilateral economic relations.³⁴ The Cuban government is actively seeking foreign investment to bring much-needed capital, development, and economic growth to the island.³⁵ In April 2014, the Cuban government adopted new regulations pertaining to foreign direct investment (FDI) that essentially opened up nearly all industry sectors to foreign participation, except for health, education, the military, and the media.³⁶ In November 2015, the Cuban government published a list of 326 specific projects (worth \$8.2 billion) for which foreign investment is desired.³⁷ Reportedly, Cuba needs \$2 billion to \$2.5 billion in FDI annually to increase national economic growth rates to above 5 percent.³⁸

Investment as a share of GDP for Cuba is still very low at approximately 0.1 percent.³⁹ Cuban investment data are incomplete and vary considerably by year, and the available information does not always appear internally consistent. For example, the United Nations Conference on Trade and Development (UNCTAD), which based its estimate on information provided by a commercial database, reports that the value of greenfield FDI projects in Cuba was \$1.6 billion in 2010, but only \$195 million in 2013.⁴⁰ Greenfield FDI project data are based on announcements by investing companies, and funds may not actually have been invested in Cuba in the same year as the project announcement. In some cases, if investors' plans fall through, the invested capital may not materialize in later years either. Despite the high reported greenfield inflow in 2010, UNCTAD also reports that total FDI in 2011 (latest year available) was only \$427 million.⁴¹ Relative to other Caribbean countries, global FDI stock in Cuba is minimal. For example, reported global FDI stock in the Dominican Republic was \$17 billion in 2013 (with FDI stock from the United States alone valued at \$1.3 billion), about

³⁴ Cuban academic, interview by USITC staff, Havana, June 15, 2015.

³⁵ Article 1.3 of foreign investment law 118 states: "Foreign investments in the Republic of Cuba are oriented towards the diversification and expansion of export markets, access to advanced technologies and substitution of imports, particularly food imports. Likewise, they are also oriented towards obtaining foreign financing, creating new sources of employment and harnessing new managerial methods while linking them to the development of productive chains, and changing the country's energy matrix through the use of renewable sources of energy."

³⁶ Feinberg, "Cuba's New Investment Law: Open for Business?" April 1, 2014; Grogg, "Wanted: Foreign Investment in Cuba," April 1, 2014. Cuba has bilateral investment treaties in force with 42 countries. Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015).

³⁷ Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015).

³⁸ *Cuba Standard*, "Cuban Parliament Approves New Foreign Investment Law," March 30, 2014; Frank, "Cuba Struggles to Attract Investors despite Reforms," August 21, 2014.

³⁹ By comparison, this figure is 3.7 percent for the Dominican Republic and 5.2 percent for Costa Rica. Cuban academic, interview by USITC staff, Havana, June 15, 2015; World Bank, "Foreign Direct Investment, Net Inflows (Percent of GDP)," WDI database (accessed January 13, 2016).

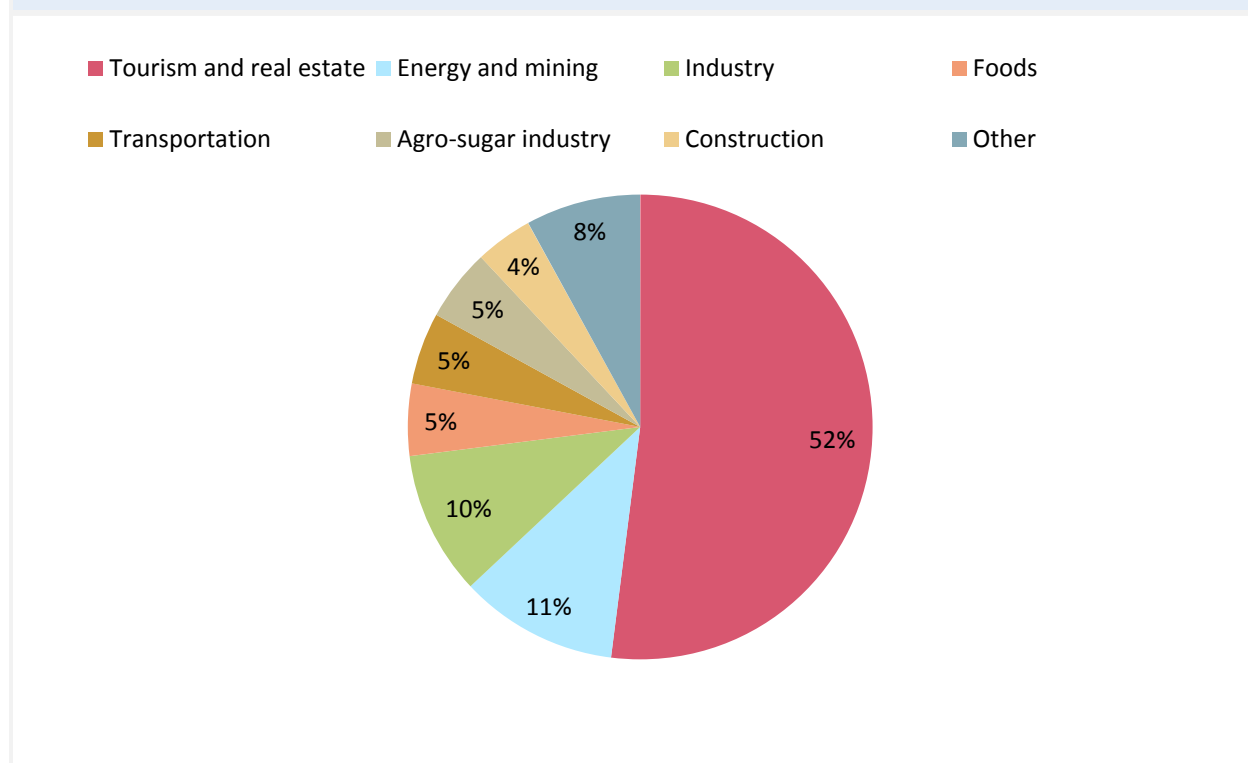
⁴⁰ UNCTAD, *World Investment Report 2014*, 2014, annex table 6, 218. UNCTAD compiles these data from press reports of companies, and they do not reflect official FDI inflows. "Greenfield" refers to foreign investment in a new project from the ground up.

⁴¹ UNCTAD, *World Investment Report 2012*, 2012, annex 1.2, 175.

\$1 billion in Costa Rica, and \$2.9 billion in El Salvador.⁴² Cuba reports nearly 250 joint venture investments, with most investors coming from Spain, Italy, Canada, and Venezuela.⁴³

The largest industry destination for FDI in Cuba is tourism, followed by energy and mining (figure 2.1). In the tourism industry, Spain is by far the largest investor, with 19 reported hotel projects since 2003. Two companies, Meliá and Iberostar, account for most of these projects. In many cases, Spanish companies reportedly hold management contracts for the hotels, rather than direct ownership stakes.⁴⁴ In the energy and mining sector, notable projects include an oil and gas extraction project initiated by Petrobras (Brazil) in 2008, another by Pebercan (Canada) in 2003–05, a hydropower project by Inter RAO Unified Energy System of Russia in 2009, a natural gas project by China National Petroleum Corp. in 2010, and investment in a petroleum refinery by Petróleos de Venezuela in 2008.⁴⁵ China’s interest in investing in Cuba is reportedly growing, and China currently accounts for about 4 percent of total FDI stock in Cuba.⁴⁶

Figure 2.1: FDI in Cuba, by sector, 2014



Source: Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment, 2015*, n.d., 12. (accessed December 9, 2015).

Note: See appendix [table J.10](#).

⁴² All three countries are members of CAFTA-DR.

⁴³ Kotschwar and Cimino, written testimony to USITC, June 2, 2015, 2–3.

⁴⁴ Cuban government official, interview by USITC staff, Varadero, Cuba, June 19, 2015. Cuba’s government classifies this form of investment as an international economic association contract.

⁴⁵ Except as noted, information in this paragraph is from Financial Times, FDI Markets database (accessed November 20, 2015).

⁴⁶ Cuban industry representative, interview by USITC staff, Havana, June 18, 2015.

Overview of Cuban Imports of Goods and Services⁴⁷

Cuba is a net importer of merchandise⁴⁸ and has run a trade deficit in goods for the last 40 years.⁴⁹ It receives almost 70 percent of its total imports of goods from its top three suppliers—Venezuela, the European Union (EU), and China. Total Cuban imports of goods reached \$9.3 billion in 2014, representing an increase of 62 percent since 2005 but a decline of 13 percent from 2013 (table 2.1). Cuba depends heavily on imports of food; as much as 80 percent of all food consumed in Cuba is imported. Cuba also depends on imports for its energy needs. Venezuela, which supplies crude petroleum products to Cuba at subsidized rates,⁵⁰ is the country's leading trading partner, accounting for about 30 percent of total Cuban trade in goods (imports and exports) in 2014.⁵¹

Table 2.1: Cuban imports of goods from the world, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Venezuela	1,240.0	1,933.9	1,382.3	3,426.0	2,265.9	2,808.0	3,982.8	3,807.0	3,629.0	3,234.0
EU	1,566.6	2,114.5	2,022.8	2,413.1	1,466.2	1,712.8	2,107.9	2,221.8	2,416.3	2,140.8
Spain	599.9	793.6	919.9	1,135.4	646.8	779.6	898.8	949.2	1,061.2	918.1
Italy	244.7	353.3	309.8	431.6	257.0	244.0	317.1	317.0	355.1	304.1
Germany	312.6	516.0	291.5	303.5	218.5	221.4	216.0	232.7	244.4	252.6
China	635.9	1,264.1	1,170.0	1,353.6	972.1	1,067.1	1,043.6	1,173.4	1,374.1	1,063.0
Brazil	245.5	343.3	323.9	526.8	277.2	414.9	550.2	568.1	528.2	507.8
Canada	370.9	453.3	527.7	725.2	275.1	379.2	468.8	422.5	454.7	405.7
Mexico	221.5	194.4	189.6	308.9	250.9	307.3	356.7	387.1	372.6	362.3
United States	369.0	340.5	447.1	711.5	532.8	363.1	363.3	464.4	359.6	299.1
All other	1,101.5	1,239.6	1,787.3	2,212.0	1,282.2	1,264.1	1,551.3	1,259.8	1,556.1	1,284.3
Total	5,751.0	7,883.6	7,850.5	11,677.2	7,322.3	8,316.5	10,424.5	10,304.1	10,690.7	9,296.9

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

In contrast to merchandise trade, Cuban imports of services totaled just \$2.5 billion in 2013, the latest year for which data are available. Cuba runs a trade surplus in services and has done so since 2007,⁵² owing to the country's strong tourism sector and its exports of medical services. With respect to membership in trade organizations, Cuba is an original contracting party to the

⁴⁷ In this chapter Cuban import data for goods are based on Cuba's trading partners' exports to Cuba, as reported by GTIS Global Trade Atlas, and USITC estimates. See chapter 1, box 1.1, for further explanation of data sources and other related information.

⁴⁸ Cuban exports totaled about \$2.4 billion in 2014, resulting in a trade deficit of \$6.9 billion.

⁴⁹ Cuban academic, interview by USITC staff, Havana, June 15, 2015.

⁵⁰ Piccone and Trinkunas, in "The Cuba-Venezuela Alliance," 2014, report that "Venezuelan oil sold to Cuba is heavily subsidized as only 60 percent is paid for in the first 90 days while the other 40 percent is financed at a one percent interest rate over 25 years."

⁵¹ GTIS, Global Trade Atlas database (accessed November 30, 2015); USITC estimates.

⁵² Cuban academic, interview by USITC staff, Havana, June 15, 2015.

General Agreement on Tariffs and Trade (GATT), joined the World Trade Organization (WTO) in April 1995, and belongs to a number of regional organizations.⁵³

The Cuban government's access to foreign exchange is a key determinant of Cuba's ability to import goods and services, especially those from the United States, since no U.S. commercial credit can be provided for most U.S. exports. Cuba earns foreign exchange through exports of Cuban goods and services, access to foreign financing, remittances, and assistance from allies such as Venezuela; its foreign currency reserves were estimated at \$10 billion in 2014.⁵⁴ While U.S. firms are barred from extending credit for agricultural products and other products that are not 100 percent U.S. origin to Cuban importers,⁵⁵ many of Cuba's primary trading partners supply bilateral commercial credit under generous payment terms, which strongly influences Cuban purchasing decisions.⁵⁶ Cuban officials note that they will change trading partners based on credit availability,⁵⁷ leading to what some term a geographic relocation of commerce.⁵⁸ The removal of U.S. restrictions would eliminate this disadvantage for U.S. exporters, although few U.S. companies have indicated the exact credit terms they would be willing to offer Cuba.⁵⁹

Limited availability of foreign currency has made it difficult for Cuba to honor all foreign payments in a timely manner.⁶⁰ Cuba is characterized as a high-credit-risk country,⁶¹ given that it has a history of defaulting on its debt.⁶² Its external debt is currently estimated at \$25.2 billion, accounting for over 32 percent of GDP.⁶³ However, the Cuban government appears to be taking steps toward addressing Cuba's foreign obligations, improving its finances, and positioning Cuba to rejoin the global economy. Cuba has restructured its debt with a

⁵³ Cuba is a member of the Association of Caribbean States, the Latin American Integration Association, the Bolivarian Alliance for the Americas, the Caribbean Community and Common Market, and the Community of Latin American and Caribbean States; it is also a non-participating member of the Organization of American States.

⁵⁴ Cuban academic, interview by USITC staff, Havana, June 15, 2015; *Cuba Standard Monthly*, "Cuba Reportedly Releases Foreign Reserve Figures," January 2015, 7.

⁵⁵ On January 27, 2016, the United States removed limitations on payments and financing of U.S. Department of Commerce-authorized exports from the United States of 100 percent U.S.-origin goods or re-export of 100 percent U.S.-origin goods from a third country, other than exports of agricultural products. 81 Fed. Reg. 4583 (January 27, 2016). See chapter 3 for additional information.

⁵⁶ USITC, hearing transcript, June 2, 2015, 63 (testimony of William Messina, University of Florida), and 177 (testimony of Ricardo Torres Pérez, University of Havana); Cuban economist, interview by USITC staff, Washington, DC, December 10, 2015. Examples of credit deals include government-to-government arrangements as well as government-supported credit for exports to Cuba. See chapter 4 for additional information on factors affecting Cuban trade and investment decisions.

⁵⁷ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

⁵⁸ Cuban economist, interview by USITC staff, Havana, June 17, 2015.

⁵⁹ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

⁶⁰ Brookings, "Rethinking Cuba" event transcript, Washington, DC, June 2, 2015, 84 (José María Viñals Camallonga, Lupicinio International Law Firm).

⁶¹ Moody's Investors Service rates Cuba at Caa2 with a positive outlook. According to Moody's, "Obligations rated Caa are judged to be speculative of poor standing and are subject to very high credit risk." Moody's Investors Service, *Rating Symbols and Definitions*, January 2016. Moody's Investors Service, "Moody's Changes Cuba's Outlook to Positive from Stable; Caa2 Rating Affirmed," December 10, 2015; USITC, hearing transcript, June 2, 2015, 119 (testimony of William Messina, University of Florida).

⁶² Showalter, "Go Figure: Cuban Freedom and Trade Decline," October 14, 2015.

⁶³ CIA, *World Factbook*; Cuban academic, interview by USITC staff, June 15, 2015.

number of countries, obtaining cancellation or significant reductions in the amount owed, as well as more feasible payment plans.⁶⁴

Credit is not the only factor affecting Cuba's import levels and sourcing choices, which also fluctuate to reflect changes in global prices, weather effects, and U.S. and Cuban policies and relations.⁶⁵ In addition, Cuban imports depend heavily on government decisions about the amount of money available annually within the budget. When Cuba has balance-of-payments issues, the response is to reduce imports in order to rebalance the budget; the government calculates the amount available for spending on imports, and the state-owned importing entities, which are responsible for nearly all imports used for the Cuban population, are limited to that amount.⁶⁶ As a result, Cuban imports can be irregular, exhibiting no particular trend, and are not necessarily indicative of changes in Cuban demand or production.

Cuban Imports of Goods

Primary Suppliers

Cuba depends primarily on three suppliers to meet its import needs. In 2014, Venezuela was the leading supplier of Cuban imports, with a share of 35 percent (figure 2.2). The EU as a whole supplied 23 percent of total Cuban imports, while China accounted for 11 percent. Collectively, Venezuela, the EU, and China accounted for \$6.4 billion, or 69 percent, of total Cuban imports in 2014. By contrast, before initiating trade restrictions, the United States alone accounted for 70 percent of Cuba's total imports in 1958;⁶⁷ in 2014, the U.S. share was just 3 percent.

The list of Cuba's top suppliers remained relatively unchanged during 2005–14, with Venezuela consistently ranking as the largest single-country supplier. Cuba's trade with Venezuela is largely a form of barter.⁶⁸ Cuba receives subsidized crude petroleum exports from Venezuela in exchange for sending professionals—doctors, teachers, sports trainers, and military advisors—to work in Venezuela (box 2.2).⁶⁹ However, Venezuela's recent economic and political challenges, including the December 2015 legislative elections which gave the opposition party a two-thirds majority in the National Assembly, are placing a strain on the bilateral trade relationship between Venezuela and Cuba. This changing dynamic could spark additional economic reforms in Cuba as well as bolster the U.S.-Cuba trade relationship.⁷⁰

⁶⁴ Bolton, "Cuba Reaches \$15bn Debt Agreement," June 23, 2015; Strohecker, "Cuba Debt Holder Hangs On," May 18, 2015; Scanlan, "Spain Agrees Debt Deal with Cuba," November 3, 2015.

⁶⁵ USITC, hearing transcript, June 2, 2015, 60 (testimony of William Messina, University of Florida).

⁶⁶ USITC, hearing transcript, June 2, 2015, 179 (testimony of Ricardo Torres Pérez, University of Havana).

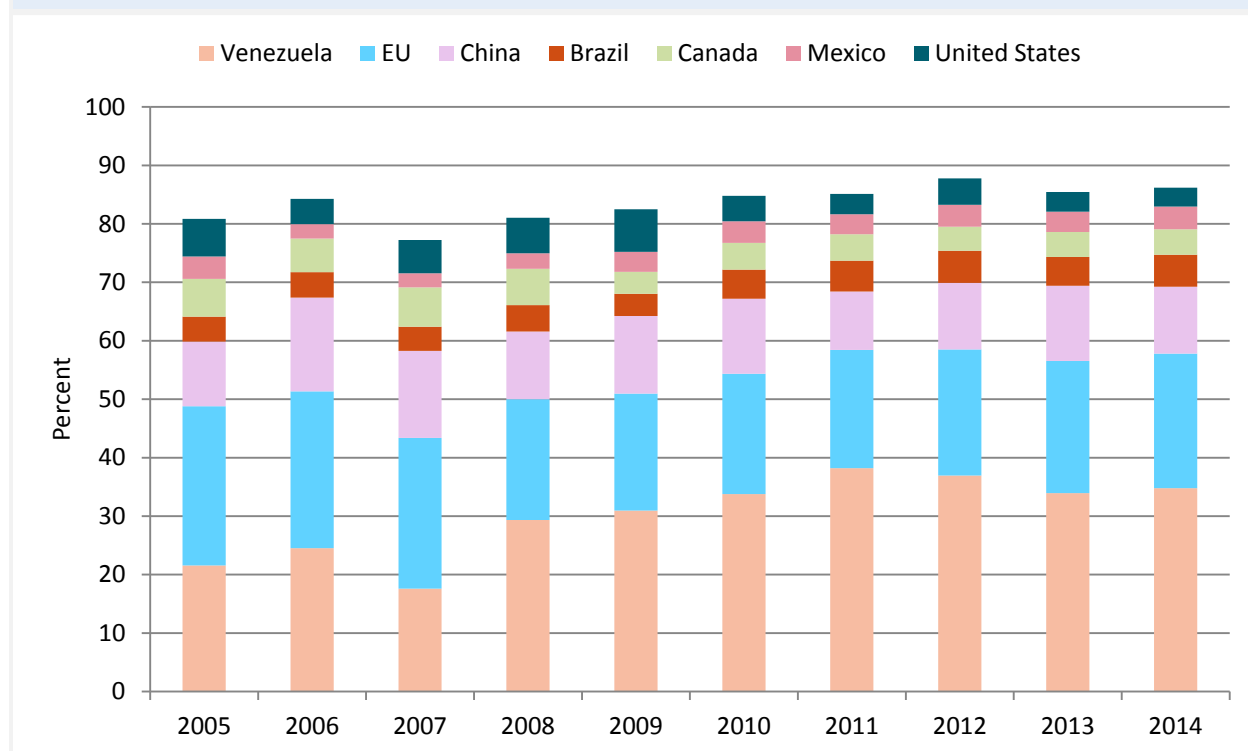
⁶⁷ Similarly, in 1958, the United States accounted for 67 percent of total Cuban exports. United Nations Economic Commission for Latin America, *Economic Survey of Latin America*, 1963, 273.

⁶⁸ Cuba has such barter arrangements with about 80 countries. Cuban academic, interview by USITC staff, Havana, June 15, 2015.

⁶⁹ Piccone and Trinkunas, "The Cuba-Venezuela Alliance," June 2014; USITC, hearing transcript, 157, 237 (testimony of Jorge Piñon, University of Texas at Austin).

⁷⁰ USITC, hearing transcript, June 2, 2015, 307 (testimony of Rafael Romeu, DevTech Systems).

Figure 2.2: Shares of total Cuban imports by trading partner, 2005–14



Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

Note: See appendix [table J.2](#).

Box 2.2: The Cuba-Venezuela relationship

In 2000, Cuba and Venezuela signed the *Convenio Integral de Cooperación*, an agreement setting up the bartering of Cuban services for Venezuelan crude petroleum.^a This agreement marked the end of a historically contentious relationship between these two nations and the beginning of Cuba’s dependence on Venezuelan crude and other aid. Diplomatic relations between Cuba and Venezuela improved following the 1999 election of Venezuelan president Hugo Chávez, a long-time ally and mentee of Fidel Castro. The barter agreement also signaled the end of a decade-long economic crisis in Cuba known as the “Special Period in Time of Peace” that followed the collapse of the Soviet Union, Cuba’s longtime supporter and leading trading partner. Subsidized Venezuelan crude with inexpensive financing played an integral role in Cuba’s economic recovery.^b

Crude from Venezuela is both consumed domestically and re-exported as a way for Cuba to obtain hard currency, which is worth an estimated \$1 billion annually.^c In recent years, Venezuela shipped approximately 100,000 barrels of petroleum products per day to Cuba at below-market rates; these shipments accounted for about 67 percent of Cuba’s total crude imports.^d In return, Cuba sends 40,000 service workers to Venezuela, of which 30,000 are healthcare workers, to help with Venezuela’s social assistance programs. Cuba also provides medical care in country for tens of thousands of Venezuelans, in addition to hosting Venezuelan students interested in studying medicine.^e While money is exchanged for both the Venezuelan crude and the Cuban services, the highly subsidized nature of this trade demonstrates the barter-like nature of the agreement.

Cuban imports of crude petroleum from Venezuela (million dollars)

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
1,151	1,769	1,318	3,333	2,244	2,782	3,935	3,782	3,622	3,230

Source: Derived from official statistics of the Organization of Petroleum Exporting Countries (OPEC), Annual Statistical Bulletin, various years; official statistics of the American Petroleum Institute; and various industry sources.

Notes: The value data are obtained by multiplying the total export quantity to Cuba by the average spot market price of Venezuelan Tia Juana Light crude and Mesa 30 crude. Data for total exports to Cuba are estimated from total Venezuelan exports of crude petroleum to Cuba minus exports to its major markets (U.S., EU, Latin American), coupled with industry experts' estimates of Venezuelan shipments to Cuba.

Because of the Venezuelan economy's heavy reliance on oil, for which prices have fallen steeply, Venezuela underwent a painful economic contraction in 2015. Venezuela's difficulties have far-reaching implications for Cuba, as Cuba-Venezuela transactions account for 15 percent of Cuban GDP.^f It is predicted that a loss of Venezuelan support would cause an economic contraction in Cuba of 4.0 to 7.7 percent of GDP over four years.^g The Venezuelan economic crisis has prompted Cuba to begin to diversify its economy and trade relations, and many believe that it is a key reason behind Cuba's decision to reestablish relations with the United States.

^a Corrales, "The Logic of Extremism: How Chávez Gains," 2005, 1.

^b Piccone and Trinkunas, "The Cuba-Venezuela Alliance," 2014, 1.

^c Yáñez, "The Cuba-Venezuela Alliance," 2005, 11.

^d USITC, hearing transcript, 157, 237 (testimony of Jorge Piñon, University of Texas at Austin); Piccone and Trinkunas, "The Cuba-Venezuela Alliance," 2014, 3, 7.

^e Werner, "After 10 Years of Alba," January 2015, 24; Piccone and Trinkunas, "The Cuba-Venezuela Alliance," 2014, 3.

^f Werner, "Venezuelan Opposition Victory," January 2016.

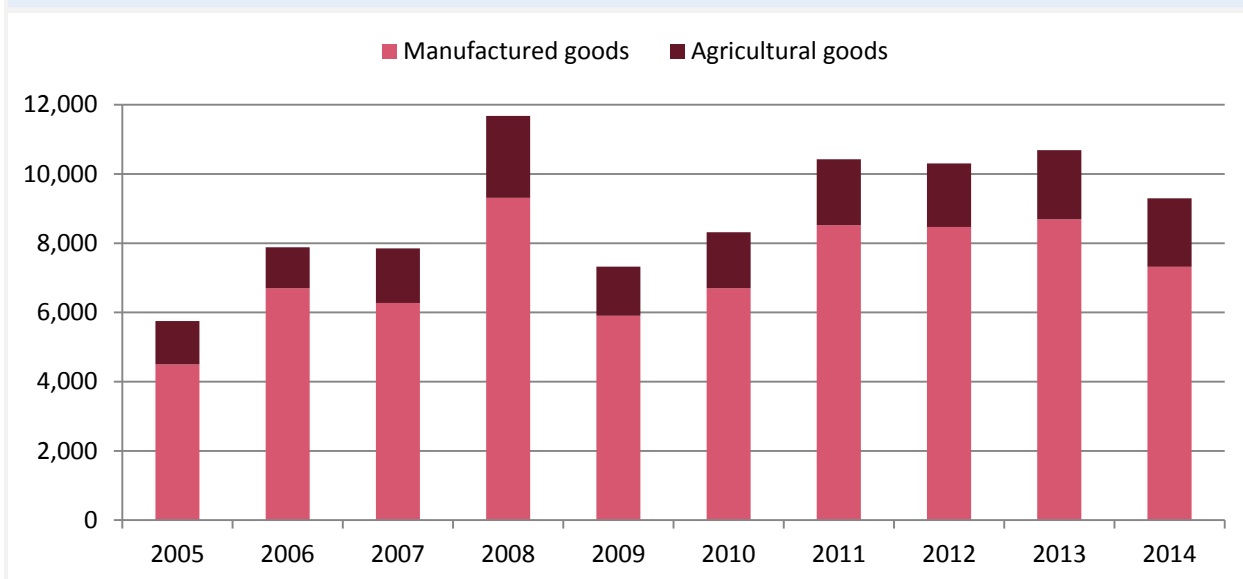
^g Piccone and Trinkunas, "The Cuba-Venezuela Alliance," 2014, 10.

Imports from the World

Nonagricultural products accounted for the vast majority (79 percent) of total Cuban imports of \$9.3 billion in 2014 (figure 2.3). At \$3.2 billion, crude petroleum imports accounted for 44 percent of nonagricultural imports in 2014; these imports increased 63 percent by value during 2005–14. Other key manufactured products imported during 2005–14 included refined petroleum products; motor vehicle parts and accessories; and insecticides, fungicides, herbicides, and similar products.

Agricultural goods accounted for 21 percent of Cuba's imports in 2014. Wheat, largely from France and Canada, was Cuba's largest agricultural import in 2014, accounting for 12 percent of total agricultural imports. Cuban imports of wheat decreased 6 percent to \$235 million during 2013–14, but rose 149 percent during 2005–14. Other key agricultural commodities in 2014 were milk powder, corn, poultry, soybean meal, and rice. Import trends and the composition of Cuban imports of both agricultural and nonagricultural commodities are discussed in greater detail in chapters 5 and 6.

Figure 2.3: Cuban manufactured and agricultural goods imports from the world, 2005–14 (million dollars)



Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

Note: See appendix [table J.3](#).

Imports from the United States

The United States and Cuba have been said to have a natural affinity with respect to trade, based on proximity, history, and complementary production.⁷¹ Despite the longstanding U.S. restrictions on trade with Cuba and the comparatively small U.S. share of Cuban imports, the United States consistently ranked among the top 10 suppliers to Cuba during 2005–14, although its supplier position weakened substantially during this period. U.S. exports to Cuba totaled \$299.1 million in 2014, down 17 percent from 2013 and down 19 percent from 2005 (table 2.1). The value of U.S. exports in 2014 represented the lowest value recorded during 2005–14. During this period, the value of U.S. exports to Cuba fluctuated between a low of \$340.5 million and a high of \$464.5 million, except for 2008 and 2009, when U.S. exports reached unusual highs of \$711.5 million and \$532.8 million, respectively. These greater-than-normal export values resulted from higher commodity prices and weather-related issues in Cuba that spurred greater demand for agricultural imports.

While the December 2014 announcement of restored relations between the United States and Cuba was expected to help boost U.S. exports to Cuba, the opposite has occurred. U.S. exports to Cuba in 2015 totaled \$180.3 million, down nearly 40 percent from 2014. Declines in U.S. exports of poultry, corn, and soybeans contributed largely to the decrease, which was not offset by increases in U.S. exports of a number of nonagricultural commodities. Reportedly, the decrease in Cuban purchases of U.S. goods was the result of concerns about avian flu,⁷² as well

⁷¹ Cuban government official, interview by USITC staff, Havana, June 18, 2015; Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015.

⁷² Industry representative, interview by USITC staff, Miami, June 13, 2015.

as the desire to place political pressure on the United States to fully lift trade restrictions.⁷³ This decline in U.S. exports to Cuba in an era of renewed relations reflects the multiple and complex factors that ultimately affect U.S. exports and reach far beyond market and economic conditions in Cuba.⁷⁴

The composition of U.S. exports to Cuba varied greatly during 2005–15. Only six of the top 15 products exported from the United States to Cuba in 2005 (excluding donations)—poultry, corn, soybeans, soybean oilcake, flour and meals of oilseeds and oleaginous fruits, and phosphates and similar products—were among the top 15 products supplied by the United States to Cuba in 2015 (figure 2.4). This variability is reportedly the result of both U.S. restrictions on providing credit to Cuba and Cuban import substitution policies. The U.S. requirement that Cuba pay cash for U.S. goods,⁷⁵ combined with higher global food prices, has prompted Cuba to procure from sources other than the United States if credit is available.⁷⁶ Further, import substitution is a stated priority of the Cuban government; it has influenced the changing composition of Cuban imports from both the United States and other countries.⁷⁷

Since 2000, the United States has allowed U.S. companies to export food to Cuba, and U.S. exports to Cuba consist largely of agricultural products (figure 2.5).⁷⁸ U.S. agricultural exports accounted for 95 to 99 percent of total U.S. exports to Cuba during 2005–14. These exports totaled \$285.0 million in 2014, down 18 percent over 2013 and down 19 percent from 2005. Poultry is by far the primary U.S. export to Cuba (figure 2.6). U.S. exports of poultry to Cuba, primarily frozen chicken cuts, totaled \$147.8 million in 2014, accounting for 52 percent of total U.S. agricultural exports to Cuba in that year. In contrast to the overall decline in U.S. agricultural exports to Cuba during 2005–14, U.S. poultry exports to Cuba increased by 154 percent during the period. Poultry was also one of the most stable U.S. export products, and the United States is reportedly highly competitive on price against other suppliers to Cuba.⁷⁹

⁷³ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

⁷⁴ See chapter 4 for additional information on these factors.

⁷⁵ Some of these restrictions were relaxed on January 27, 2016, when the United States removed limitations on payments and financing of certain nonagricultural exports. 81 Fed. Reg. 4583 (January 27, 2016). See chapter 3 and appendix F for additional information.

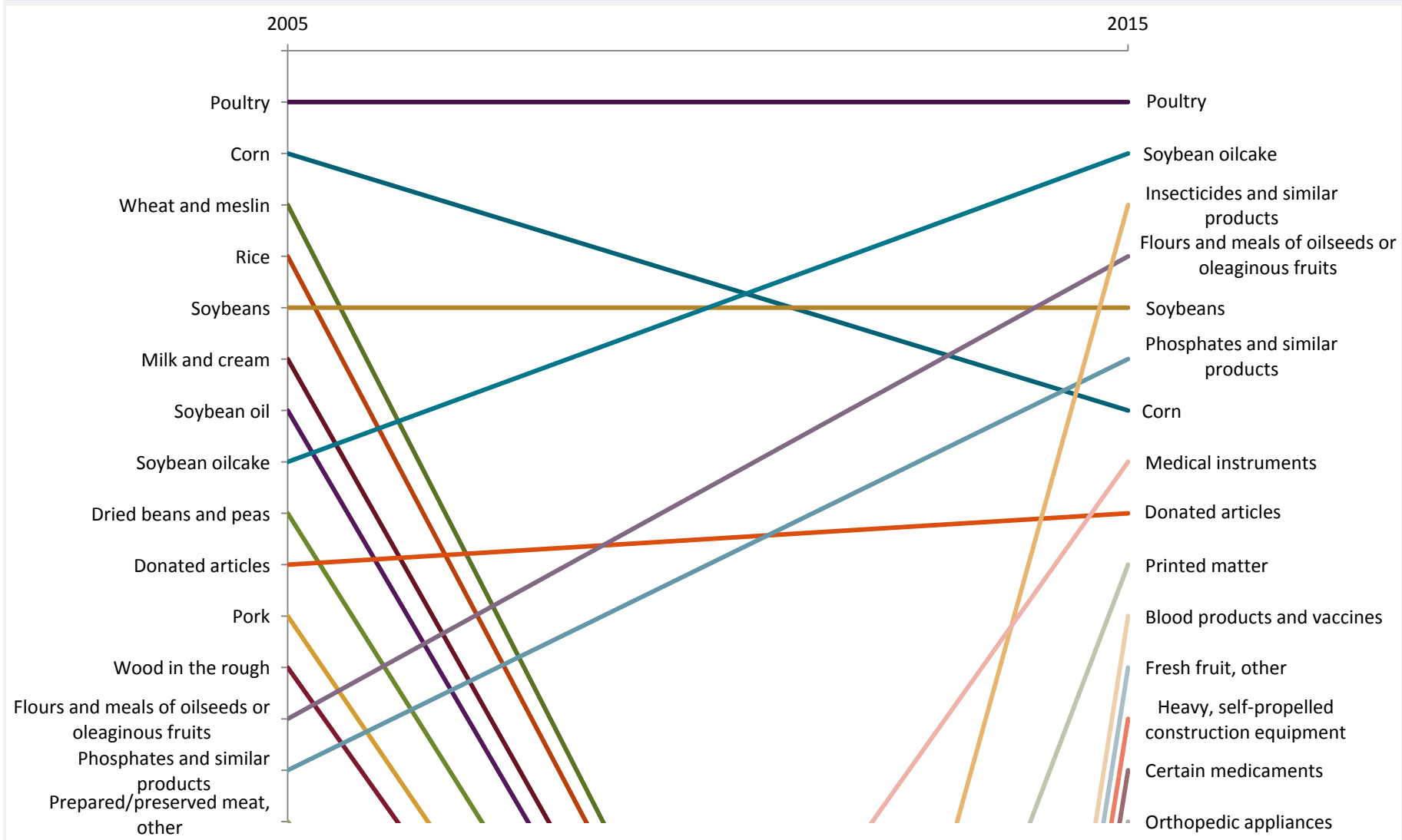
⁷⁶ Cuban academic, interview by USITC staff, Havana, June 15, 2015; Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 108–9.

⁷⁷ Cuban academic, interview by USITC staff, Havana, June 15, 2015.

⁷⁸ The Trade Sanctions and Reform and Export Enhancement Act of 2000 permits U.S. exports of food products and agricultural commodities to Cuba on a cash basis, while the export of healthcare products to Cuba is authorized by the Cuban Democracy Act of 1992. See chapter 3 and appendix F for additional information on U.S. restrictions.

⁷⁹ Industry representative, interview by USITC staff, Washington, DC, May 27, 2015.

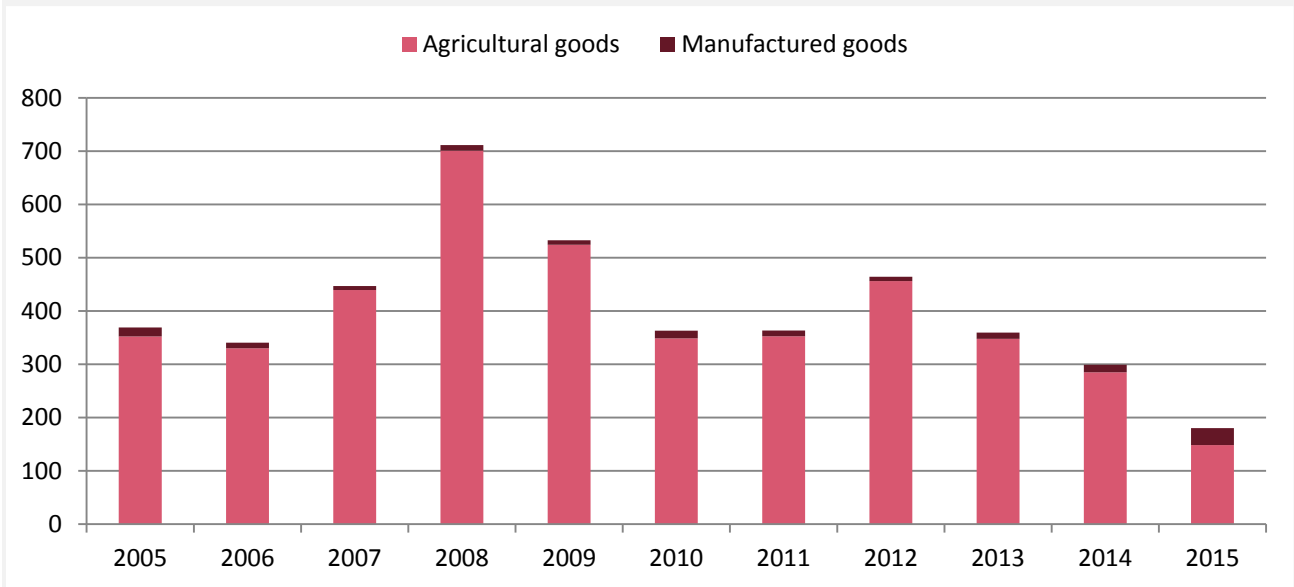
Figure 2.4: Top 15 U.S. exports to Cuba in 2005 and 2015



Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC DataWeb/USDOC (accessed February 8, 2016).

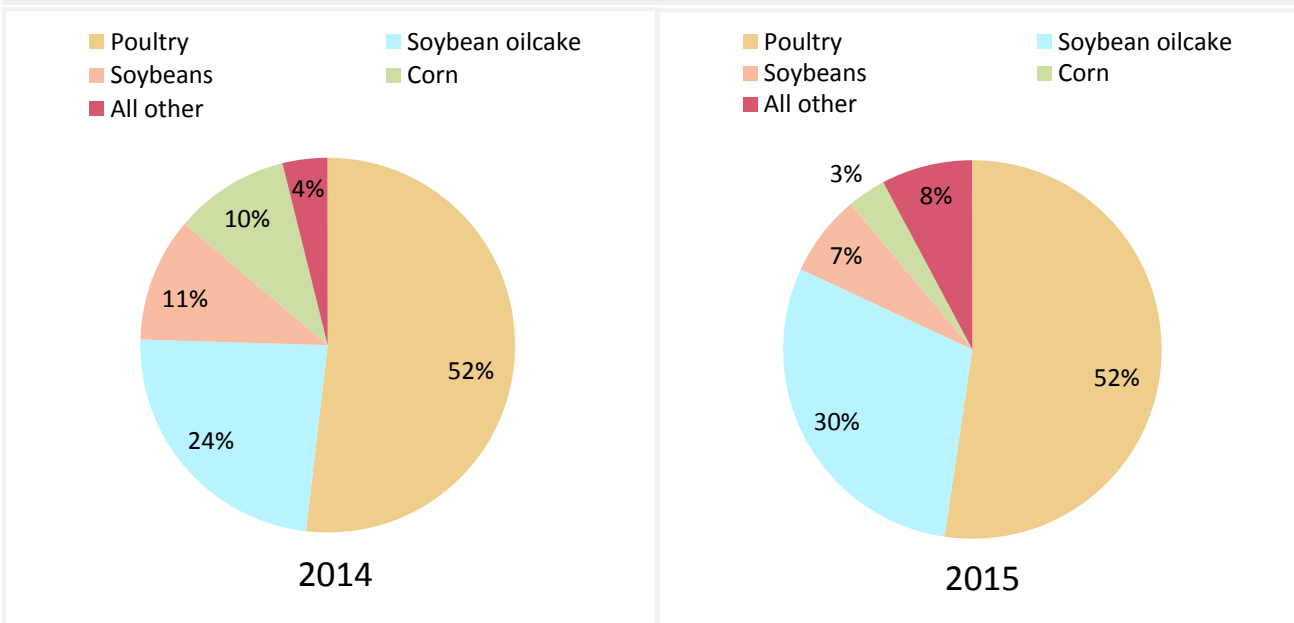
Note: See appendix [table J.4](#).

Figure 2.5: Cuban agricultural and manufactured goods imports from the United States (million dollars)



Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC DataWeb/USDOC (accessed February 8, 2016).
 Note: See appendix [table J.5](#).

Figure 2.6: Cuban imports of agricultural goods from the United States (2014 and 2015)



Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC DataWeb/USDOC (accessed February 8, 2016).
 Note: Due to rounding, shares may not add to 100 percent. See appendix [table J.11](#).

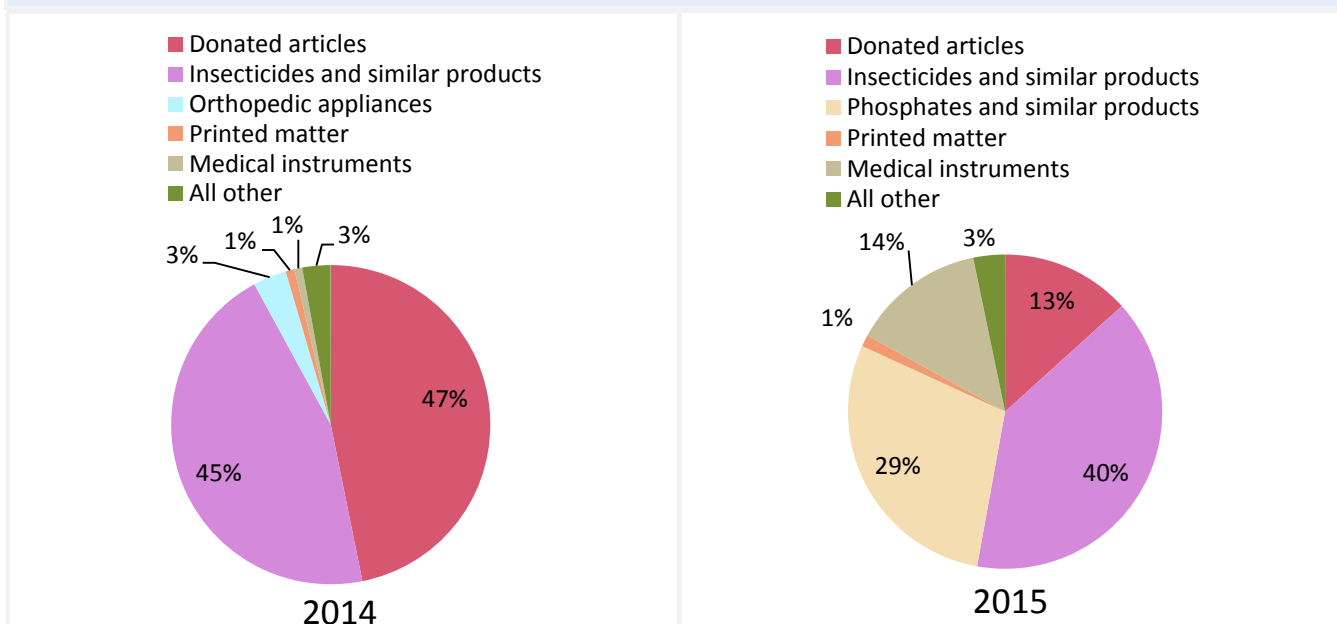
In 2015, poultry still comprised 52 percent of U.S. agricultural exports to Cuba. However, the value of U.S. poultry exports to Cuba dropped by 47 percent to just \$77.8 million in 2015. Moreover, the composition of U.S. exports changed considerably during 2014–15. While still representing a majority, the share of U.S. exports to Cuba accounted for by agricultural products fell to just over

82 percent in 2015. Total U.S. agricultural exports to Cuba fell 48 percent to \$148.5 million in 2015, driven primarily by the drop in poultry exports, as well as significant declines in U.S. exports to Cuba of corn and soybeans.

Unlike agricultural commodities, most nonagricultural exports from the United States to Cuba generally require specific export licenses. Such exports were fairly inconsistent and volatile during 2005–14. The value of such exports totaled just \$14.1 million in 2014, down 16 percent from 2005. Aside from donated articles, key nonagricultural exports to Cuba in 2014 consisted of insecticides, fungicides, herbicides, disinfectants, and similar products, as well as orthopedic appliances (figure 2.7). The United States shipped \$6.4 million worth of insecticides, fungicides, herbicides, disinfectants, and related products to Cuba in 2014, following the years 2008–13, when there were no exports in that sector. Similarly, U.S. exports of orthopedic appliances, which totaled \$472,215 and were the second-largest nonagricultural export to Cuba from the United States in 2014, were either negligible or nonexistent during 2005–12.

A doubling of U.S. exports of insecticides, fungicides, herbicides, disinfectants, and similar products, coupled with strong exports of other manufactured products, boosted the share of total U.S. exports to Cuba accounted for by nonagricultural products to 18 percent in 2015, compared with just 5 percent in 2014. In contrast to the near halving of U.S. exports to Cuba of agricultural goods in 2015, the value of U.S. exports to Cuba of manufactured goods grew by 127 percent. U.S. exports of nonagricultural goods totaled \$31.9 million in 2015, and consisted primarily of chemicals and medical goods.

Figure 2.7: Cuban imports of nonagricultural goods from the United States (2014 and 2015)



Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC DataWeb/USDOC (accessed February 8, 2016). See appendix [table J.12](#).

Cuban Imports of Services

In contrast with its deficit in merchandise trade, Cuba is a net exporter of services. Total Cuban exports of commercial services reached \$12.3 billion in 2014, the latest year for which data are available. Imports totaled \$2.5 billion in that year, up 150 percent from 2005.⁸⁰ Although disaggregated data on services trade with Cuba are not available, medical services are Cuba's largest services export, followed by tourism.⁸¹ Exports of medical services reportedly earn the country over \$8 billion annually.⁸² Tourism revenues were \$2.6 billion, as noted above. Spending by foreign tourists in Cuba constitutes a Cuban services export, and Cuba is a popular tourist destination, particularly for Canadian visitors. Cuba registered just over 3 million tourists in 2014, with 39 percent of the total (1.2 million) from Canada, followed by Germany (138,138, or just 5 percent) and the UK (almost 124,000, or 4 percent).⁸³ Arrivals from January to November 2015 were up 18 percent, with 3.1 million tourists visiting Cuba; almost 38 percent of these tourists came from Canada.⁸⁴

⁸⁰ WTO, Integrated Trade Intelligence Portal (accessed November 17, 2015).

⁸¹ Cuban government official, interview by USITC staff, June 17, 2015; European Parliament, Members' Research Service, "At a Glance: Cuba's International Trade," February 2015.

⁸² Frist, "Cuba's Most Valuable Export: Its Healthcare Expertise," June 8, 2015; Sabo, "Cuba Forecasts \$8.2 billion from Doctors Abroad," March 21, 2014.

⁸³ ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, table 15.3.

⁸⁴ ONEI, *Turismo Llegada de Visitantes Internacionales* [Tourism: international visitor arrivals], December 2015, table 3. See chapter 7 for more information on the Cuban tourism sector.

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Chapter 3

Current U.S. Restrictions on Trade with and Travel to Cuba and Their Effects on Cuban Imports of U.S. Goods and Services

Current U.S. restrictions on trade and travel between the United States and Cuba are based on various presidential proclamations, laws, and regulations developed during 11 presidential administrations over more than 55 years (see appendix F for a full history of the U.S. restrictions). There is no single piece of legislation that covers all aspects of the U.S. policy on trade with and travel to Cuba; instead, a combination of statutes and regulations provides the framework under which trade with and travel to Cuba are conducted.

There are three primary pieces of legislation, however, that largely affect U.S.-Cuba trade and that have generally codified restrictions and placed conditions on administrative action. These include the Cuban Democracy Act of 1992 (CDA),⁸⁵ the Cuban Liberty and Democratic Solidarity Act of 1996 (Libertad or Helms-Burton Act),⁸⁶ and the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA).⁸⁷ This chapter provides a brief summary of the key provisions of these statutes and the regulations promulgated under them and their effect on U.S. exports to Cuba.

Current Restrictions

Despite changes in U.S. policy and regulations following President Obama's December 2014 directive to increase engagement with Cuba, trade with Cuba remains difficult and limited. And, while many types of specific travel are allowed, tourist travel is still banned. The regulations governing interaction with Cuba are based on multiple legal authorities that specifically state what is permissible in terms of exports and imports, investment, provision of services, and other aspects of doing business with Cuba, as described below.

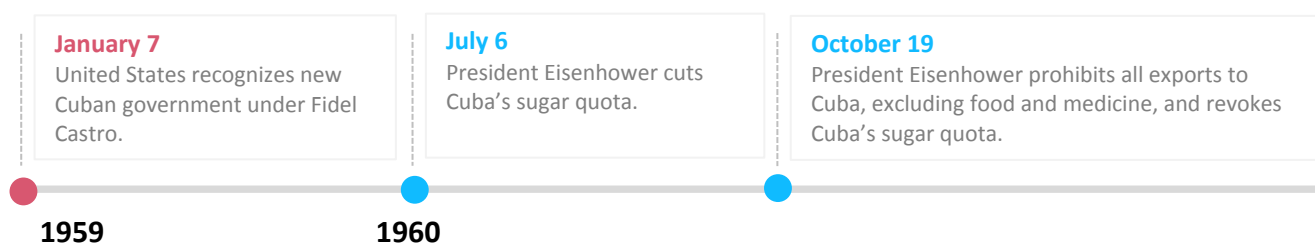
The legislation also indicates the circumstances under which the President may lift or waive U.S. restrictions. For example, the CDA included language that allowed the President to waive most of its provisions; later, however, the Helms-Burton Act narrowed the conditions under which the President could waive selected provisions of the legislation, including provisions of both Helms-

⁸⁵ Cuban Democracy Act of 1992, as amended, 22 U.S.C. §6021–6091.

⁸⁶ Cuban Liberty and Democratic Solidarity Act of 1996, as amended, 22 U.S.C. § 6021–6091.

⁸⁷ Trade Sanctions Reform and Export Enhancement Act of 2000, 22 U.S.C. § 7201–7211.

Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions



Burton and the CDA.⁸⁸ In addition, Helms-Burton specifically codified the regulations that established the economic embargo, including the provisions of the Cuban Assets Control Regulations (CACR).⁸⁹ Thus, prohibitions on transactions listed in the CACR as of March 1, 1996, require legislative action to be changed.⁹⁰ Moreover, the President can suspend the CACR only if certain conditions are met. These include having a transitional government in power in Cuba and the resolution of property claims (see box 3.1).⁹¹

Box 3.1: Outstanding Claims between the United States and Cuba

The United States and Cuba met on December 8, 2015, for the first bilateral discussion devoted to outstanding claims. These include the U.S. claims stemming from the Foreign Claims Settlement Commission as well as Cuban government claims related to the U.S. restrictions.^a

The U.S. claims stem from the United States' heavy presence in the Cuban economy in the years before the Cuban revolution in 1959. On the eve of the revolution, U.S. citizens and companies owned large shares in key sectors of the Cuban economy, including 90 percent of transportation, electrical services; 50 percent of the sugar sector (including rum); and over 50 percent of the telecom sector.^b U.S. interests also owned 25 percent of Cuba's land, including 75 percent of the arable land, and had significant ownership positions in the banking, cattle, mining, oil, timber, and tobacco sectors.^c

Following the revolution, the government of Cuba took steps to seize the assets and private property of both foreign nationals, including Americans, and Cuban citizens. The process started in 1959 with the passage of the Agrarian Reform Law, which authorized the takeover of agricultural and cattle operations, and continued in 1960 following the promulgation of Law 851, which authorized the expropriation of property from U.S. nationals.^d Additional resolutions authorizing expropriation were passed in 1960 and continued through 1963, when the last remaining U.S. properties were seized.^e With the exception of

⁸⁸ Rennack and Sullivan, *Cuba Sanctions: Legislative Restrictions*, June 5, 2015, 5–8; Cuban Liberty and Democratic Solidarity Act of 1996, 22 U.S.C. § 6021–6091.

⁸⁹ The CACR (28 Fed. Reg. 6974), issued by United States Department of the Treasury on July 8, 1963, under the Trading with the Enemy Act of 1917, regulate relations between the United States and Cuba and are the main mechanism of domestic enforcement of the U.S. restrictions on transactions with Cuba. Cuban Liberty and Democratic Solidarity Act of 1996, 22 U.S.C. § 6021–6091.

⁹⁰ Except for specific authorizations given to the Secretary of the Treasury. Rennack and Sullivan, *Cuba Sanctions: Legislative Restrictions*, June 5, 2015, 9–10; Cuban Liberty and Democratic Solidarity Act of 1996, 22 U.S.C. § 6021–6091.

⁹¹ Sections 6065 and 6067 of the Helms-Burton Act very specifically define the criteria for determining if a transition government exists in Cuba and address the settlement of outstanding claims. Cuban Liberty and Democratic Solidarity Act of 1996, 22 U.S.C. § 6021–6091.

1961

January 3

United States severs diplomatic relations with Cuba.

September 4

The Foreign Assistance Act of 1961 is enacted, authorizing the President to establish and maintain a total embargo on Cuba.

homes, personal items, and small parcels of land, the Cuban government also seized the assets of Cuban nationals from 1959 through 1968.^f

Cuba's expropriation laws did provide for compensation to the owners of seized properties. Law 851, for example, provided for payment to U.S. nationals via 30-year bonds yielding 2 percent interest, with such bonds being financed with income from U.S. sugar sales which, in turn, were supported by U.S. sugar import quotas.^g The Eisenhower administration responded to Cuba's expropriation of U.S. property and assets by initiating the U.S. economic embargo against Cuba^h and suspending its sugar quota.ⁱ As a result, almost no compensation was paid to U.S. citizens for expropriated property. By comparison, over the next 20 years, Cuba settled property claims with most, if not all, other claimant countries, including Canada, France, Spain, and Switzerland, with many such settlements reportedly tied to increased trade with Cuba.^j

Starting in 1964, the Foreign Claims Settlement Commission of the United States (FCSC), a quasi-judicial independent agency within the U.S. Justice Department, started to review claims by U.S. citizens and companies that were seeking compensation for confiscated property in Cuba. By 1972, when the first review period closed, the FCSC had reviewed 8,821 claims, subsequently approving 5,913 claim awards with a combined principal amount of \$1.9 billion,^k a figure that has reportedly grown over time to an estimated \$6 to \$8 billion (due to the accumulation of unpaid simple interest).^l U.S. claims run the gamut from vacation homes to an oil refinery seized from Exxon. Overall, more than 80 percent of the approved claims were filed by individuals, although the largest claims are held by U.S. companies. Of the original \$1.9 billion in claim awards, roughly 12 percent (\$230 million) are attributable to private individuals; the remaining claims belong to U.S. companies.^m

While Cuba has acknowledged its liability for U.S. property claims and reportedly wants to settle them,ⁿ efforts to settle them will likely be lengthy and complex. For example, many of the original assets—like factories and warehouses—no longer exist,^o and many of the individual claimants have died. Many of the U.S. companies originally holding claims also no longer exist, having been merged or acquired over the past 56 years, with their claims passing to new or acquiring companies. Starwood Resorts, for example, assumed a \$50 million claim on the ITT Telegraph Tower in Havana when it acquired another company.^p Similarly, Office Depot inherited a \$267 million claim on the Cuban Electric Company via a series of corporate acquisitions.^q

Cuba, however, also asserts claims against the United States. Cuban government officials, for example, have repeatedly stated that the U.S. embargo has inflicted severe economic hardship on Cuba, placing an accumulated monetary value on such losses at \$121 billion as recently as July 2015.^r Currently, Cuban assets totaling more than \$270 million—mostly wire transfers identified as originating in or destined for Cuba—are frozen in U.S. bank accounts.^s

A number of proposals to accomplish a final resolution of the property claims issue have been presented. One such proposal is a licensing fee on companies doing business in Cuba, with the proceeds being redistributed to claimants; a variation on this proposal also suggests levying fees on remittances sent by

February 7

Proclamation 3447—“Embargo on All Trade with Cuba”—is made by President Kennedy.

March 23

President Kennedy extends embargo to include imports of any goods that contain Cuban materials, regardless of production location.

May 24

President Kennedy suspends most-favored-nation status for Cuba.

1962

Cuban-Americans to their relatives in Cuba. Another proposal, suggested in a 2007 report prepared by several professors at Creighton University for the U.S. Agency for International Development, involves establishing a tribunal to oversee the claims settlement process and dividing up claims into small and large tiers.[†] Under this proposal, smaller claims would be paid off in lump sums by the Cuban government, whereas large claims owned by U.S. companies could be satisfied in ways that do not involve cash payments, namely development rights, tax-free status, and other incentives to invest in Cuba.

^a USDOS, “United States and Cuba Hold Claims Talks in Havana,” December 7, 2015.

^b USDA, FAS, *Cuba’s Food and Agriculture Situation Report*, March 2008, 3; Claim of International Telephone and Telegraph, Foreign Claims Settlement Commission of the United States, claim no. CU-2615, decision no. CU-5013, June 17, 1970; USITC calculations.

^c USDA, FAS, *Cuba’s Food and Agriculture Situation Report*, March 2008, 3.

^d Anillo-Badia, “Outstanding Claims to Expropriated Property in Cuba,” 2011, 83.

^e *Ibid.*

^f *Ibid.*

^g *Ibid.* Cuba’s sugar quota to the United States was 3 million tons per year at a price not less than 5.75 cents per pound.

^h USDOS, “U.S. Relations with Cuba,” July 21, 2015.

ⁱ Anillo-Badia, “Outstanding Claims to Expropriated Property in Cuba,” 2011, 83.

^j Brannigan, “Settling U.S. Business, Property Claims,” December 19, 2014; Gordon, *The Settlement of Claims for Expropriated Private Property*, October 1, 1973.

^k USDOJ, “Completed Programs—Cuba” at <https://www.justice.gov/fcsc/claims-against-cuba> (accessed January 26, 2015). The FCSC opened a second claim program between February 13, 2006, and August 11, 2006. During this period, the FCSC certified two claims in the total principal amounts of \$16,000 and \$51 million, respectively.

^l Davis, “As U.S. and Cuba Relations Warm,” July 19, 2015; Risco, “The Main Unresolved Disputes,” July 20, 2015.

^m Glovin, “Cuba Property Claims, Yielding Pennies,” December 22, 2014; Davis, “As U.S. and Cuba Relations Warm,” July 19, 2015.

ⁿ Taylor, “US Property Claims in Cuba,” July 1, 2015; Glovin, “Cuba Property Claims, Yielding Pennies,” December 22, 2014.

^o Taylor, “US Property Claims in Cuba,” July 1, 2015.

^p Neyfakh, “Cuba, You Owe us \$7 Billion,” April 8, 2014.

^q Glovin, “Cuba Property Claims, Yielding Pennies,” December 22, 2014.

^r Government of Cuba, “Report By Cuba,” July 2015, 36.

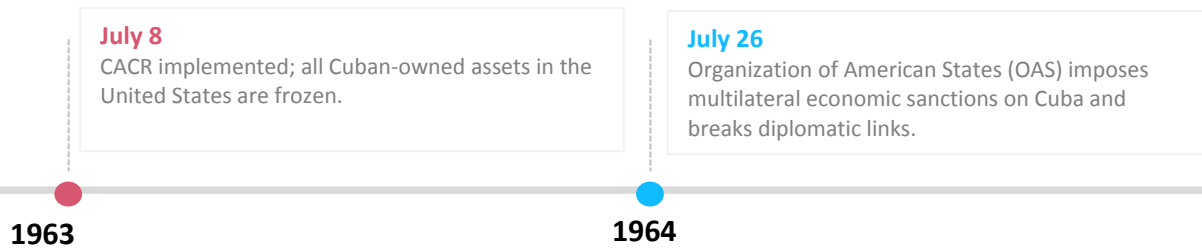
^s U.S. Treasury, OFAC, *Terrorist Assets Report*, 2014, 14.

^t Borchers et al., *Report on the Resolution*, 2007.

U.S. Restrictions on Trade with Cuba

For the past five decades, imports from Cuba have remained largely prohibited, although there are a few recent exceptions. Imports of specific goods and services produced by independent Cuban entrepreneurs are authorized.⁹² In addition, persons authorized to travel to Cuba may import, as accompanied baggage, goods acquired in Cuba of a total value not to exceed \$400 per person,

⁹² Eligibility of independent entrepreneurs is determined by the State Department; eligible goods, by the State Department’s Section 515.582 list, <http://www.state.gov/e/eb/tfs/spi/cuba/515582/237471.htm>. 80 Fed. Reg. 2291–2302 (January 16, 2015); 31 CFR § 515.



including no more than \$100 in alcohol and tobacco products.⁹³ CACR prohibitions also have an exemption for the importation of information and informational materials, including works of art.⁹⁴

Since implementation of the embargo, U.S. exports of medicine, medical supplies, and food and agricultural products to Cuba have been subject to various exceptions and special provisions at the discretion of the Secretary of Commerce. The CDA and TSRA, however, codified selected exceptions and special provisions into law.

TSRA specifically delegated authority to establish procedures to exempt agricultural products from normal licensing requirements. To implement this authority, the Department of Commerce's Bureau of Industry and Security (BIS)⁹⁵ created License Exception Agricultural Commodities (AGR). AGR promulgated a list of commodities that may be exported to Cuba subject to special licensing provisions.⁹⁶ TSRA provisions authorize the export and re-export of U.S.-origin agricultural commodities under AGR as long as exportation occurs under a written contract and takes place within a year of signing the contract.⁹⁷ Other TSRA provisions, however, prohibit the use of U.S. aid or the use of any government funds to support these exports to Cuba, limit financing to third-country sources, and require payments to be made in advance in cash.⁹⁸ Thus, U.S. government agencies are prohibited from providing export marketing assistance, technical trade assistance, and credit or credit guarantees for exports to Cuba.⁹⁹

AGR does not apply to medicine or medical goods. Medicine and medical goods may be exported to Cuba under license subject to provisions of the CDA; while such exports do not require a written contract, they must be carried out within two years of issuance of the license. Moreover, the CDA

⁹³ U.S. Treasury, "Frequently Asked Questions on Changes," December 21, 2015, 14–15.

⁹⁴ For a definition of information and informational materials see 31 CFR § 515.332 and U.S. Treasury, "Frequently Asked Questions on Changes," December 21, 2015, 14–15.

⁹⁵ The Bureau of Industry and Security (BIS) is a licensing, regulatory, and enforcement agency that advances U.S. national security, foreign policy, and economic objectives by ensuring an effective export control and treaty compliance system. BIS administers and enforces the Export Administration Regulations (EAR), which regulate the export and re-export of commercial commodities and technology, as well as less sensitive military items. BIS has a team of special enforcement agents and analysts, singularly focused on enforcing export control regulations. USDOC, BIS, "Bureau of Industry and Security" (accessed January 28, 2016).

⁹⁶ USDOC, BIS, "Sanctioned Destinations: Cuba" (accessed January 19, 2016).

⁹⁷ The list of commodities subject to TSRA is available here: <http://www.fas.usda.gov/regions/cuba>.

⁹⁸ Rennack and Sullivan, *Cuba Sanctions: Legislative Restrictions*, June 5, 2015, 10; Trade Sanctions Reform and Export Enhancement Act of 2000, 22 U.S.C. § 7201–7211.

⁹⁹ Scuse, testimony before the Senate Committee on Agriculture, Nutrition, and Forestry, April 21, 2015, 2.

July 29

OAS members vote to lift multilateral sanctions against Cuba.

August 21

United States permits U.S. foreign subsidiaries to trade with Cuba, cancels rule banning ships engaged in commerce with Cuba from refueling in the United States.

1975

requires that medical exports be subject to on-site verification confirming that the items exported are being used for their intended purpose.¹⁰⁰

Outside of the products specifically authorized by the CDA or TSRA, most U.S. exports continue to be subject to specific licensing under Export Administration Regulations (EAR) on a case-by-case basis.¹⁰¹ BIS maintains a general policy of denying applications for exports subject to the EAR, with certain exceptions.¹⁰² In addition, various licensing exceptions under the EAR have been established by presidential directive for several categories of products, allowing export or re-export of goods without license that would otherwise require a license, as outlined below.

License Exception Consumer Communication Devices (CCD) under the EAR authorizes the export and re-export of certain consumer communications devices, related software, applications, hardware, and services, and items for setting up and updating communications-related systems.¹⁰³ Commercial sales, as well as donations, of consumer communications devices—personal computers, mobile phones, televisions, memory devices, recording devices, and consumer software—are authorized under this exception.¹⁰⁴

License Exception Support of the Cuban People (SCP) under the EAR authorizes the export and re-export of certain items to Cuba that are intended to improve Cuban living conditions, support independent economic activity, strengthen civil society, improve the free flow of information, and facilitate travel and commerce.¹⁰⁵ Items eligible for export and re-export to Cuba under License Exception SCP must be for certain specified end uses and end users, and they are limited to those designated as EAR99.¹⁰⁶ General categories of items eligible for this exception include building materials, equipment, and tools for use by the private sector to construct or renovate privately

¹⁰⁰ Rennack and Sullivan, *Cuba Sanctions: Legislative Restrictions*, June 5, 2015, 5–8; Cuban Democracy Act of 1992, 22 U.S.C. § 6001–6010.

¹⁰¹ USDOC, BIS, “Sanctioned Destinations: Cuba” (accessed January 19, 2016).

¹⁰² Exceptions to the general policy of denial include: medicines and medical devices, items to ensure the safety of civil aviation and the safe operation of commercial passenger aircraft, and items necessary for the environmental protection of U.S. and international air quality, waters and coastlines, including items related to renewable energy or energy efficiency. In addition, on January 27, 2016, BIS added a general policy of approval for exports and re-exports to meet the needs of the Cuban people. USDOC, BIS, “Sanctioned Destinations: Cuba” (accessed February 5, 2016).

¹⁰³ USDOC, BIS, “Sanctioned Destinations: Cuba” (accessed January 19, 2016).

¹⁰⁴ *Ibid.*

¹⁰⁵ *Ibid.*

¹⁰⁶ EAR99 products are those subject to the EAR but not specified on the Commerce Control List (CCL) <https://www.bis.doc.gov/index.php/regulations/commerce-control-list-ccl>. See also USDOC, BIS, “Cuba: Frequently Asked Questions,” September 21, 2015, 4.

March 18

President Carter does not renew the travel ban, effectively lifting the prohibition on travel to Cuba, and allows U.S. citizens to spend up to \$100 on Cuban goods while there.

1977**April 19**

President Reagan prohibits U.S. citizen travel to Cuba, but allows some travel-related transactions by certain categories of travelers.

1982

owned buildings;¹⁰⁷ tools and equipment for private sector agricultural activity; and tools, equipment, supplies, and instruments for use by private sector entrepreneurs.¹⁰⁸

License Exception Gift Parcels and Humanitarian Donations (GFT) under the EAR authorizes the export and re-export of items donated by an individual, or a forwarding service acting on behalf of the donor, to eligible recipients.¹⁰⁹ Gift parcels may contain a variety of items, including food, most medicines and medical supplies and devices, certain consumer communications devices, and other items normally exchanged as gifts.¹¹⁰ Donors may send one parcel per month per eligible recipient with a total value not exceeding \$800, excluding the value of food items.¹¹¹

On January 27, 2016, BIS revised the EAR to further engage and empower the Cuban people, as directed by President Obama in December 2014.¹¹² Specifically, the EAR were amended to provide a general policy of approval for (1) license applications for exports and re-exports of certain telecommunications items to improve communications to, from, and among the Cuban people; (2) certain commodities and software to human rights organizations, individuals, and nongovernmental organizations to promote independent activity; (3) agricultural items outside the scope of AGR and other licensing exceptions; and (4) items to ensure the safety of civil aviation.¹¹³

Also on January 27, 2016, OFAC revised the CACR.¹¹⁴ These changes removed limitations on payments and financing of exports of 100 percent U.S.-origin items from the United States authorized by the U.S. Department of Commerce or the re-export of 100-percent U.S.-origin items from third countries, other than exports of agricultural items or commodities subject to TSRA. Changes were also made to regulations related to air carrier services; temporary sojourns by aircraft and vessels; and transactions related to information, information services, professional meetings, public performances, clinics, workshops, athletic and other competitions, exhibitions, and humanitarian projects.¹¹⁵

¹⁰⁷ This includes privately-owned residences, businesses, places of worship, and buildings for private sector social or recreational use.

¹⁰⁸ For additional information on U.S. regulations and the products that can be traded with the Cuban private sector, see 80 Fed. Reg. 2289–2291 (January 16, 2015) and 22763 (April 23, 2015). See also USDOC, BIS, “Cuba: Frequently Asked Questions,” September 21, 2015, 4.

¹⁰⁹ USDOC, BIS, “Sanctioned Destinations: Cuba” (accessed January 19, 2016).

¹¹⁰ *Ibid.*

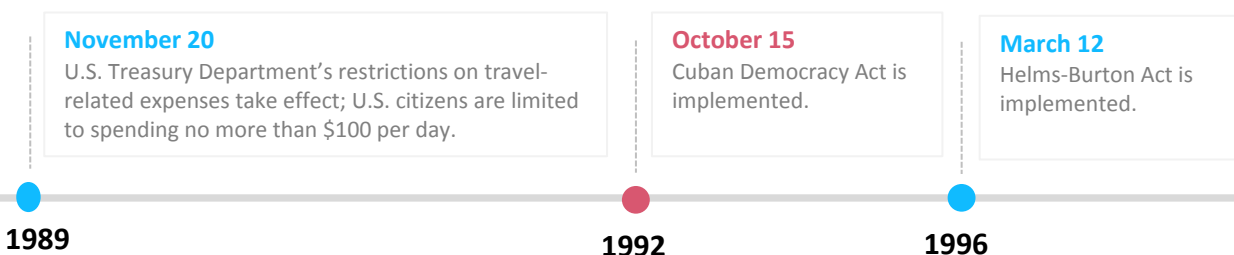
¹¹¹ *Ibid.*

¹¹² 81 Fed. Reg. 4583 (January 27, 2016); 31 CFR § 515.

¹¹³ *Ibid.*

¹¹⁴ *Ibid.*

¹¹⁵ *Ibid.*



U.S. Restrictions on Travel to Cuba

For U.S. citizens, travel-related transactions involving Cuba are permitted only for 12 specific categories of activities identified in the CACR. Travel-related transactions for all other purposes, including tourist travel, remain prohibited.¹¹⁶ Travel within the 12 designated categories is permitted without prior approval from OFAC but remains subject to general licensing through OFAC.¹¹⁷ Moreover, OFAC issued an advisory statement about educational travel in 2009 stating that all travelers must be able to certify that they have a full-time schedule of educational exchange activities. The statement, which is still in effect, stressed that such activities do not allow for unrestricted travel (e.g., tourism) to Cuba.¹¹⁸

U.S. Restrictions on Investment and Other U.S. Restrictions

Investment by U.S. firms in Cuba is largely prohibited by the CACR, although certain persons subject to U.S. jurisdiction may set up a physical or business presence in Cuba to facilitate authorized transactions, such as an office, warehouse, or retail outlet.¹¹⁹ Telecommunications services between the United States and Cuba are allowed, and telecommunications and Internet-based service providers can also establish a business presence in Cuba under general licensing procedures.¹²⁰

¹¹⁶ The 12 categories are (1) family visits (family defined as any individual related to the traveler by blood, marriage, or adoption within three generations); (2) official business of the U.S. government, foreign governments, and certain intergovernmental organizations; (3) journalistic activity; (4) professional research and professional meetings; (5) educational activities; (6) religious activities; (7) public performances, clinics, workshops, athletic and other competitions, and exhibitions; (8) support for the Cuban people; (9) humanitarian projects; (10) activities of private foundations or research or educational institutes; (11) exportation, importation, or transmission of information or information materials; and (12) certain authorized export transactions. U.S. Treasury, "Frequently Asked Questions on Changes," December 21, 2015, 2.

¹¹⁷ A general license constitutes blanket authorization for travel in the 12 approved categories. Travelers must submit information indicating which of the approved categories their travel falls under. See U.S. Treasury, OFAC, Submitting a New License Application at <https://licensing.ofac.treas.gov>.

¹¹⁸ Sullivan, "Cuba: U.S. Restrictions on Travel and Remittances," April 10, 2015, 21; 74 Fed. Reg. 46000–46003 (September 8, 2009).

¹¹⁹ U.S. Treasury, "Frequently Asked Questions on Changes," December 21, 2015, 15.

¹²⁰ *Ibid.* See chapters 6 and 7 for further discussion of the restrictions on telecommunications equipment and services.

October 28

Trade Sanctions Reform and Export Enhancement Act is signed into law.

December 14

In the aftermath of Hurricane Michelle, first U.S. exports of food are sent to Cuba after a request from the Cuban government.

2000**2001**

With respect to financial transactions, U.S. travelers are permitted to use credit and debit cards in Cuba.¹²¹ In addition, authorized travelers are permitted to open and maintain bank accounts while in Cuba to access funds for authorized transactions, including managing remittances. Moreover, depository institutions are allowed to open correspondent accounts at banks in Cuba to facilitate authorized transactions, including transactions to facilitate trade.¹²²

Other notable restrictions on U.S. activities with Cuba include a prohibition on licensing of exports to Cuba by U.S.-owned foreign subsidiaries, and restrictions on vessels carrying goods or passengers to and from Cuba. With the exception of vessels carrying authorized U.S. exports and passengers, a vessel loading or unloading cargo at a Cuban port may not enter a U.S. port for a period of 180 days from the date the vessel departed Cuba.

There are currently no dollar limits on remittances sent to Cuba, including family remittances, remittances for humanitarian projects, remittances for support for the Cuban people, and remittances for the development of private businesses.¹²³ The amount of remittances that an individual traveler to Cuba may carry is also unlimited.¹²⁴ However, remittances to selected officials of the government of Cuba and selected members of the Cuban Communist Party are prohibited.¹²⁵

Effects of the U.S. Restrictions on U.S. Exports to Cuba

Previous analysis by the Commission generally found that U.S. restrictions on trade with Cuba had a relatively small impact on total U.S. economic activity from 1960 through 1990, noting that U.S. exports to Cuba had begun to decline before the first restrictions were in place.¹²⁶

The Cuban economy and U.S. exports to Cuba both began to decline as political unrest and intensification of guerrilla activity against the Batista government in the late 1950s undermined

¹²¹ 80 Fed. Reg. 2291–2302 (January 16, 2015); 80 Fed. Reg. 56898–56904 (September 21, 2015); 31 CFR § 515.

¹²² 80 Fed. Reg. 2291–2302 (January 16, 2015); 31 CFR § 515. See chapter 7 for further discussion of the restrictions on financial services.

¹²³ *Ibid.*

¹²⁴ *Ibid.*

¹²⁵ *Ibid.*

¹²⁶ USITC, *The Economic Impact of U.S. Sanctions*, February 2001, 2-12 to 2-14, 3-1 to 3-8.

October 10

President G.W. Bush imposes measures to tighten travel restrictions and crack down on illegal cash transfers.

April 13

United States eases travel restrictions and limits on remittances to Cuba for Cuban family members in the United States.

2003

2009

economic activity in Cuba.¹²⁷ U.S. exports fell from \$617 million in 1957 to \$439 million in 1959, a 29 percent decrease, and fell again to \$224 million (a drop of 49 percent) from 1959 to 1960.¹²⁸

As Cuba began to focus on economic integration with the Soviet bloc, U.S. exports to Cuba further decreased. During 1961–63, as the level and scope of U.S. restrictions grew, U.S. exports to Cuba fell to an average of just \$21 million before dropping to zero in 1964. The next three decades were characterized by Cuba’s dependence on Soviet assistance and persistent inefficiencies in the Cuban economy. The disintegration of the Soviet Union in 1989 brought deep cuts in outside aid to Cuba, and the Cuban economy contracted sharply. In response, Cuba imposed policies to promote austerity and self-reliance in the 1990s during what is called the “Special Period.”

Despite policy reforms during this period, Cuba remained highly dependent on imported food and energy. U.S. licensing exemptions in place since 2000 for agricultural goods increased opportunities for U.S. sales to Cuba. Cuba initially took advantage of this opportunity and increased imports of U.S. agricultural goods, despite strict U.S. financial requirements and restrictions on providing credit for these exports. These U.S. rules, however, increased costs and cut into the competitiveness of U.S. exports to Cuba.

U.S. restrictions on payments, financing, and the use of U.S. government-sourced and -administered funds continue to create conditions that make various U.S. exports to Cuba uncompetitive.¹²⁹ The continued ban on U.S. tourist travel also depresses demand for U.S. exports in Cuba by limiting the influx of U.S. dollars that could be used to buy U.S. goods, in spite of the easing of other travel restrictions. Further, Cuba’s trade relationships have been focused on countries where Cuba can barter medical and social services, or provide them at non-market prices, in exchange for goods.¹³⁰ Thus, opportunities for U.S. exports to Cuba have been limited by Cuba’s government actions as well as U.S. restrictions.

Effects of Specific U.S. Restrictions

U.S. exporters report that U.S. restrictions have severely limited their ability to export to Cuba, a market where they state that they should be competitive based on price, product quality, and

¹²⁷ Ibid.

¹²⁸ Ibid.

¹²⁹ Restrictions include, but are not limited to, appropriated funds via USDA’s Market Access Program (MAP) and Foreign Market Development (FMD) program, as well as producer-funded research and promotion funding administered by USDA.

¹³⁰ Feinsilver, “Fifty Years of Cuba’s Medical Diplomacy,” 2010, 85–104.

January 14

United States further eases travel restrictions for cultural, educational, journalistic, and religious travel, and allows non-family remittances to Cuba.

2011**December 17**

Presidents Obama and Raúl Castro announce intentions to normalize relations between the United States and Cuba.

2014

geographic proximity.¹³¹ Others state that the U.S. restrictions completely deter any interest in exporting to Cuba.¹³² After the CDA passed in 1992, trade with Cuba remained negligible, averaging \$6 million during 1992–2001.¹³³ After TSRA (2000) created licensing exemptions for commercial sales of agricultural goods, U.S. exports to Cuba averaged \$394 million from 2002 through 2011.¹³⁴ Since peaking at more than \$700 million in 2008, however, U.S. exports to Cuba have slowed, as Alimport, the Cuban state trading entity that handles all U.S. agricultural exports to Cuba, diversified its sourcing, giving preference to suppliers that offered more competitive purchasing and payment options.¹³⁵

Before TSRA, all U.S. exports to Cuba were strictly limited because licenses were generally denied.¹³⁶ While licensing exemptions under TSRA increased export opportunities for agricultural goods, other aspects of U.S. restrictions still hamper U.S. exports to Cuba, as discussed below.

Restrictions on Payment and Financing

Provisions restricting payment and financing under TSRA, which limit the payment options U.S. exporters can offer and increase the cost of purchasing from U.S. suppliers, were identified as one of the leading impediments to sales to Cuba.¹³⁷ TRSA specifically prohibits financing of agricultural sales to Cuba using either private or public lending sources. In addition, payment to U.S. exporters must be either (1) in the form of cash in advance, or (2) financed via third-country financial institutions. Since non-U.S. suppliers to Cuba do not face such restrictions, they are able to provide

¹³¹ USITC, hearing transcript, June 2, 2015, 36 (testimony of Devry Boughner Vorwerk, Cargill); American Feed Industry Association, written submission to the USITC, June 18, 2015, 1; Dairy Farmers of America, written testimony to the USITC, May 20, 2015, 1; U.S. Meat Export Federation, written submission to the USITC, June 18, 2015, 1; U.S. Grains Council, written testimony to the USITC, June 2, 2015, 6.

¹³² Industry representative, interview by USITC staff, Miami, June 13, 2015.

¹³³ GTIS, Global Trade Atlas database (accessed January 6, 2015).

¹³⁴ *Ibid.*

¹³⁵ Alimport (*Empresa Comercializadora de Alimentos*) is the sole Cuban buying agency for U.S. agricultural products. It negotiates for client Cuban entities and handles all purchasing, documentation, and logistics for Cuba's agricultural imports from the United States.

¹³⁶ AAWH, *Denial of Food and Medicine*, 1997, 3–4.

¹³⁷ American Feed Industry Association, written submission to the USITC, June 18, 2015, 1; U.S. Chamber of Commerce, written submission to the USITC, June 2, 2015, 4; Dairy Farmers of America, written testimony to the USITC, May 20, 2015, 1; National Association of Wheat Growers and U.S. Wheat Associates, written submission to the USITC, May 20, 2015, 4; USITC, hearing transcript, June 2, 2015, 45 (testimony of Devry Boughner Vorwerk, Cargill); 31–32 (testimony of Terry Harris, Riceland Foods); Cuban government official, interview by USITC staff, Havana, June 17, 2015; Salmonsens, remarks at “Cuba, the United States, and the Road Back to MFN,” September 10, 2015.

Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

January 16

OFAC and BIS publish major rule changes to the CACR and EAR.

January 21

U.S.-Cuba bilateral talks begin in Havana.

March 17

Direct charter flights between New York City and Havana begin.

2015

more attractive terms and expedite financial transactions.¹³⁸ Payment restrictions also raise the cost of U.S. goods, making them less attractive in the Cuban market.¹³⁹

TSRA's cash-in-advance requirements did not initially appear to create insurmountable barriers to U.S. agricultural exports to Cuba. From implementation through most of 2004, U.S. exports to Cuba were conducted by a process known as "cash-against-documents," in which cash payment and title to the goods were transferred while the goods were already in transit. These arrangements, however, were suspended in late 2004 for OFAC review. In 2005, OFAC redefined "cash in advance" as requiring payment before the product exited the U.S. port.¹⁴⁰ As this meant that Alimport had to tie up cash by using it to pay for products that had not yet left a U.S. port, many transactions involving U.S. exports switched to transactions requiring letters of credit from third-country banks. This shift, however, created shipping and logistical delays that resulted in contracted goods missing scheduled shipping dates and increasing costs.¹⁴¹ Both the U.S. rice and wheat industries attribute decreased sales to Cuba to the 2005 change in the cash-in-advance definition. The rice industry has stated that U.S. rice exports to Cuba fell from \$64 million in 2004 to near zero after "cash in advance" was defined to require payment before a shipment could leave port.¹⁴² The wheat industry attributes the lack of U.S. wheat exports to Cuba to higher costs associated with payment and financing.¹⁴³

Beginning in January 2015, the regulatory interpretation of "cash in advance" was changed again to mean "cash before transfer of title and control."¹⁴⁴ This essentially reverts to the "cash against documents" regime that was used before 2005. One U.S. exporter to Cuba reports that the return to the initial definition may not always be helpful, as goods may arrive in Cuba before the financial transaction is completed, resulting in demurrage charges, slower turnaround time of vessels (thus, reducing the number of round trips), and subsequently lost revenues.¹⁴⁵ Furthermore, the redefinition reportedly does not relieve the negative effects related to U.S. exporters' inability to

¹³⁸ USITC, hearing transcript, June 2, 2015, 46 (testimony of Devry Boughner Vorwerk, Cargill).

¹³⁹ USITC, hearing transcript, June 2, 2015, 56 (testimony of Marco Palma, Texas A&M University).

¹⁴⁰ Under the cash before shipment definition, ships carrying U.S. exports to Cuba were not allowed to leave the U.S. port until payment had been made and title transferred for all goods being transported to Cuba.

¹⁴¹ Echevarría, "U.S. Food Exporters Zero In," January 2015, 17.

¹⁴² USITC, hearing transcript, June 2, 2015, 29 (testimony of Terry Harris, Riceland Foods).

¹⁴³ National Association of Wheat Growers and U.S. Wheat Associates, written submission to the USITC, May 20, 2015, 1–2.

¹⁴⁴ Under the "cash before transfer of title and control" definition, a ship carrying exports to Cuba may leave the U.S. port before payment is completed; thus payment can be made and title can be transferred while the goods are in transit to Cuba. 80 Fed. Reg. 2291 (January 16, 2015); 31 CFR § 515.

¹⁴⁵ Industry representative, interview by USITC staff, Miami, June 13, 2015.

May 29

Cuba is removed from the list of State Sponsors of Terrorism.

July 20

Full diplomatic relations resume.

July 22

BIS publishes changes to the EAR to implement Cuba's removal from the State Sponsors of Terrorism list.

2015

offer competitive payment and financing options, as well as other transaction costs and requirements.¹⁴⁶

Third-country financing is an alternative to cash payments under current U.S. regulations. The requirements for this type of payment, however, are cumbersome and increase the time and cost of Cuban imports from the United States relative to other suppliers.¹⁴⁷ Such requirements also add complexity to export transactions with Cuba and increase the administrative burden for firms.¹⁴⁸ Moreover, routing cash payments and letters of credit through offshore, foreign-owned banks increases costs related to bank fees and currency conversions.¹⁴⁹ These payment provisions are especially burdensome and costly for small and medium-sized enterprises that lack or are reluctant to create relationships with foreign banks.¹⁵⁰ Moreover, third-country suppliers of export goods to Cuba have become more willing to provide better payment and credit terms to Alimport.¹⁵¹ As a result of these conditions, U.S. product suppliers struggle to offer competitive contract bids to Alimport, and they continue to identify financing restrictions as the greatest challenge to their ability to export to Cuba.¹⁵²

For example, the U.S. dairy industry stated that the financing restrictions have been a significant competitive restriction, resulting in the Cuban market being relinquished to other foreign suppliers.¹⁵³ The favorable credit deals Cuba has been able to conclude with numerous other trading partners exclude U.S. participation in the Cuban market. For example, much of Cuba's imports of rice are currently sourced from Vietnam, in spite of the additional freight costs and the low quality of Vietnamese rice (estimated to be 15 percent broken kernels), because Vietnam offers Cuba up to two years of credit at favorable rates.¹⁵⁴ Industry sources report that such credit offers have pushed U.S. suppliers out of the Cuban market for rice.¹⁵⁵ Additionally, Cuban

¹⁴⁶ National Association of Wheat Growers and U.S. Wheat Associates, written submission to the USITC, May 20, 2015, 4. These costs include those of using third-country banks and the prohibition on loading cargo in Cuba.

¹⁴⁷ Ibid.

¹⁴⁸ USITC, hearing transcript, June 2, 2015, 46 (testimony of Devry Boughner Vorwerk, Cargill); industry representative, interview by USITC staff, Washington, DC, May 27, 2015.

¹⁴⁹ Echevarría, "U.S. Food Exporters Zero in," January 2015, 17.

¹⁵⁰ U.S. Chamber of Commerce, written submission to the USITC, June 2, 2015, 4.

¹⁵¹ Dairy Farmers of America, written testimony to the USITC, May 20, 2015, 1; USITC, hearing transcript, June 2, 2015, 36, 45-46 (testimony of Devry Boughner Vorwerk, Cargill).

¹⁵² USITC, hearing transcript, June 2, 2015, 45 (testimony of Devry Boughner Vorwerk, Cargill); Industry representative, interview by USITC staff, Washington, DC, May 27, 2015.

¹⁵³ USITC, hearing transcript, June 2, 2015, 15 (testimony of Jay Waldvogel, Dairy Farmers of America).

¹⁵⁴ Cuban government official, interview by USITC staff, Havana, June 15, 2015. By comparison, high quality rice has generally less than 10 percent broken kernels. See USITC, *Rice: Global Competitiveness of the U.S. Industry*, April 2015, 35.

¹⁵⁵ USITC, hearing transcript, June 2, 2015, 62 (testimony of William Messina, University of Florida).

September 21

OFAC and BIS further modify the CACR and EAR to ease travel restrictions, expand license exceptions, and allow U.S. business presence in Cuba.

October 7

First U.S.-Cuba Regulatory Dialogue held in Havana.

2015

government officials stated that Cuba no longer purchases wheat from the United States but rather from Canada, at least to some extent as a result of favorable terms of credit offered by Canada.¹⁵⁶

Restrictions on financing under TSRA do not appear to affect all firms equally. Notably, chicken meat exporters do not believe that their inability to offer additional payment terms or credit to Alimport limits their ability to compete for Alimport's chicken purchases. On the other hand, some Canadian businesses have not entered the Cuban market in part because of longer-than-usual payment terms required by the Cuban importing entities.¹⁵⁷ Thus, it appears that the effect of these restrictions may also vary by commodity, and the ability to offer credit is only one factor among many affecting sales to Cuba. Nonetheless, most U.S. suppliers expect the U.S. share of Cuba's agricultural and food imports to grow under normal commercial payment and financing options—for example, being able to offer payment terms other than cash in advance or third-country financing.

Restrictions on the Use of Government Funds

Another restriction widely seen as hampering U.S. exports to Cuba is TSRA's ban on all U.S. government assistance for such exports. The ban applies to two important cooperative market development programs from USDA—the Market Access Program (MAP) and the Foreign Market Development Program (FMD).¹⁵⁸ These restrictions also limit the effectiveness of various trade associations seeking Cuban market access for their members.¹⁵⁹

In testimony to the Commission and Congress during 2015, industry representatives detailed specific problems that they attributed to these legal restrictions. The U.S. Grains Council described its members' inability to use USDA- and checkoff-funded commodity promotion programs as impediments to increased U.S. exports to Cuba.¹⁶⁰ The U.S. Meat Export Federation indicated that these restrictions constrain their ability to conduct even basic trade servicing functions, such as providing information to members about the Cuban market, and that the rules will continue to do

¹⁵⁶ Cuban government official, interview by USITC staff, Havana, June 17, 2015.

¹⁵⁷ Canadian Trade Commissioner Service, "Agriculture, Food and Beverages Sector Profile—Cuba," July 2014, 3.

¹⁵⁸ Scuse, testimony before the Senate Committee on Agriculture, Nutrition, and Forestry, April 21, 2015, 2.

¹⁵⁹ Ibid.

¹⁶⁰ For example, the U.S. Grains Council is unable to use checkoff funds to support educational programs to increase Cuban poultry production and thus grain imports as it has in other developing countries. USITC, hearing transcript, 105 (testimony of Bill Christ, U.S. Grains Council). Checkoff funds refer to various agricultural Research and Promotion programs that are: (1) authorized by Congress; (2) requested, funded, and driven by industry; and (3) monitored by the United States Department of Agriculture. For more information go to: <http://www.ams.usda.gov/rules-regulations/research-promotion>.

December 8

U.S.-Cuba discussions on claims are held in Havana.

January 27

OFAC and BIS further modify the CACR and EAR to ease restrictions related to payment and financing of some exports, and to authorize additional exports.

2015**2016**

so even with the 2015 changes to the CACR.¹⁶¹ One U.S. cattle industry representative noted in Congressional testimony that the lack of USDA marketing support and technical assistance was especially onerous for small and medium-sized producers trying to sell their products directly into the Cuban market.¹⁶²

Restrictions on Travel

Travel restrictions also put U.S. exporters at a disadvantage relative to competing suppliers who do not face these same restrictions.¹⁶³ Firms reported difficulty in traveling to Cuba to gain knowledge and information about the Cuban market and to develop the relationships necessary to initiate trade.¹⁶⁴ Travel restrictions were also cited as one of the most significant barriers for small and medium-sized enterprises.¹⁶⁵ In addition, current visa restrictions on Cubans' travel to the United States limit U.S. export opportunities, as Cuban buyers cannot come to the United States to perform the inspections needed to fulfill trade contracts in various products.¹⁶⁶

Cuba's most promising export to the United States, tourist travel, is banned.¹⁶⁷ Peterson Institute researchers estimated that Cuba loses 1 million U.S. tourist visits per year to other Caribbean destinations where U.S. tourists spend an average of \$1,000 per person, which implies that U.S. tourist travel could potentially inject \$1 billion into the Cuban economy.¹⁶⁸ One result of this ban is that Cuban demand for U.S.-sourced food products is limited. Easing U.S. tourist travel restrictions to Cuba would increase demand for high-value food products that would be sourced from the United States.¹⁶⁹ For example, the U.S. Meat Export Federation suggested that U.S. tourist trade would increase rather quickly if U.S. restrictions were lifted, increasing Cuban demand for U.S. meat products, especially high-value food service items, in line with other Caribbean tourist destinations.¹⁷⁰ Similarly, the U.S. Chamber of Commerce stated that increased U.S. citizen travel to Cuba would boost demand for high-quality U.S. products and established brands.¹⁷¹

¹⁶¹ U.S. Meat Export Federation, written submission to the USITC, June 18, 2015, 1.

¹⁶² Kaehler, testimony before the Senate Committee on Agriculture, Nutrition, and Forestry, April 21, 2015, 2.

¹⁶³ Dairy Farmers of America, written testimony to the USITC, May 20, 2015, 1.

¹⁶⁴ USITC, hearing transcript, June 2, 2015, 18 (testimony of Jay Waldvogel, Dairy Farmers of America); U.S. Meat Export Federation, written submission to the USITC, June 18, 2015, 1.

¹⁶⁵ USITC, hearing transcript, June 2, 2015, 112-113 (testimony of Devry Boughner Vorwerk, Cargill).

¹⁶⁶ USITC, hearing transcript, June 2, 2015, 46 (testimony of Devry Boughner Vorwerk, Cargill).

¹⁶⁷ Cuban government officials, interviews by USITC staff, Havana, June 15, 17-18, 2015.

¹⁶⁸ Kotschwar and Cimino, written testimony to the USITC, June 2, 2015, 3.

¹⁶⁹ USITC, hearing transcript, June 2, 2015, 48 (testimony of Devry Boughner Vorwerk, Cargill).

¹⁷⁰ U.S. Meat Export Federation, written submission to the USITC, June 18, 2015, 2.

¹⁷¹ U.S. Chamber of Commerce, written submission to the USITC, June 2, 2015, 6.

Restrictions on Investment

As discussed in chapter 2, the Cuban government is opening its economy to increased foreign investment. However, because the United States effectively bans U.S. investment in Cuba, foreign firms may readily take advantage of FDI opportunities in Cuba, while U.S. firms will be forced to play catch-up if U.S. restrictions are lifted.¹⁷² Reportedly, the Cuban government is using the fact that U.S. firms still cannot invest in Cuba to promote investment from other sources, urging non-U.S. firms to quickly invest in Cuba before U.S.-Cuba relations resume and U.S. investment dollars flow in.¹⁷³

The restrictions disadvantage U.S. firms in a number of different ways. Non-U.S. firms that can invest and operate in Cuba are able to gain experience and expertise in Cuba that U.S. firms lack.¹⁷⁴ The restrictions have also prevented U.S. companies from using their investments to create local linkages with Cuban farmers and consumers, while competitors from other countries have filled this gap.¹⁷⁵ In addition, lack of direct investment by U.S. companies may be another factor inhibiting U.S. exports, as an estimated 45 percent of U.S. exports are linked to U.S. overseas investment.¹⁷⁶ Moreover, lack of access to unique raw materials produced in Cuba can put U.S. firms at a competitive disadvantage in the United States and other global markets. For example, U.S. cigar manufacturers have been unable to access Cuban tobacco, which hinders their ability to compete in the premium cigar market, both in the United States and globally.¹⁷⁷ Tourism is another industry where U.S. firms are disadvantaged by investment restrictions, as foreign hotel companies have established joint ventures and management contracts in Cuba that represent nearly 60 percent of current hotel capacity.¹⁷⁸ Even if investment restrictions were immediately lifted, U.S. firms could continue to be at a competitive disadvantage for years, as creating supply chains and establishing a business presence in a new market takes time.¹⁷⁹

Other Restrictions

Various restrictions on movement of ships to and from Cuban and U.S. ports increase the costs to Cubans of purchasing from U.S. exporters. Ships transferring authorized cargo from the United States to Cuba cannot accept cargo from Cuba,¹⁸⁰ thus increasing the costs of shipping.¹⁸¹ For the same reasons, shipping from other sources is also more expensive, because ships stopping in Cuba

¹⁷² Industry representatives, interviews by USITC staff, Washington, DC, October 14, 2015; Miami, June 23, 2015.

¹⁷³ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

¹⁷⁴ Participant, Cuba Corporate Counsel Summit, New York, October 7, 2015.

¹⁷⁵ USITC, hearing transcript, June 2, 2015, 48 (testimony of Devry Boughner Vorwerk, Cargill).

¹⁷⁶ Ibid.

¹⁷⁷ General Cigar, written submission to the USITC October 23, 2015, 4 and 9.

¹⁷⁸ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

¹⁷⁹ Industry representatives, interviews by USITC staff, Washington, DC, October 14, 2015 and October 23, 2015; Higley, "US Hotels' Arrival," December 8, 2015; Karmin, "U.S. Hotel Companies Eager," December 8, 2014.

¹⁸⁰ 22 U.S.C. § 6005.

¹⁸¹ Cuban government official, interview by USITC staff, Havana, June 18, 2015; USITC, hearing transcript, June 2, 2015, 77 (testimony of Devry Boughner Vorwerk Cargill).

may not continue to the United States.¹⁸² Higher shipping costs reduce the amount of goods that Cubans can buy with the limited foreign currency at their disposal. The increased shipping costs magnify the impact of other added costs of doing business with U.S. suppliers.

U.S. restrictions on trade with Cuba constrain the overall amount of U.S. exports, a factor that directly affects the cost and timeliness of shipments to Cuba. Companies shipping goods from the United States to Cuba rely on having enough volume to make the trips profitable.¹⁸³ A U.S. shipper to Cuba indicated that the frequency of the firm's shipments to Cuba depends heavily on the quantity of U.S. poultry purchased by Alimport, because poultry is a major component of the shipments.¹⁸⁴ Thus, when Alimport stopped buying U.S. poultry in August and September of 2015, shipments of other goods to Cuba were also negatively affected.¹⁸⁵

A less cited factor affecting U.S. exports to Cuba is the fact that the U.S. does not allow imports from Cuba. This limits Cuba's opportunities to earn U.S. dollars to spend on imports from the United States.¹⁸⁶ Cuba can export to countries such as Brazil and Argentina, which creates relationships and income that facilitate trade with Brazilian and Argentinian suppliers.¹⁸⁷

¹⁸² Cuban government official, interview by USITC staff, Havana, June 18, 2015.

¹⁸³ Industry representative, interview by USITC staff, Miami, June 13, 2015.

¹⁸⁴ *Ibid.*

¹⁸⁵ After an outbreak of highly pathogenic avian influenza (HPAI) in the United States, Alimport did not allow U.S. poultry meat exporters to bid for contracts for August–September 2015 delivery. Industry representative, interview by USITC staff, Miami, June 13, 2015.

¹⁸⁶ USITC, hearing transcript, June 2, 2015, 24 (testimony of Bill Christ, U.S. Grains Council); 31, 120 (testimony of Terry Harris, Riceland Foods).

¹⁸⁷ Cuban academic, interview by USITC staff, Havana, June 15, 2015.

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Chapter 4

Possible Cuban Barriers to U.S. Exports and Investment in the Absence of U.S. Restrictions

Although U.S. restrictions have limited or prevented exports of many U.S. goods and services to Cuba, U.S. firms are likely to face challenges in doing business with or in Cuba even if these restrictions are removed. In its August 2015 letter expanding the scope of the Commission’s investigation and report, the Senate Committee on Finance asked for a qualitative analysis of existing Cuban nontariff measures, Cuban institutional and infrastructural factors, and other Cuban barriers that inhibit or affect the ability of U.S. and non-U.S. firms to conduct business in and with Cuba.¹⁸⁸ This chapter addresses the measures, factors, and barriers specified in the letter and others identified by Commission staff through research and interviews.

The factors addressed in this chapter cover the most often cited challenges to doing business with Cuba, some of which are unique to Cuba. Some of these factors are possible barriers because they are not yet faced by U.S. firms, due to the limited involvement of U.S. firms in the Cuban market; some are possible barriers because they do not necessarily act as barriers to all firms; and others are perceived as barriers although it is not clear to what extent they might act as such. In some cases, Cuban regulations clearly allow or disallow certain activities, but how the government implements the regulations is often opaque. As a result, analyzing the degree to which these regulations may affect trade with and investment in Cuba if U.S. restrictions are removed must rely on anecdotal accounts from individuals and businesses with experience working in Cuba. Due to limited U.S. involvement in the Cuban market, this analysis also draws heavily on third-country firms, although in some cases, such firms have had contradictory experiences.¹⁸⁹

For some U.S. firms considering doing business with Cuba, certain factors are so restrictive as to deter them from entering the market. As discussed below, such deterrents include the inability of foreigners to own land and hire labor directly, the de facto requirement for foreign companies to partner with state-owned entities, extensive state control over trade, and the lack of telecommunications infrastructure. However, other firms regard Cuba as posing no greater risk than other emerging markets. Moreover, changes in regulations and policies have improved Cuba’s investment climate, offering more foreign investors international dispute settlement options and the ability to import and export directly, leading many to be hopeful about future opportunities in Cuba.

¹⁸⁸ See chapter 8 for the requested quantitative analysis of the effects of the removal of U.S. restrictions combined with the effects of lowering Cuban tariff and nontariff barriers to trade.

¹⁸⁹ Although the August 2015 request letter was received after the Commission’s public hearing in June 2015, information relevant to the topics discussed in this chapter was gathered from the public hearing and is included here.

The chapter begins by looking at political and social considerations in Cuban trade and investment decisions, an overarching concern that connects—and may magnify—many of the other factors discussed in this chapter. This is followed by a description of Cuba’s investment climate—property rights; its legal system, anticorruption efforts, and dispute settlement methods; intellectual property rights; and the country’s dual currency and exchange rate systems. The chapter then describes the Cuban state trading, storage, and distribution systems; customs duties and procedures; and sanitary and phytosanitary measures. Finally, the chapter describes Cuba’s transportation and telecommunications infrastructure.

Political Considerations Affecting Cuban Trade and Investment Decisions

Several Cuba observers note that the Cuban government rarely makes economic decisions based on economic factors alone; rather, political and social considerations are often taken into account.¹⁹⁰ Political considerations include attempts to diversify import sources and a preference for government-to-government transactions. Historical events and former geopolitical ties and animosities may also influence current Cuban decisions about trade, investment, and the economy as a whole.¹⁹¹

Political considerations related to changes in the U.S. restrictions on trade with Cuba have significantly affected Cuban imports of U.S. goods in the past and continue to do so now. Following the passage of the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA), Cuba reportedly increased its purchases from the United States in the hope that doing so would encourage U.S. businesses to lobby Congress for a full removal of the restrictions.¹⁹² These purchases were spread across as many U.S. states as possible in order to generate broad support for political efforts to end U.S. restrictions.¹⁹³ However, when it became apparent that little to no change was occurring in U.S. policy, the Cuban government decreased spending on U.S. goods in favor of other trading partners that offered credit.¹⁹⁴ Moreover, Cuban imports from the United States have declined significantly since the December 2014 announcement of the normalization of relations between the United States and Cuba.¹⁹⁵ It has been suggested that the decision to reduce

¹⁹⁰ USITC, hearing transcript, June 2, 2015, 184 (testimony of Jorge Piñon, University of Texas at Austin); Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015; Industry representative, interview by USITC staff, Washington, DC, May 27, 2015; U.S. academic, telephone interview by USITC staff, October 19, 2015; USITC, hearing transcript, June 2, 2015, 95 (testimony of William Messina, University of Florida); presenter, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015.

¹⁹¹ Brookings, “Rethinking Cuba” event transcript, Washington, DC, June 2, 2015, 86 (Mark Entwistle, Acasta Capital).

¹⁹² Industry representative, interview by USITC staff, Miami, May 27, 2015.

¹⁹³ USITC, hearing transcript, June 2, 2015, 63 (testimony of William Messina, University of Florida).

¹⁹⁴ Industry representative, interview by USITC staff, Washington, DC, May 27, 2015; Palma, written testimony to the USITC, June 2, 2015, 4; Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 109.

¹⁹⁵ See chapter 2.

purchases from the United States since then is again motivated, in part, by the desire to encourage U.S. firms to pressure Congress to fully remove the U.S. restrictions.¹⁹⁶

Some commentators note that political and cultural sensitivities also play a role in Cuban government decisions over foreign direct investment (FDI). Industry sources suggest that U.S. businesses need to demonstrate their understanding of Cuban social goals and their commitment to supporting those goals when making investment proposals.¹⁹⁷ Proposals that highlight only economic gains for both parties are viewed less favorably than those that stress a project's potential to help the people of Cuba.¹⁹⁸

According to Cuban government officials, Cuban decision making on trade is also influenced by a desire to diversify the country's international partners.¹⁹⁹ Cuba has suffered economically in the past as a result of overreliance on a single trading partner.²⁰⁰ The Cuban economy's dependence on the United States for imports and exports before the revolution was replaced by dependence on the Soviet Union. After the dissolution of the Soviet Union, Cuba became dependent on Venezuela for subsidized oil and hard currency. Cuban officials reportedly now believe that diversifying trading partners is a matter of national security as well as sustainable development.²⁰¹ Cuba has strengthened relationships with a number of its other key trading partners, including Brazil, China, and Russia, through trade and by courting large-scale foreign investment. Much of this investment is aimed at improving agricultural productivity and building the infrastructure the Cuban government views as important for increasing Cuban economic growth rates.

Concern over diversifying its import-supplying countries may affect Cuba's willingness to procure U.S. goods and services in the future. In 2004, for example, U.S. goods accounted for 40 percent of Cuba's total imported food products. This share was reportedly considered too high by the Cuban government, which shifted some purchases away from the United States in order to prevent a renewed dependence on the United States.²⁰²

In addition to these factors, it has been reported that the Cuban government prefers to conduct business with countries that have similar political systems and state involvement in the economy, such as China. This is because the Cuban government favors government-to-government transactions that can offer more liberal financing terms, greater discretion, and fewer potential

¹⁹⁶ U.S.-Cuba Trade and Economic Council, "Economic Eye on Cuba," October 2015; Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015; *Cuba Standard*, "U.S. Presence at Havana Fair Shrinks," December 2015, 9; Rosson, statement to the Senate Committee on Agriculture, Nutrition, and Forestry, April 21, 2015, 3–4.

¹⁹⁷ Presenters, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015; presenters, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

¹⁹⁸ Presenter, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015; presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

¹⁹⁹ Cuban government official, interview by USITC staff, Havana, June 15, 2015; presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 16, 2015.

²⁰⁰ USITC, hearing transcript, June 2, 2015, 238 (testimony of Jorge Piñon, University of Texas at Austin); presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 16, 2015.

²⁰¹ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 16, 2015.

²⁰² USITC, hearing transcript, June 2, 2015, 60 (testimony of William Messina, University of Florida).

problems if it cannot meet payment terms.²⁰³ Such contractual agreements are expected to continue in the event that U.S. restrictions are lifted.

Cuban government officials have been known to approach decisions with caution.²⁰⁴ Because some of the changes in U.S. regulations affecting trade opportunities with the United States are very recent, Cuban officials are also reportedly concerned that they could be reversed by future U.S. administrations.²⁰⁵ Commentators have noted that given this uncertainty, large increases in trade and investment are unlikely to occur until trust is reestablished between the two countries.²⁰⁶

Cuba's Investment Climate

The Cuban government has expressed a goal of attracting \$2 billion–\$2.5 billion in FDI annually in order to achieve its targeted growth rate.²⁰⁷ To that end, the government has undertaken a number of measures to improve the investment environment for foreign businesses. In 2014, Cuba enacted a new foreign investment law to attract more FDI. While this marks an improvement from the previous law, much remains to be addressed, both in the law and in associated measures and practices, before significant FDI inflows can occur.²⁰⁸ These include laws on ownership of property and labor hiring and payment; the de facto requirement to partner with state-owned enterprises; and the bureaucratic approval process, along with a lack of transparency.

Cuba's 2014 Foreign Investment Law

In an effort to attract much-needed foreign capital, new technology, and new sources of employment, Cuba enacted an updated foreign investment law (Law 118) in March 2014.²⁰⁹ This marked an update to the previous foreign investment law (Law 77) from 1995. Some of the measures under this new law include reductions in some taxes for firms (box 4.1), as well as a provision guaranteeing just compensation if there is government expropriation. Under the new law, foreign investors may establish a business in one of three forms: a joint venture with a Cuban

²⁰³ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

²⁰⁴ Industry representative, interview by USITC staff, Miami, June 13, 2015; Cuban government official, interview by USITC staff, Havana, June 15, 2015.

²⁰⁵ Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015.

²⁰⁶ Presenters, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015; Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015; Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

²⁰⁷ *Cuba Standard*, "Cuban Parliament Approves New Foreign Investment Law," March 30, 2014; Frank, "Cuba Struggles to Attract Investors Despite Reforms," August 21, 2014. A brief discussion of trends in foreign investment in Cuba is included in chapter 2.

²⁰⁸ Feinberg and Miller, written submission to the USITC, June 19, 2015, 5.

²⁰⁹ The law took effect on June 28, 2014. The text of the law is available online on the website of Cuba's Center for the Promotion of Foreign Trade and Investment (the Spanish acronym is CEPEC). The link to the English version is [http://www.cepec.cu/sites/default/files/ley%20118%20\(English\).pdf](http://www.cepec.cu/sites/default/files/ley%20118%20(English).pdf). See also Betancourt and Villanueva, "Analysis of the *Portfolio of Opportunities*," December 19, 2014.

company, an international economic association (IEA) contract,²¹⁰ or a wholly foreign-owned enterprise.²¹¹

Box 4.1: Law 118: Key Changes in Cuba’s Foreign Investment Laws

The key changes in the new FDI regime include tax cuts for foreign investors in Cuban joint ventures, a more streamlined approach to the project approval process, and other incentives designed to promote joint ventures with Cuban firms. Another change is that foreign investors can now form joint ventures with private farms and non-farm cooperatives as well as with state-owned enterprises. Even though Law 118 permits 100 percent foreign ownership, the new tax incentives apply only to joint ventures with Cuban entities.

Tax incentives for joint ventures include:

- No tax on net profits for the first eight years (with the possibility of extension).
- Tax on profits of 15 percent after the initial eight-year tax holiday. The tax may be increased to 50 percent if the business involves exploiting natural resources (including beaches, hydrographic basins, bays, forestry resources and wildlife, and terrestrial waters).^a
- Zero tax on reinvested profits.^b
- Exemption from labor tax for joint ventures.^c
- Exemption from payment of wholesale sales and services taxes during the first year of operation of the investment with a 50 percent reduction in those taxes thereafter.^d
- Exemption from customs duties during the investment process.^e

Sources: Cuban Law Number 118: Foreign Investment Act, March 29, 2014; Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015).

^a The tax rate for wholly foreign-owned firms is 35 percent, and may increase to 50 percent for businesses involved in exploiting natural resources.

^b Standard tax rates on all profits apply to wholly foreign-owned firms.

^c As of 2016, the labor tax rate is 5 percent for wholly foreign-owned firms.

^d Standard tax rates of 2 percent wholesale sales tax and 10 percent services tax apply to wholly foreign-owned firms.

^e No such exemption is available for wholly foreign-owned firms.

²¹⁰ This includes management contracts for hotels, contracts to provide professional services, and risk contracts for exploration for “nonrenewable natural resources.” Government of Cuba, “Cuba Investor Guide,” November 2014, 30–31. In most countries, such management contracts would not normally be considered FDI.

²¹¹ Wholly foreign-owned enterprises were allowed under Law 77, but were not approved in practice. U.S. academic, telephone interview by USITC staff, October 16, 2015.

In any of these categories, all investment projects must be approved by the relevant Cuban government body—the Council of State, the Council of Ministers, or another authority appointed by the Council of Ministers. Joint ventures and wholly foreign-owned enterprises are permitted to carry out only the specific business activities for which they have received authorization. Specifically, foreign-invested entities are prohibited from:

- Direct imports and exports for commercial purposes.
- Engaging in wholesale and retail trade of goods and services, except for after-sales and warranty services.
- Distributing or transporting goods within Cuba.²¹²

According to one U.S. industry group, while the updated law does not provide all of the legal guarantees that U.S. companies would like to see, it is a welcome step to establishing a more favorable investment climate.²¹³ The rules governing investment in Cuba continue to evolve, and Cuban officials appear willing to negotiate additional incentives for firms locating in the Mariel Special Economic Development Zone (*Zona Especial de Desarrollo Mariel*) or “ZED Mariel.”²¹⁴

Under Law 118’s Article 11.1, as was the case under Law 77, foreign investment may be authorized in all sectors except for healthcare and education services for the Cuban population and the armed forces. (However, business systems connected with healthcare and education services are eligible for FDI.) In addition, Cuba’s constitution states that mass media, including radio, television, and film, may not become private property, meaning that these sectors are also off limits to foreign investment.²¹⁵ The sectors designated as priorities for FDI include pharmaceuticals and biotechnology, tourism, transportation, agriculture, renewable energy, and light manufacturing, among others.²¹⁶ Two of the sectors named as priorities for investment under the new law—sugar and biotechnology—were effectively excluded from FDI under the previous FDI regime.²¹⁷ Financial firms are still excluded in most cases, as Cuba keeps a monopoly over most financial transactions for the benefit of state-owned banks.²¹⁸

Under its investment law, Cuba allows 100 percent foreign-owned investments, and investors may choose their form of establishment. So far, however, almost all approved investment projects are joint ventures—generally 51 percent Cuban equity, 49 percent foreign equity.²¹⁹ It appears that the Cuban government rarely approves individual investment projects that are wholly foreign

²¹² Government of Cuba, “Cuba Investor Guide,” November 2014, 31–32.

²¹³ U.S. Chamber of Commerce, written submission to the USITC, June 2, 2015, 5.

²¹⁴ Cuba specialist, interview with USITC staff, September 10, 2015.

²¹⁵ Feinberg, “Cuba’s New Investment Law,” April 1, 2014; Grogg, “Wanted: Foreign Investment in Cuba,” April 1, 2014.

²¹⁶ Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015).

²¹⁷ Feinberg, *The New Cuban Economy: What Roles?* December 2012, 25.

²¹⁸ Ibid.

²¹⁹ During the 1990s, by contrast, most joint ventures were approved with a 50/50 equity ownership split. Cuban government official, interview by USITC staff, Havana, June 15, 2015.

owned.²²⁰ According to the government, 51 percent of foreign investment projects are joint ventures, 28 percent are hotel management contracts, and 12 percent are other types of IEA contracts. Only 5 percent are wholly foreign owned.²²¹ Many foreign investors agree that, in practice, 100 percent foreign ownership tends to be restricted to ZED Mariel (box 4.2). Additionally, although there are exceptions to the rule, fully foreign-owned companies tend to be approved only in sectors that the Cuban government considers priorities for attracting new investment.²²²

While the law allows for 100 percent foreign-owned companies in most sectors, the government's general policy in projects involving natural resources, oil, mining, tourism, and biotechnology is that the foreign partner may have no more than a minority share. The Cuban government has implied that this is because it recognizes these industries as sectors in which Cuba is potentially internationally competitive.²²³ In other areas, discretion to allow 100 percent foreign ownership is given to certain sectors and government agencies.²²⁴ For example, Cuba's Ministry of Tourism only allows joint ventures with at least 51 percent Cuban ownership.²²⁵

Following the enactment of Law 118, in November 2014 the Cuban government released its *Portfolio of Opportunities for Foreign Investment in Cuba*, a list of 246 proposals billed as "shovel ready" for foreign investors, totaling over \$8 billion in investments.²²⁶ Many of these opportunities were reportedly developed by Cuban state-owned enterprises (SOEs) and offer joint venture partnerships with those companies. The criteria for joint venture partners enumerated in the document focus on experience, prestige, and global market positioning. Investment opportunities in the *Portfolio* are open to foreign investors, including nonresident Cubans, but not to Cuban domestic investors.²²⁷

Much of the current approach to attracting foreign investment is said to be a response to the negative experiences of the Cuban government after the implementation of Law 77, when Cuba made mistakes in partnering with inexperienced investors and on projects that were not in line with the government's goals.²²⁸ The *Portfolio* was created with the intention of renewing it annually with new investment opportunities, and a new portfolio was released in November 2015, with an updated list of 326 projects valued by the Cuban government at \$8.2 billion.²²⁹

²²⁰ Cuba specialist, interview by USITC staff, September 10, 2015; Feinberg and Miller, written submission to the USITC, June 19, 2015, 4.

²²¹ Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d., 12 (accessed December 9, 2015).

²²² Presenter, "Cuba: An Update on the Liberalization of Trade Relations," sponsored by Crowell & Moring, Washington, DC, April 21, 2015.

²²³ Cuban government official, interview by USITC staff, Havana, June 18, 2015.

²²⁴ Cuban government official, interview by USITC staff, Havana, June 17, 2015.

²²⁵ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

²²⁶ Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2014*, n.d. (accessed January 27, 2015).

²²⁷ Betancourt and Villanueva, "Analysis of the *Portfolio of Opportunities*," December 19, 2014, 3.

²²⁸ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

²²⁹ Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015); Hamre, "Cuba Seeks \$8.2 Billion in Foreign Investment," November 3, 2015.

Box 4.2: ZED Mariel

As part of its efforts to attract new investment and increase its integration into the global trading system, the Cuban government developed a port and special economic development zone in Mariel. ZED Mariel was built in partnership with the Brazilian government and the Brazilian construction company Odebrecht for roughly \$900 million. Established on November 1, 2013, the zone is aimed at creating a modern, multimodal trading hub for trade between Cuba, the Caribbean, and the United States. The Port of Mariel is currently managed by PSA International, a Singaporean port operator. CMA CGM, a French shipping company, also formed a joint venture with the Cuban state company Almacenes Universales SA to operate a logistics platform at the Port of Mariel. The operation includes 10,000 square meters of warehouses and 5,000 cubic meters of refrigerated warehouses.

ZED Mariel is expected to boost development by attracting foreign investment in high-tech industries, generating new exports, increasing employment, and encouraging domestic production of goods that are currently imported.^b It is divided into 11 zones, each dedicated to a specific industrial or logistical activity, including high technology, agro-food, and logistics. Areas of desired investment include biotechnology, renewable energy, agro-food, and telecommunications. Twenty of the 326 investment proposals outlined in Cuba's *Portfolio of Opportunities* document are specifically proposed for ZED Mariel.

Firms that establish within ZED Mariel (when compared to firms outside the area) will face lower taxes, fewer restrictions on hiring labor, and foreign investment protection. ZED Mariel will also offer modern utility infrastructure; a 10-year tax holiday on profits, with the possibility of extension; and no Cuban customs duties on imports of equipment and goods for the project.

To establish a firm in ZED Mariel, investors must provide a comprehensive due diligence report detailing their firms' mission and objectives, feasibility conditions, expected demands on infrastructure and human capital needs, and market research reports proving the firms' ability to succeed. While ZED Mariel users are authorized to process raw materials into intermediate and finished goods, the zone is not intended to become a manufacturing center. And although regulations in ZED Mariel are not as restrictive as in the rest of Cuba, firms must abide by investment laws that have a tight investment schedule, maintain strict records of their activities, present an annual report, and pay dues (0.5 percent of quarterly gross income) to the Projects Zone Development Fund.

A panel of Cuban experts determines if a prospective project is viable, and this review process takes approximately 65 days. As of January 2016, nine projects had been approved to operate in Mariel. Richmeat de México, a fully foreign-owned firm, was among the first foreign firms allowed to invest in Mariel, and their facilities will include a meat processing and packaging operation. Cleber, LLC, an Alabama-based tractor company, is the first known U.S. firm to be approved for operation in Mariel; Cleber received approval from U.S. authorities in February 2016 (see box 6.1).

Sources: Cuban government officials, interview by USITC staff, Mariel, Cuba, June 16, 2015; Cuban Decree-Law 313, 2013; Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015); ZED Mariel, *Open to the World*, November 2014 and June 2015; Romeo Matos, "Unilever Suchel S.A. Joint Venture Established," *Granma*, January 12, 2016; Felipe, "Mexico contributing to meat production in Cuba," *Granma*, November 25, 2015.

Cuban Barriers to Foreign Investment

Even if the United States removes restrictions on investment in Cuba by U.S. firms, industry representatives and other observers have cited a substantial list of impediments for businesses interested in investing in Cuba. U.S. investors are particularly concerned about the state-controlled

nature of Cuba's economy. For instance, it is difficult for potential U.S. investors in Cuba to compete against SOEs that receive priority treatment from the government, and to know when their business activities might clash with the government's interests.²³⁰

Cuba's SOEs likely have strong vested interests in protecting their positions from outside competition as well.²³¹ For example, the telecommunications sector requires substantial investment to upgrade its performance to international standards. However, industry representatives have stated that they see little indication the Cuban government is interested in attracting foreign investment to provide the country with robust Internet access. This lack of interest may be related to the Cuban government's longstanding policies regarding censorship, its sensitivities about national security, and/or Cuban incumbent carrier ETECSA's interest in preserving its dominant market position.²³²

The Cuban government has outlined its priority areas for FDI, but potential investors remain unclear on the extent to which FDI will be allowed in non-priority sectors. It is also uncertain whether the industry segments where investment is permitted will offer investment opportunities that are profitable. However, there have been instances of projects being approved that were not included in the Cuban government's pre-approved *Portfolio of Opportunities* list.²³³ The relevant Cuban government agencies are reportedly open to projects that are outside of the scope of their focus if they judge that the projects could help the Cuban economy.²³⁴

In addition to the direct limitations the government places on foreign investment, a number of practical difficulties, described below and elsewhere in the report, deter and impede investment in Cuba. These include investors' inability to own land and other property rights issues; the requirement that all labor be hired through government employment agencies; very low Internet penetration; a restrictive business environment; a weak financial system; legal uncertainties, including lack of an independent judiciary; and concerns about Cuba's dual currency and exchange rate system, coupled with uncertainty about currency unification. The combination of these factors creates an overall high-risk environment for investors.²³⁵

²³⁰ Bacardi, written submission to the USITC, October 22, 2015, 3; General Cigar, written submission to the USITC, October 23, 2015, 7-8.

²³¹ Kotschwar and Cimino, written testimony to the USITC, June 2, 2015, 4-5; Feinberg, *The New Cuban Economy: What Roles?* December 2012, 58-9.

²³² USITC, hearing transcript, June 2, 2015, 147-8 (testimony of Eduardo Guzman, Drinker, Biddle & Reath LLP); 149 (testimony of Kent Bressie, Harris, Wiltshire & Grannis LLP); and 168 (testimony of Barbara Kotschwar, Peterson Institute).

²³³ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

²³⁴ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

²³⁵ Feinberg and Miller, written submission to the USITC, June 19, 2015, 1; Kotschwar and Cimino, written testimony to the USITC, June 2, 2015, 4-5; Cuba specialist, interview by USITC staff, September 10; presenter, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015; presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015; Cuba specialist, telephone interview by USITC staff, November 24, 2015.

Property Rights

Although property rights have been liberalized to a certain extent, the Cuban government still owns the majority of property in the country; 72 percent of the land in Cuba is state-owned.²³⁶

Government control over property is a primary reason why Cuba ranks low on the Heritage Foundation's 2016 Index of Economic Freedom. According to the index, Cuba ranked 164th out of 186 countries in the category of property rights and ranked 177th out of 178 countries in overall economic freedom.²³⁷ The Heritage Foundation describes its property rights scoring as "an assessment of the ability of individuals to accumulate private property, secured by clear laws that are fully enforced by the state."²³⁸ Cuba's score of 10 out of 100 on the Heritage Foundation's property rights scale denotes that private property in Cuba is "rarely protected, and almost all property belongs to the state."²³⁹ Compared to other Latin American and Caribbean countries studied in the Index, only Venezuela is ranked lower in property rights.²⁴⁰ Below is a discussion of foreign property rights in Cuba. Information on domestic property rights is presented in box 4.3.

Box 4.3: Domestic Property Rights

The Cuban constitution establishes two types of property rights, those guaranteed to Cuban citizens and those guaranteed to the state. According to the constitution, all Cuban citizens are granted the right to own their homes as well as "other possessions and objects which serve to satisfy one's material and cultural needs."^a Likewise, Cubans are allowed to own the tools relevant to their work, as long as these tools are not "used to obtain earning derived from the exploitation of the work of others."^b The Cuban constitution grants additional property rights to small farmers. Farmers are allowed to own their land on the condition it is used for agricultural production, with subsequent rights including the authorized sale, swap, or transfer of land to the state or other small farmers. However, mortgages, leasing, and other liens on farmer's lands are prohibited. Farmers may also group themselves, contingent on state approval, and own the resulting agricultural production cooperatives and associated lands. These cooperatives are exempt from seizure and taxes, and their land may be transferred to the state or to other similar cooperatives.

State property encompasses all land not owned by small farmers or their cooperatives, and includes "subsoil, mines, mineral, plant and animal resources in the Republic's maritime economic area, forests, waters, and means of communications."^c It also comprises "the sugar mills, factories, chief means of transportation and all those enterprises, banks and facilities that have been nationalized and expropriated from the imperialist, landholders and bourgeoisie, as well as the factories, enterprises and economic facilities and scientific, social, cultural and sports centers built, fostered or purchased by the state and those to be built, fostered or purchased by the state in the future."^d State property, except in extraordinary circumstances, can never be transferred to a person or legal entity. Likewise, "the press, radio, television, cinema, and other mass media are state or social property and can never be private property."^e

The Cuban government began liberalizing property rights during the economic crisis known as the "Special Period." In 1993, for example, the Cuban government issued Decree Law 142, the purpose of which was to distribute lands previously used by state-run farms to private farmers and cooperatives. While farmers could

²³⁶ Váldez-Fauli, "Cuban Private Sector," July 21, 2015.

²³⁷ Heritage Foundation, "Cuba," 2016.

²³⁸ Heritage Foundation, "Property Rights," 2016.

²³⁹ Ibid.

²⁴⁰ Heritage Foundation, "Venezuela," 2016.

not own the newly available land, they could own the goods they produced on that land and the profits from selling their products in state markets.^f The following year, further reforms allowed farmers to sell excess products at private markets, marking the first time the Cuban government allowed market forces to govern, to some extent, the sale of privately owned items.^g

Upon becoming President in 2008, Raúl Castro further loosened restrictions over personal property rights in Cuba. Months into his term, an internal memo was circulated within the government approving the sale of certain electronic devices and appliances that were previously restricted. While the relaxation was officially attributed to the expanded availability of electricity for consumers to power these new devices, in actuality, it was the first step of many Raúl Castro has made in liberalizing domestic personal property rights in Cuba.^h

The legalization of sales of electronic devices and appliances, including DVD players, cellphones, microwaves, televisions, computers, and the like, was an important step that had to be taken before Cuba could begin to import these consumer goods. While many of these items were already traded in the Cuban black markets at very high prices, Cuban citizens can now purchase these goods legally, providing increased market opportunities for foreign exporters of such products.ⁱ For example, cellphone ownership in Cuba increased from 330,000 in 2008 to 1.3 million in 2011.^j Because Cuba produces few consumer electronics of its own, these newly purchasable goods demonstrate how strengthening personal property rights has the potential to spur increased trade with foreign suppliers.

Source: Ministry of Foreign Affairs of Cuba, Constitution of the Republic of Cuba, Articles 15, 19, 20, 21, and 53. <http://anterior.cubaminrex.cu/English/LookCuba/Articles/AboutCuba/Constitution/inicio.html>.

^a Constitution of the Republic of Cuba, Article 21.

^b Ibid.

^c Constitution of the Republic of Cuba, Article 15.

^d Ibid.

^e Constitution of the Republic of Cuba, Article 53.

^f Bugher, "Transition or Survival? The Cuban Reforms," November 6, 2004, 10.

^g Ibid., 11.

^h BBC News, "Cuba Moves to Lift Appliance Ban," March 14, 2008.

ⁱ Valdés, "Cubans Rush to Buy DVD Players," April 3, 2008.

^j Frank, "More Cubans Have Local Intranet, Mobile Phones," June 15, 2012.

Foreign companies looking to trade with or invest in Cuba are limited in the amount of property they are allowed to own. In particular, the vast majority of foreign companies are unable to own land in Cuba and instead must lease it from the government. Without the ability to own the land, foreign companies see greater risks and fewer incentives to make permanent improvements.²⁴¹ In 2010, the Cuban government enacted Decree Law 273 with the purpose of addressing land ownership issues concerning foreigners. Decree Law 273 does not allow full ownership of land, but rather permits the conceding of surface rights for up to 99 years.²⁴² Foreign owners are allowed to build and make improvements to the land, but ultimate ownership remains with the state.²⁴³

The Cuban government has reportedly granted some exceptions regarding foreign ownership of property. In some industries, for example, foreign investors may be allowed to hold title to land

²⁴¹ Industry representative, telephone interview by USITC staff, October 13, 2015.

²⁴² Previously, the maximum was 50 years. Legal representative, telephone interview by USITC staff, November 20, 2015.

²⁴³ Peters, "Cuba's New Real Estate Market," February 2014, 16.

that does not have a certified claim against it.²⁴⁴ One notable recent example is the opportunity for foreigners to own property at the Carbonera Club Oceanfront Resort. This resort, the result of a joint venture between British firm Esencia and Cuban-government owned Palmares S.A.,²⁴⁵ is a gated golf and residence facility.²⁴⁶ The planned 650 private residences will be able to be rented, sold, and inherited by foreigners.²⁴⁷ At the time of its announcement, the Carbonera Club would be the only place foreigners are allowed to buy property in Cuba—and the first time that such ownership has been allowed in Cuba since a short-lived experiment in the 1990s.²⁴⁸

Joint ventures are typically created between Cuban entities and foreign companies looking to conduct business in Cuba, and an examination of standard joint venture practices reveals how property rights function within this common setup. An example is Brascuba Cigarrillos S.A., a Cuban-Brazilian joint venture that was the first created under the 1995 foreign investment law.²⁴⁹ Describing what each party brings to the table, Brascuba states, “The foreign partner provides investment capital, technology, employee training (including in Brazil for some Cubans), exclusive brands, access to international markets, and international lines of credit. In comparison, the local partner provides the land, the buildings, [and] the workers.”²⁵⁰ This lack of ownership with respect to anything physical adds to the risk for potential foreign investors.

Cuban law protects foreign companies from expropriation without compensation.²⁵¹ However, the Cuban government reportedly has other means of restricting and regulating the property of foreign firms. The Cuban government can simply not renew a contract with a foreign partner, regardless of performance. Alternatively, the government can pressure a business with demands that appear unreasonable, such as requiring firms to export high percentages of their production, ultimately forcing the sale of shares to the state.²⁵²

Labor Regulations

In Cuba, foreign investors are required to negotiate a labor force supply contract with a Cuban government employment agency, rather than hire workers directly. This system has been cited by

²⁴⁴ Cuba specialist, interview by USITC staff, September 10, 2015.

²⁴⁵ Palmares S.A. is a Cuban tourism enterprise overseen by the Ministry of Tourism.

²⁴⁶ Doolittle, “Cuba’s Second Golf Resort under Review” (accessed on November 23, 2015); Cuban government official, interview by USITC staff, Havana, June 15, 2015.

²⁴⁷ Rainsford, “Cuba Golf Project Gets Green Light,” May 13, 2013; Cuban government official, interview by USITC staff, Havana, June 15, 2015.

²⁴⁸ The Cuban government enacted a foreign investment law (Law 77) in 1995 that, among other changes, allowed the building of condominiums purchasable by foreigners. However, less than 1,000 units were actually built when political and social reasons led to a moratorium on sales to foreigners in April 2000. Rainsford, “Cuba Golf Project Gets Green Light,” May 13, 2013; Zamora, “Prospects for Tourism in Cuba,” July 2010, 371.

²⁴⁹ Feinberg, *The New Cuban Economy: What Roles?* December 2012, 46.

²⁵⁰ *Ibid.*, 47.

²⁵¹ Cuban Law No. 118, Chapter III, Article 4.1.

²⁵² Feinberg, *The New Cuban Economy: What Roles?* December 2012, 13; legal representative, telephone interview by USITC staff, December 4, 2015.

some foreign investors as a significant drawback to investment in Cuba.²⁵³ One of 12 state employment agencies acts as the direct supervisor, responsible for hiring and firing workers, settling labor disputes, setting wage scales, and actually paying wages, using funds paid by the investor to the agency.²⁵⁴ The investor pays the agency in hard currency and the workers are paid in local currency, creating an effective 24-to-1 tax.²⁵⁵ As one Cuba observer notes, “If the firm pays the employment agency \$500 a month per worker, and the employment agency pays the workers 500 pesos, over 90 percent of the wage payment disappears in the currency conversion; the effective compensation is instantly deflated to \$21 per month. This could be the world’s heaviest labor tax.”²⁵⁶ In some cases, this can make labor costs in Cuba higher than in neighboring countries, such as the Dominican Republic.²⁵⁷

There is an exception for certain upper-level management positions or technical positions, which can be filled by non-Cuban residents and paid directly by the employer.²⁵⁸ However, these non-permanent residents remain subject to Cuba’s immigration and alien citizens laws and must obtain work permits.²⁵⁹ Foreign investors located in ZED Mariel may directly employ foreign nonresidents to perform management or technical jobs (Article 32), but investors must work through the Cuban government employment agency to hire Cuban or foreign resident workers (Article 31).²⁶⁰

According to others, however, it is possible for a foreign employer to choose his or her own employees directly, through personal interviews, contacts, or other means, and then to present the list of desired names to the Cuban government employment agency. While this does not permit an investing firm to maintain total control over its employees, it does represent a significant step toward employer autonomy and mitigates much of the concern these investors have about working through Cuba’s employment system.²⁶¹

Approval Process for Investment Projects

Establishing an FDI project in Cuba requires case-by-case government authorization at the highest levels of government. Projects must be authorized by either the Council of State or the Council of Ministers, depending on the circumstances of the particular project, as described below.²⁶² While

²⁵³ Feinberg, *The New Cuban Economy: What Roles?* December 2012, 58; legal representative, telephone interview by USITC staff, October 5, 2015; legal representative, interview by USITC staff, Miami, June 22, 2015; industry representative, interview by USITC staff, Miami, June 23, 2015; presenter, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015.

²⁵⁴ Cuban government official, interview by USITC staff, Mariel, Cuba, June 16, 2015.

²⁵⁵ Government of Cuba, “Cuba Investor Guide,” November 2014, 34; Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2014*, n.d., 7–8 (accessed January 27, 2015); Feinberg, *The New Cuban Economy: What Roles?* December 2012, 13–14. See “Dual currency.”

²⁵⁶ Feinberg, *The New Cuban Economy: What Roles?* December 2012, 13–14.

²⁵⁷ Feinberg and Miller, written submission to the USITC, June 19, 2015, 6.

²⁵⁸ Cuban government official, interview by USITC staff, Mariel, Cuba, June 16, 2015.

²⁵⁹ Government of Cuba, “Cuba Investor Guide,” November 2014, 34.

²⁶⁰ Pérez-López, “Investment Incentives of the ZED Mariel,” June 2014, 217.

²⁶¹ Industry representatives, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

²⁶² The Council of Ministers is the executive and administrative body of the Cuban government. It is similar to a cabinet in that it consists of several high-ranking Cuban officials (including the President and Vice President) and the ministers

many countries impose an approval process for new foreign investment projects, it is unusual for most projects to need such high-level approval. According to observers, the Cuban government is most likely to approve investment proposals that fulfill a social objective and proposals that bring hard currency into the country.²⁶³

Council of State: The Council of State must approve all FDI involving prospecting for or exploiting non-renewable natural resources (except in the case of IEA agreements that are approved and authorized by the Council of Ministers). It must also approve FDI aimed at the management of public services, such as transportation, communications, and electric power. Once an FDI project receives Council of State approval, the Council of Ministers will issue its authorization.²⁶⁴

Council of Ministers: FDI projects involving the following must be approved by the Council of Ministers, but not by the Council of State:²⁶⁵

- Real estate developments.
- Totally foreign capital companies.
- The transfer of state ownership or other property rights over state goods.
- IEA risk agreements to exploit and produce non-renewable natural resources.
- A foreign company working with public capital.
- The use of renewable sources of energy.
- The business system of the health and education sectors and the armed forces.
- Other foreign investments that do not require approval by the Council of State.²⁶⁶

The Ministry of Foreign Trade and Investment is responsible for approving all IEA contracts for production and services management, as well as the provision of professional services. The Ministry of Tourism will approve IEA contracts for hotel management businesses.²⁶⁷ Approval is reportedly a lengthy process, with projects being approved only after the Cuban government

of various government agencies. The Council of State is a legislative body elected by the National Assembly of People's Power and vested with carrying out legislative duties between sessions of the full Assembly. Most of the same high-ranking Cuban officials that sit on the Council of Ministers, such as the President and Vice President, also sit on the Council of State. *Granma*, "The Structure of the Cuban State,"

<http://www.granma.cu/granmad/secciones/elecciones/112.html> (accessed February 6, 2016).

²⁶³ Industry representative, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015; Brookings, "Rethinking Cuba" event transcript, Washington, DC, June 2, 2015, 94 and 96 (Omar Everlency, University of Havana; Mark Entwistle, Acasta Capital).

²⁶⁴ Government of Cuba, "Cuba Investor Guide," November 2014, 26–27.

²⁶⁵ In ZED Mariel, however, projects that do not fall into these categories can be authorized by the Director General of the Office of the Special Economic Development Zone. Decree Law 313, 2013, Chapter III; Cuban government official, interview by USITC staff, Havana, June 16, 2015.

²⁶⁶ Government of Cuba, "Cuba Investor Guide," November 2014, 27.

²⁶⁷ *Ibid.*, 27–28.

determines that the project meets its own criteria.²⁶⁸ The approval process is reportedly faster and easier for investments located in ZED Mariel, most of which are finalized in 65 days.²⁶⁹

Requirements for foreign investors under Law 118 include limits on exports and imports;²⁷⁰ the purchase of insurance, with right of first refusal to Cuban carriers;²⁷¹ financial reporting requirements;²⁷² and an environmental and technological review.²⁷³ A number of other, more specific requirements for foreign investment for particular sectors or projects are listed in the *Portfolio of Opportunities*.²⁷⁴

Given its relatively recent enactment, there are few examples of Cuba's approval process under the new foreign investment law. As of 2012, under the previous investment system, Cuba approved FDI projects individually and for a fixed time period only—as little as 15 years. A 2012 set of case studies of FDI in Cuba reported that several foreign investors experienced significant problems when trying to get projects reauthorized, including demands from the Cuban government to have SOE joint venture partners awarded a majority share.²⁷⁵

Business Licenses

Besides obtaining the initial approval, doing business in Cuba requires specific licenses and approvals from various ministries and administrative bodies. If a foreign company wishes to have an office in Cuba, for example, a license through the Cuban Chamber of Commerce is required.²⁷⁶ Business licenses are sector specific, and the exact details of procuring such licenses differ from case to case.²⁷⁷ For investments within ZED Mariel, once a project is approved, Cuban officials will assist with the various licenses and approvals required, simplifying the procedure. At least one

²⁶⁸ Atlantic Council, "EU-Cuba Negotiations" teleconference, February 11, 2015. As noted above, industry representatives have stated that only projects that meet social goals identified by the Cuban government are likely to be approved.

²⁶⁹ Cuban government official, interview by USITC staff, Havana, June 16, 2015.

²⁷⁰ Foreign-invested entities are allowed to directly import and export only the goods needed for their operation. Companies must register their trade with MINCEX, which will approve the code for authorized products. However, Cuba encourages investors to acquire domestic goods and services where possible. Government of Cuba, "Cuba Investor Guide," November 2014, 34; EU official, telephone interview by USITC staff, February 11, 2015.

²⁷¹ Foreign investors will be required to obtain insurance for various goods and responsibilities, with Cuban insurance companies entitled to the right of first refusal on the basis of international competitive conditions. Government of Cuba, "Cuba Investor Guide," November 2014, 37.

²⁷² Foreign-invested entities, including firms that are parties to an IEA agreement, must submit an annual report of their operations to the Ministry of Foreign Trade and Investment. *Ibid.*, 38.

²⁷³ MINCEX must submit all investment proposals to the Ministry of Science, Technology and Environment (CITMA), which will review their "environmental and technological feasibility and suitability," decide whether to require an environmental impact assessment, and determine what licenses, controls, and inspection system should be applied. *Ibid.*, 38–39.

²⁷⁴ Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015).

²⁷⁵ Feinberg, *The New Cuban Economy: What Roles?* December 2012, 13, 33–34, 51–52, 58–60.

²⁷⁶ Cuban government representative, interview by USITC staff, Havana, June 18, 2015.

²⁷⁷ Legal representative, interview by USITC staff, Miami, June 23, 2015.

prospective U.S. investor reports that the approval process for Mariel is timely and straightforward.²⁷⁸

Business licenses are generally short term: the standard duration is five years, with three possible extensions (each extension is good for an additional three years).²⁷⁹ The short license terms reportedly enable Cuba to attract investment in desired sectors, but then allow Cuban firms to end the partnership once knowledge and skills have been transferred to them, allowing the domestic industry to become self-sufficient. On the other hand, businesses that have continued to innovate in Cuba have been allowed to continue operations beyond the license limitations.²⁸⁰

With limited information on the number of approvals as well as the time and cost of applying for and receiving licenses, the degree to which this process can act as a barrier cannot be determined. Regardless, as the number of foreign businesses that wish to operate in Cuba grows, there is concern that the increased demand on the Cuban employees and agencies dealing with these short-term licensing requests could create a bottleneck if the process is not streamlined.²⁸¹

Impact of Cuba's Investment Climate on Foreign Investors

While Cuba's new investment law takes some needed steps to allow for increased investment, it has been suggested that the law does not go far enough to decrease the risks associated with investing in Cuba. The law does add a number of measures that businesses need in order to be willing to invest in Cuba. These include legal guarantees of compensation in case of expropriation and the ability of the investor to choose its form of establishment (wholly owned enterprise or joint venture). However, problems remain for investors both in the law (such as differential tax rates for joint ventures and wholly foreign-owned firms) and in the way it is implemented in practice (particularly the arbitrary investment approval process). The lack of property rights also reportedly remains one of the most pressing concerns for foreign investors in Cuba.²⁸² These problems, combined with many other factors described in this chapter—lack of infrastructure, uncertainty about the legal environment, state involvement in the economy, and non-economic factors in decision making—create an environment that is still generally considered challenging for foreign investors in Cuba.

²⁷⁸ Industry representative, telephone interview by USITC staff, October 22, 2015.

²⁷⁹ Legal representative, telephone interview by USITC staff, December 4, 2015.

²⁸⁰ Ibid.

²⁸¹ Participant, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015.

²⁸² Legal representative, telephone interview by USITC staff, November 20, 2015; Feinberg, *The New Cuban Economy: What Roles?* December 2012, 62.

Cuban Legal System, Dispute Settlement, and Anticorruption Efforts

U.S. firms and attorneys have had limited interaction with the Cuban legal and dispute resolution systems. However, international firms and attorneys that have worked within these systems report improvements in processes and options for foreign investors.

The Cuban Court of International Commercial Arbitration (CCACI) serves as the main dispute settlement mechanism within Cuba. The close relationship between Cuban lawyers and the Cuban government, as well as the lack of transparency in CCACI processes and outcomes, may cause concern for foreign investors and firms interested in doing business in Cuba. Some with experience with these processes suggest that the Cuban legal system is generally fair and continues to improve as a result of the Cuban government's awareness that a more effective and reliable legal environment is crucial to attracting much-needed foreign investment.²⁸³ Others are less optimistic and question the application of due process in the Cuban legal system.²⁸⁴

While the lack of independence of the legal system is a commonly voiced concern, the government's increased willingness to allow international arbitration appears to be alleviating some potential investor apprehension.²⁸⁵ Additionally, while corruption continues to exist in Cuba, sources report a decline in recent years in the wake of the Cuban government's anticorruption campaigns.

The Legal System

The Cuban legal system is staffed by lawyers and judges who are employees of the Cuban government. Given their employment status, some foreign observers have questioned their independence, particularly in cases involving the state or state-owned entities.²⁸⁶ All Cuban lawyers must contribute three years of public service after graduating from law school to repay the Cuban government for their free education.²⁸⁷ After this required service, Cuban lawyers can pursue diverse job opportunities, including working for the criminal prosecutor's office; for the *Consultoría Jurídica Internacional* (International Legal Consultancy), a corporate law firm dealing with government-owned companies and imports/exports; as a lawyer through *La Organización Nacional de Bufetes Colectivos* (the Cuban bar); for a joint venture; or for a judge.²⁸⁸ In each of these cases,

²⁸³ Legal representatives, telephone interviews by USITC staff, November 20, 2015 and December 4, 2015.

²⁸⁴ Veciana-Suarez, "Investing in Cuba Remains 'Very Risky,'" October 6, 2015.

²⁸⁵ Legal representative, telephone interview by USITC staff, November 20, 2015; Cuba specialist, telephone interview by USITC staff, November 24, 2015.

²⁸⁶ Legal representative, telephone interview by USITC staff, October 13, 2015; legal representative, interview by USITC staff, Miami, June 23, 2015; industry representative, interview by USITC staff, Miami, June 23, 2015; Veciana-Suarez, "Investing in Cuba Remains 'Very Risky,'" October 6, 2015.

²⁸⁷ Legal representative, telephone interview by USITC staff, December 4, 2015.

²⁸⁸ Presenters, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015; legal representative, telephone interview by USITC staff, December 4, 2015.

the lawyers remain employees of the Cuban government and receive a government salary.²⁸⁹ Although the Cuban constitution holds that judges are independent to administer justice,²⁹⁰ all Cuban courts are subordinate to the National Assembly and the Council of State. Further, there are no jury trials in the Cuban judicial system.²⁹¹

Sources familiar with the legal system suggest that in most commercial disputes, Cuban lawyers and judges are relatively independent and that there have been cases in which courts have issued rulings against the state.²⁹² However, those sources do suggest that the Cuban courts would have great difficulty ruling against the government in cases considered to have political or national security implications.²⁹³

Dispute Settlement

Cuba makes various methods of dispute settlement available to foreign companies. When navigated properly, these channels reportedly can be effective in handling the needs of foreign businesses, should disputes arise.

Cuba's own settlement mechanism for trade disputes is the CCACI, a body linked to the Cuban Department of Commerce. Created in 2007, the CCACI functions as an autonomous nongovernmental agency meant to foster commerce between Cuba and the rest of the world.²⁹⁴ According to one source, the CCACI judges have more experience with issues related to trade and investment than judges in the domestic legal system, and this expertise and transparency is greater in Cuba than in most other Latin American countries.²⁹⁵ However, arbitration before the CCACI is often more costly than in traditional Cuban courts and can add additional steps to the restitution process.²⁹⁶ While reports have stated that a majority of CCACI rulings have gone in favor of foreign companies, CCACI rulings, like those in many other international arbitration forums, are not made public.²⁹⁷ Therefore it is difficult to evaluate the performance and impartiality of the Cuban dispute settlement process. It is also unclear whether or not awards have been issued, what has actually been paid, or whether the awards were paid in full.

Foreign investors have also been able to negotiate stipulations into contracts to allow international arbitration forums, such as the London Court of International Arbitration or the International

²⁸⁹ Legal representative, telephone interview by USITC staff, December 4, 2015.

²⁹⁰ Government of Cuba, "Constitution of the Republic of Cuba," Chapter XIII: Article 122, <http://anterior.cubaminrex.cu/English/LookCuba/Articles/AboutCuba/Constitution/inicio.html> (accessed December 16, 2015).

²⁹¹ However, the Cuban courts include peers in the judicial process by using both professional and lay judges, with all judges having equal votes. Government of Cuba, "Constitution of the Republic of Cuba," Chapter I: Article 12; Chapter XIII: Article 124, <http://anterior.cubaminrex.cu/English/LookCuba/Articles/AboutCuba/Constitution/inicio.html> (accessed November 2, 2015).

²⁹² Legal representatives, telephone interviews by USITC staff, November 20, 2015 and December 4, 2015.

²⁹³ Ibid.

²⁹⁴ Echevarría, "Arbitration: Cuba's Record Is Better than Believed," November 2015.

²⁹⁵ Legal representative, telephone interview by USITC staff, November 20, 2015.

²⁹⁶ Ibid.

²⁹⁷ Echevarría, "Arbitration: Cuba's Record Is Better than Believed," November 2015.

Chamber of Commerce’s International Court of Arbitration, to handle any business disputes. Some companies prefer international arbitration due to fears of possible CCACI bias in favor of the Cuban state and concerns over successfully collecting on any sums that the CCACI may award companies at the expense of the Cuban state.²⁹⁸ However, other individuals experienced with arbitration within the CCACI suggest that it is a fair and effective means of dispute resolution.²⁹⁹ Some suggest that if an investment matter is small and does not affect the Cuban regime, a foreign investor will likely have a fair and straightforward process within the Cuban legal and dispute resolution systems, particularly because the government is interested in attracting FDI and will be disinclined to seem unfriendly to foreign business.³⁰⁰

Overall, the Cuban legal system reportedly functions well so long as the issue in question is not a political one. Persons interviewed and the available literature indicate that, while foreign firms are concerned about their ability to successfully challenge state-owned entities through the state-controlled legal system, the availability of multiple dispute settlement mechanisms provides foreign firms with alternative avenues should disputes arise. Specifically, Cuba’s increased willingness to use international arbitration to resolve disputes may minimize some of the legal risks associated with doing business in Cuba.

Anticorruption Efforts in Cuba

Cuba has one of the lowest levels of corruption in Latin America.³⁰¹ Cuba was ranked 56 out of 168 countries worldwide with respect to the prevalence of corruption in 2015, better than many Caribbean, Central American, and South American countries.³⁰² Cuba ranks as less corrupt than Colombia, the Dominican Republic, Mexico, Nicaragua, and Panama, while ranking as more corrupt than Costa Rica and Chile.³⁰³

In 2009, Cuba launched a series of anticorruption campaigns, aimed at ending what Raúl Castro called *guayabera* (white collar) crime.³⁰⁴ Based on the campaign, hundreds of senior Cuban Communist Party officials, state managers, and employees, as well as representatives of foreign enterprises, have been arrested and/or found guilty of corruption.³⁰⁵ However, two large-scale audits in 2011 still found violations of laws and regulations as well as corruption in 45 percent of state enterprises in Havana. In addition, 37 percent of state enterprises nationally were found to have deficient or bad management.³⁰⁶ In a 2013 speech to the Cuban Parliament, President Raúl Castro called on government entities to continue to contribute to the ongoing anticorruption

²⁹⁸ Ibid.

²⁹⁹ Ibid.

³⁰⁰ Legal representative, telephone interview by USITC staff, October 13, 2015.

³⁰¹ Participants, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015; legal representative, telephone interview by USITC staff, November 20, 2015.

³⁰² Cuba has a score of 47 out of 100, with 0 being highly corrupt and 100 being free of corruption. Transparency International, “Corruption Perceptions Index” (accessed January 31, 2016).

³⁰³ Ibid.

³⁰⁴ Frank, “Cuba Cracks Down on ‘Guayabera’ Crime,” May 20, 2011.

³⁰⁵ Ibid.; Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 186.

³⁰⁶ Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 224.

campaign.³⁰⁷ This campaign, combined with the stringent provisions of the U.S. Foreign Corrupt Practices Act, makes it even more challenging for U.S. firms to do business in and with Cuba.

The overall impression from various businesses' reports of their experiences is that corruption does not impede doing business in Cuba any more than it does in other similar developing countries. However, some foreign business owners have expressed concern about the highly publicized arrests of foreign businesspeople in Cuba,³⁰⁸ questioning if some foreign investors have been victims of an overzealous or misguided anticorruption drive.³⁰⁹

In addition, while not currently a serious concern, corruption could increase in the future if foreign business presence and trade increase, due to the anticipated increased burden on the Cuban bureaucracy. It has been suggested that as the Cuban business climate improves, low-paid civil servants will have a heavier workload, resulting in stronger temptations to engage in corruption.³¹⁰

Intellectual Property Challenges and Opportunities in Cuba

Many of Cuba's intellectual property (IP) laws and institutions have evolved to address the requirements of the WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), which entered into force on January 1, 1995. While in the area of trademarks and patents, Cuba reportedly has put in place modern laws and administrative systems that rights holders are using to register their rights in Cuba, legal proceedings related to the disputed ownership claims of certain pre-revolutionary trademarks are ongoing (box 4.4).³¹¹ Other IP laws, however, including Cuba's copyright law, have remained largely unchanged, and the infringement of movies, television programming, and films is reportedly pervasive.

Notwithstanding limitations in the IP environment, some U.S. research institutes and firms in IP-intensive sectors, including biotechnology and music, are exploring new opportunities to

³⁰⁷ *Havana Times*, "Speech by Raúl Castro Ruz," July 10, 2013.

³⁰⁸ In various cases, foreign businessmen have been imprisoned without any formal charges and had their property and assets seized. In the most extreme cases, foreign businessmen have spent years in jail and have had up to \$100 million in assets seized by the Cuban government. Under the anticorruption campaigns in Cuba, similar arrests continued as recently as September 2014. Gray, "How a Canadian Businessman Lost Everything," March 20, 2015; Feinberg, *The New Cuban Economy: What Roles?* December 2012; Trotta, "Cuba Frees Canadian Businessman Tokmakjian," February 21, 2015; USDOS, "Country Reports on Human Rights Practices for 2014: Cuba," 2014 (accessed October 22, 2015).

³⁰⁹ Participants, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015; participants, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

³¹⁰ Participant, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015.

³¹¹ The long-running dispute between the European Communities and the United States—United States: Section 211 Omnibus Appropriations Act of 1998 (DS176)—involves provisions that prohibit those having an interest in trademarks related to businesses or assets confiscated by the Cuban government from registering or renewing those trademarks in the United States without the original owner's consent. The dispute is outside the scope of this investigation, as it addresses conditions for the registration of trademarks in the United States not Cuba. By contrast, concerns that firms have raised about IPR protection, the investment environment, and state-owned entities in Cuba are addressed in this chapter.

collaborate with Cuban scientists and artists. Removal of U.S. trade restrictions, however, would not be expected to have a large impact on IP-intensive U.S. firms in the near term, given current economic conditions in Cuba and the need for domestic legal reforms, particularly in the area of copyrights.

Box 4.4: Trademarks, State-owned Enterprises, and Cuba’s Rum and Cigar Industries

Written submissions made by Bacardi and General Cigar to the Commission focused on the reported need for reforms to address the dominance of Cuban state-owned enterprises in the rum and tobacco sectors, respectively, before normalizing trade relations between the United States and Cuba. While there are ongoing legal proceedings involving Bacardi and General Cigar over the use in the United States of, respectively, the Havana Club trademark for rum and the Cohiba trademark for cigars, these U.S. administrative and judicial proceedings are not within the scope of this investigation as they address the trademarks’ use inside the United States.

However with respect to the Cuban market, Bacardi’s written submission stated that it will be unable to compete effectively with the Cuban government-favored state monopoly without access to the physical assets and trademarks expropriated by Cuba in 1960. According to Bacardi, any normalization must be based on the principle of reciprocity. That is, U.S. and other foreign firms should be free to export, invest, and compete on the same footing as state-protected operators in Cuba. Bacardi stated that Cuba’s restrictions on investment are particularly severe, as multinational firms have been required to form joint ventures with state enterprises, employ Cubans vetted by the government, and compete with protected state monopolies on unfair terms.

Bacardi asserted that it seeks a long-term and multifaceted process for normalization that would require Cuba to permit the import of U.S. goods and services on a most-favored-nation basis; open investment to U.S. firms on the same terms the United States extends to foreign firms; privatize state-owned enterprises; and respect and enforce the IP rights, including trademarks, of prior owners, foreign exporters, and investors.

General Cigar, a U.S. company that makes and markets premium cigars, stated in its written submission that it holds a certified loss claim for assets expropriated by Cuba, including interests such as trademarks that it purchased in the claims of exiled Cuban tobacco families. According to General Cigar, if trade were normalized without the ability of companies other than state-owned entities and their partners to access Cuban tobacco, the exiled families would be twice deprived of the value of their Cuban businesses.

General Cigar further stated that Cuba’s tobacco sector is fully state-controlled, with no ability for companies other than the state entity and its joint venture partners to access the Cuban crop, establish cigar operations, or distribute Cuban-made products. Like Bacardi, General Cigar states that distortions in the Cuban market must be reformed before trade normalization proceeds.

Sources: Bacardi, written submission to the USITC, October 22, 2015; General Cigar, written submission to the USITC, October 23, 2015; Wilson, statement to the House Committee on the Judiciary, February 11, 2016; *Empresa Cubana del Tabaco v. General Cigar Co., Inc.*, 753 F.3d 1270 (Fed. Cir. 2014).

The Intellectual Property Environment in Cuba

Cuba’s IP environment has improved in recent years to address the requirements of TRIPS, a comprehensive multilateral IP agreement. TRIPS covers copyrights and related rights, trademarks,

geographical indications, patents, integrated circuit designs, and such undisclosed information as trade secrets and test data, as well as other types of IP. It sets out minimum substantive standards for these rights and specifies the procedures and remedies (including civil, administrative, criminal, and border measures) that member countries must make available to enforce IP rights. It also requires members to notify the WTO's Council for Trade-Related Aspects of Intellectual Property Rights ("TRIPS Council") of their IP laws and regulations.³¹²

Intellectual Property Laws in Cuba

The TRIPS Council launched a review of Cuban laws implementing TRIPS' requirements in November 2001. Eleven years later, in November 2012, the Council summarized the status of Cuba's submissions and responses to questions posed by other WTO members about its IP legislation. Cuba stated that its laws in the areas of trademarks, geographical indications, patents (including compulsory licensing), industrial designs, and plant varieties comply with TRIPS requirements.³¹³ Cuba acknowledged to the TRIPS Council, however, that it does not have compliant laws in the areas of copyrights and related rights, trade secrets, or the protection of undisclosed information used to support the regulatory approval of pharmaceuticals and agricultural chemicals.³¹⁴

The protection of copyrighted works is particularly uncertain, as Cuba's constitution states that artistic creativity is free or permissible only when the content is not contrary to the revolution.³¹⁵ Cuba's copyright law similarly provides that protections and remuneration for original works must be aligned with the principles of the socialist revolution and the state's interest in wide dissemination of science, technology, education, and culture.³¹⁶ An additional gap in Cuba's laws is the lack of protections for copyrighted works on the Internet. Unlike most countries in Latin America, Cuba is not a member of the World Intellectual Property Organization (WIPO) Internet Treaties.³¹⁷ The treaties set forth the obligations of content providers, Internet service providers, and consumers in the digital environment.³¹⁸ Cuba has not made any commitment in the TRIPS Council to fill this gap in protections for copyrighted material online.³¹⁹

³¹² WTO, "Overview: the TRIPS Agreement," n.d. (accessed October 13, 2015).

³¹³ WTO TRIPS Council, "Review of Legislation, Cuba," November 2, 2012; see also WTO TRIPS Council, "Review of Legislation, Cuba, Addendum," February 18, 2013.

³¹⁴ WTO TRIPS Council, "Review of Legislation, Cuba," November 2, 2012, 2–3, 15, 24.

³¹⁵ Republic of Cuba, Constitution, Chapter 5, Article 39(c) (1976, as amended in 1992 and 2002); see also Sanchelima, "Selected Aspects of Cuba's Intellectual Property Laws," 2002, 216.

³¹⁶ Republic of Cuba, Copyrights Law No. 14, Chapter 1, Articles 1, 3 and 6 (1977).

³¹⁷ The WIPO Copyright Treaty (WCT) and the WIPO Performances and Phonograms Treaty (WPPT) (collectively, the "Internet Treaties") are in force in the following Central and South American countries: Argentina, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Jamaica, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Lucia, and Uruguay. WIPO, "WCT, Contracting Parties," n.d.; WIPO, WPPT, "Contracting Parties," n.d. (both accessed November 5, 2015).

³¹⁸ WIPO, "WIPO Internet Treaties," n.d. (accessed October 13, 2015).

³¹⁹ The website of the Cuban copyright office itself is inactive. See Cuba's National Copyright Center, <http://www.cenda.cult.cu/> (access attempted in October, November, and December 2015).

The freedom to create and disseminate copyrighted works in Cuba is also undermined by the government's ownership of all print, television, and other media outlets, and its reported censorship of materials it considers "counterrevolutionary."³²⁰ This censorship is said to have included barring independent libraries from receiving materials from abroad, confiscating cameras to prevent the distribution of objectionable photographs and videos, detaining and threatening artists, and closing independent movie theaters showing international films.³²¹ Access to content on the Internet also is restricted by limited infrastructure, although governmental efforts to improve access are reportedly growing.³²²

Trademark and Patent Filings in Cuba

The Cuban Industrial Property Office (OCPI) is responsible for the processing of trademarks, patents, industrial designs, integrated circuit designs, plant varieties, and geographical indications.³²³ Foreign firms or individuals seeking to protect their trademarks and patents, for example, may do so by filing an application directly with OCPI or by designating Cuba on an international application filed through the WIPO.³²⁴ According to the International Trademark Association (INTA), Cuba's membership in international IP treaties, including the Madrid Agreement, the Madrid Protocol, and the Nice Agreement on International Classification of Goods and Services, has streamlined foreign rights holders' registrations.³²⁵ Participation in international treaties also reportedly provides the country with access to technical assistance and filing fees paid in hard currency.³²⁶ Since 1995, an exception to the U.S. restrictions on trade with Cuba has permitted U.S. IP owners to register, maintain, and enforce their IP rights in Cuba.³²⁷

As in many Latin American countries, nonresidents account for most trademark applications in Cuba. During 2005–14, nonresidents filed 19,703 trademark applications, compared to 3,450 filed by residents. During this period, U.S. trademark applicants filed 1,801 applications in Cuba,

³²⁰ USDOS, "Cuba 2014 Human Rights Report," n.d., 13 (accessed October 19, 2015); Serra, "Views from Cuba," April 2015, 1–2.

³²¹ USDOS, "Cuba 2014 Human Rights Report," n.d., 13–15 (accessed October 19, 2015); Serra, "Views from Cuba," April 2015, 1–2.

³²² Biddle, "Rationing the Digital," July 2013, 4; USDOS, "Cuba 2014 Human Rights Report," n.d., 13–15 (accessed October 19, 2015); Miroff, "Havana's Hottest Spot," August 8, 2015; Cuba specialist, telephone interview by USITC staff, November 24, 2015. See also chapter 7.

³²³ *Oficina Cubana de la Propiedad Industrial (OCPI)*, <http://www.ocpi.cu/> (accessed October 15, 2015).

³²⁴ For example, trademark applicants can seek protection for their marks in multiple countries under the Madrid System. The system requires three steps: first, the applicant's "home" IP office forwards the application or registered trademark to WIPO in Geneva; second, WIPO conducts a limited review of the application, publishes it, and notifies the IP offices in the territories in which the applicant seeks protection. Third, the national IP office makes a substantive examination, issues a decision on whether the mark is entitled to protection, and notifies the applicant. WIPO, "How the Madrid System Works," n.d. (accessed October 18, 2015).

³²⁵ INTA is a global association of trademark owners and professionals with about 70 percent of its corporate membership based in the United States. INTA, written submission to the USITC, January 19, 2016, 1–2.

³²⁶ Sanchelima, "Selected Aspects," 2002, 217.

³²⁷ IP payments also could be made to Cuba before August 1994; however, during the period from August 1994 to October 1995, the payments were restricted. Angeles, "Cuba—Possible Trademark Troll?" October/November 2015; INTA, written submission to the USITC, January 19, 2016, 1.

representing 9.1 percent of all foreign filings.³²⁸ Firms in the tourism, entertainment, clothing, pharmaceutical, electronics, and equipment and machinery industries, as well as well-known brands including McDonald's, Microsoft, and Google, have been particularly active in seeking trademark protection in Cuba.³²⁹

Nonresidents also filed more patent applications—1,507 applications during 2005–14, compared to 522 applications by Cubans. U.S. patent applicants filed 364 applications during this period, or 24 percent of nonresident filings.³³⁰ Most patent applications have been in the fields of pharmaceuticals, biotechnology, and chemistry.³³¹ This technology focus suggests possible opportunities for U.S. collaborations with Cuban scientists, as described below.

Trademarks and Patents in Practice in Cuba

U.S. and other foreign firms are applying for trademarks and patents in Cuba, a first step toward obtaining IP protection there. While legal representatives report that OCPI has a reputation for professionally handling routine applications and renewals, they express concerns about whether the infrastructure of the office—including Internet access, technical resources, and personnel—is sufficient to meet the growing interest of foreign firms in the Cuba market. This limited access to resources reportedly has contributed to an increasing backlog in the processing of applications.³³²

Legal representatives have more limited experience with Cuba's handling of non-routine IP matters. Nonetheless, they note potential problems in two areas: first, a concern that the Cuban legal system is not independent, as stated above; and second, an increase in “trademark squatting” cases, in which a bad-faith actor seeks to register a mark before the true owner in the hopes of a payoff.

The Independence of Cuba's Legal System

The lack of judicial independence, as stated above, gives rise to some uncertainty among legal representatives about the enforceability of IP-related agreements with Cuban state-owned entities.³³³ Others assert, however, that there is more rule of law in Cuba than U.S. investors might

³²⁸ WIPO, “WIPO Statistics Database,” December 2015.

³²⁹ INTA, written submission to the USITC, January 19, 2016, 3–4.

³³⁰ Data on resident, nonresident, and U.S. patent filings in Cuba for 2005–13 are sourced from WIPO and from OCPI for 2014. See WIPO, “WIPO Statistics Database,” December 2015; OCPI, “Estadísticas 2014,” n.d. (accessed October 15, 2015).

³³¹ WIPO, “Statistical Country Profiles: Cuba,” December 2015.

³³² Legal representatives, telephone interviews by USITC staff, September 29 and October 13, 2015; INTA, written submission to the USITC, January 19, 2016, 3.

³³³ Kolker, “Competing in a New Cuba,” January 29, 2015; presenter, U.S.-Cuba Corporate Counsel Summit, October 7, 2015; legal representative, interview by USITC staff, Miami, June 23, 2015; legal representatives, telephone interviews by USITC staff, October 5, 13, and 20, 2015.

expect, pointing to successful partnerships with non-U.S. investors and an active arbitration system.³³⁴

There are few published judicial decisions on IP matters in Cuba. In part, this is due to the fact that Cuba's civil law system emphasizes written codes rather than judicial precedents as the source of laws.³³⁵ Moreover, judges in Cuba appear to have had little experience handling IP disputes. There are only a handful of reported IP decisions, mostly involving appeals from administrative proceedings.³³⁶

One particular area of concern for U.S. firms is that a trademark may be subject to cancellation if it is not used within three years of the date of registration.³³⁷ In the "Kool-Aid" case in 1998, however, the Provincial Court for Havana reversed an administrative decision to cancel a mark for non-use, finding that U.S. restrictions on trade prevented Kraft, the trademark's owner, from selling its products and establishing use of the mark in Cuba.³³⁸ It remains unclear, however, whether this is the definitive position of the Cuban courts, as judicial precedents are not binding in civil law jurisdictions.

Concerns also have been raised about whether Cuban lawyers would be willing to zealously advocate the positions of private clients over those of the state in adversarial proceedings. To address this concern, some multinational clients rely on their home-country law firms to provide independent advice, and on local counsel for more administrative matters.³³⁹ Legal representatives state that in practice, while many Cuban lawyers are talented and professional, interactions can be difficult, as there are a limited number of firms with the expertise and infrastructure necessary to handle IP matters (e.g., reliable access to the Internet, computers, and phones).³⁴⁰

Trademark Squatting in Cuba

As noted above, these challenges reportedly are exacerbated by an upswing in "trademark squatting" cases. Bad-faith trademark applications reportedly are being filed in Cuba in the hope of selling the marks to the original brand owner for a premium. In a first-to-file regime, like that in

³³⁴ Presenter, U.S.-Cuba Corporate Counsel Summit, October 7, 2015; Kolker, "Competing in a New Cuba," January 29, 2015; Cuba specialist, telephone interview by USITC staff, November 24, 2015; legal representative, telephone interview by USITC staff, December 4, 2015.

³³⁵ Countries following a common law system are generally former British colonies. Judicial cases are binding in common law jurisdictions; decisions of the highest court can generally only be overturned by that same court or through legislation. By contrast, countries following a civil law system are typically former French, Dutch, German, Spanish, or Portuguese colonies, including much of Central and South America. Only legislative enactments are considered binding; there is little scope for judge-made law. World Bank Group, "Key Features of Common Law," April 19, 2015; Library of Congress, "Country Profile: Cuba," September 2006, 25.

³³⁶ Sanchelima, "Selected Aspects," 2002, 215; INTA, written submission to the USITC, January 19, 2016, 2.

³³⁷ INTA, written submission to the USITC, January 19, 2016, 2.

³³⁸ *Kraft Foods, Inc. v. Oficina Cubana de la Propiedad Intelectual*, Judgment No. 428, 2a Sala, Civil and Adm. Provincial Tribunal, August 31, 1998.

³³⁹ Kolker, "Competing in a New Cuba," January 29, 2015; legal representatives, telephone interviews by USITC staff, October 5, 13, and 20, and November 18, 2015.

³⁴⁰ Legal representatives, telephone interviews by USITC staff, September 29, October 13, and November 18, 2015; Cuba specialist, telephone interview by USITC staff, November 24, 2015.

Cuba and most other countries, a trademark can be registered regardless of the applicant's use of the mark in commerce or whether someone else made prior use of the mark.³⁴¹

A number of U.S.-based companies reportedly have had their trademarks registered in Cuba by bad-faith registrants.³⁴² One case that has received particular attention involves a single individual who reportedly filed applications to register more than 50 famous U.S. marks in Cuba, including "NASCAR," "Nordstrom," "Sam's Club," "Chase," "Quiznos," "Kohl's," "Chipotle" and "Denny's." As a result of increased bad-faith activity, legal representatives recommend that brand owners proactively seek Cuban trademark registrations as soon as possible to deter squatters, particularly as the costs and time delays associated with a court case to regain trademark rights can be substantial.³⁴³

Biotechnology Collaborations in Cuba

Cuba has made substantial investments in the IP-intensive biotechnology and pharmaceutical sectors, and most patent applications filed by Cuban inventors are in these fields. As of 2010, for example, Cuba reportedly had invested more than \$1 billion in the development of a cluster of state-owned biotechnology companies and research facilities.³⁴⁴ Today, Cuba's main biotechnology cluster, BioCubaFarma, reportedly encompasses 32 enterprises, 78 manufacturing facilities, and 21,785 workers.³⁴⁵ State-owned companies in the cluster focus on vaccines, pharmaceuticals, diagnostics, products for autoimmune disease, medical devices, and software. Reportedly, the companies have more than 1,000 products in the commercial pipeline; more than 30 ongoing clinical trials in 18 countries; 2,336 patent applications worldwide; 1,816 patents granted abroad; and 543 patents granted in Cuba.³⁴⁶ According to public health experts, "the tremendous benefit from this focus on health biotechnology is that it is producing more affordable drugs to tackle diseases that run rampant in low and middle income countries."³⁴⁷

Both the 2014 and 2015 editions of the *Portfolio of Opportunities for Foreign Investment* contain BioCubaFarma projects for which it is seeking foreign participation.³⁴⁸ A research and development (R&D) partnership between the Roswell Park Cancer Institute in Buffalo, NY, and one member of the cluster, the Center of Molecular Immunology (CIM), highlights the potential for mutually beneficial collaborations (box 4.5).

³⁴¹ INTA, written submission to the USITC, January 19, 2016, 2; Day Pitney LLP, "Trademark Protection in Cuba," September 16, 2015; Gould, "Battling Trademark Piracy in Cuba," May 26, 2015; Angeles, "Cuba—Possible Trademark Troll?" October/November 2015.

³⁴² Ibid.

³⁴³ Ibid.

³⁴⁴ UNESCO, *UNESCO Science Report 2010*, 2010, 127.

³⁴⁵ Lee, "Over the Straits," October 8, 2015 (information received from BioCuba Farma).

³⁴⁶ Ibid.

³⁴⁷ WHO, "Cuba—Battling Cancer with Biotechnology," January 2013.

³⁴⁸ This portfolio is discussed in greater detail above. EY [Cuba], "The Legal, Regulatory and Fiscal Framework," August 2015, 12.

Box 4.5: One U.S. Cancer Center’s Perspective on Cuban Biotech and Pharmaceutical Sectors

In 2011, Cuban scientists contacted Roswell Park Cancer Institute to discuss a vaccine CIM had developed for potential use in treating advanced stage lung cancer and other cancers. After discussions that focused on the science as well as building trust, CIM and Roswell Park entered into an R&D partnership to test the Cuban vaccine, Cimavax.

Cimavax reportedly works by stimulating the body’s own immune system to attack epidermal growth factor, a naturally occurring protein that can feed cancerous tumors. Since 2011, the vaccine has been available for free to the public in Cuba. It also has been approved for use in Peru. Reportedly, experience to date with the vaccine is promising. CIM and Roswell Park seek to replicate research and development carried out in Cuba under U.S. gold standards for medical R&D.

Roswell Park applied to the U.S. Office of Foreign Assets Control, received a license, and has begun its R&D collaboration. The collaboration includes importing research samples; applying for U.S. Food and Drug Administration approval for U.S. clinical trials for the vaccine; carrying out early-phase clinical trials at Roswell Park to assess safety and efficacy; and, if all goes well, fostering future partnerships between CIM and U.S. firms interested in further development and commercialization of the vaccine. Other anti-cancer immunotherapies developed by CIM also are being studied at Roswell Park.

Roswell Park scientists attribute the success of the partnership to date to several factors. First, both sides have a shared mission in advancing cancer treatment to benefit the public good. Cuba’s biotech sector places a priority on delivering high-quality, affordable products, a priority shared by Roswell Park. Moreover, CIM has a commercial arm in Cuba and experienced legal counsel in the United States that have worked cooperatively with Roswell Park to facilitate the collaboration. While IPR-related questions may arise down the road, Roswell Park’s experience to date suggests that they may be manageable.

Normalizing relations between the two countries reportedly may open doors for collaborations in other areas, including vaccines against childhood meningitis, brain mapping, advanced wound care, alternative medicines, and best practices in delivering cost-effective care and preventive medicine for poor populations. According to a recent article in the *American Journal of Public Health*, one of the single biggest gains in public health from normalizing trade and travel with Cuba could be improved opportunities for medical research collaborations.

Sources: Lee, “Over the Straits,” October 8, 2015; Drain, “Implications of Repealing,” 2015; Medscape, “As Cuba-U.S. Relations Thaw,” July 7, 2015.

Copyrights in Practice in Cuba

Cuba’s copyright laws appear to be the most underdeveloped of its IP laws, as noted above. Copyright protections are subordinate to Cuban revolutionary principles that favor the dissemination of scientific and cultural information, and there are no protections for copyrights in the digital environment.³⁴⁹ The infringement of copyrighted works is reportedly substantial and

³⁴⁹ See Miroff, “Cubans Pirate U.S. TV and Movies,” October 18, 2015 (perhaps because of Cuba’s socialist ethos, cultural output and pharmaceutical breakthroughs are treated as a kind of public good).

widespread in Cuba.³⁵⁰ However, there is also a growing interest in lawful collaborations between the Cuban and U.S. creative sectors.

Copyright Piracy in Cuba

Reports indicate that Cubans obtain unauthorized access to copyrighted media content from the United States and other countries in myriad ways. The Cuban government issues permits to sellers of bootlegged movies and music; clandestine satellite dishes and “video banks” enable access to the most recent titles; and thumb drives with a wealth of U.S. copyrighted content are regularly distributed throughout the country. Moreover, government agencies also participate in the unauthorized broadcasting and distribution of U.S. content, according to some press reports.³⁵¹

The Cuban government reportedly ignores substantial piracy of physical copies of movies and music. For example, shortly after the government began issuing legal permits for self-employment, newly authorized street vendors of bootlegged copyrighted materials began setting up outside markets, at bus stops, and along sidewalks around the city.³⁵² Owners of “video banks,” or shops with thousands of unauthorized DVDs and CDs, also reportedly carry government-issued identification cards.³⁵³

In addition, thousands of Cuban households reportedly subscribe for a weekly fee to privately distributed weekly bundles of movies, shows, games, and software applications known as “El Paquete” (The Package). The bundles circulate on memory sticks and hard drives from various providers.³⁵⁴ Satellite dishes and antennas reportedly also provide TVs in Cuban neighborhoods with the latest entertainment and sports programs. They operate both by capturing signals from neighboring countries and by using set-top boxes or other devices that enable the hacking of encrypted signals.³⁵⁵

According to some press reports, Cuban state-owned TV recently has expanded its regular unauthorized broadcasting of documentaries, series, and films from the United States.³⁵⁶ For example, the TV guide in *Granma*, the Communist Party’s daily newspaper, reportedly describes a lineup featuring reruns of *Cold Case*, *MythBusters*, and *Seinfeld*. Government-owned cinemas have recently screened *Teenage Mutant Ninja Turtles*, *Toy Story 2* in 3-D, and *Pirates of the Caribbean*:

³⁵⁰ Bacardi, written submission to the USITC, October 22, 2015, 5; Miroff, “Cubans Pirate U.S. TV and Movies,” October 18, 2015; Ravensberg, “Cuba Has a New TV Alternative,” January 21, 2013; Serra, “Views from Cuba,” April 2015, 7; Miroff, “Cuba: Pirates with Permits,” December 15, 2010.

³⁵¹ Miroff, “Cubans Pirate U.S. TV and Movies,” October 18, 2015; Ravensberg, “Cuba Has a New TV Alternative,” January 21, 2013; Serra, “Views from Cuba,” April 2015, 7; Miroff, “Cuba: Pirates with Permits,” December 15, 2010.

³⁵² Miroff, “Cuba: Pirates with Permits,” December 15, 2010.

³⁵³ Ravensberg, “Cuba Has a New TV Alternative,” January 21, 2013; Miroff, “Cuba: Pirates with Permits,” December 15, 2010.

³⁵⁴ Harris, “This Is Cuba’s Netflix, Hulu, and Spotify,” September 2015; Serra, “Views from Cuba,” April 2015, 7.

³⁵⁵ Ravensberg, “Cuba Has a New TV Alternative,” January 21, 2013; industry representative, telephone interview by USITC staff, October 5, 2015; International Intellectual Property Alliance, written submission to USTR, February 6, 2015, viii (stealing “overspill” signals from neighboring countries is a problem of growing severity in Latin America).

³⁵⁶ Ravensberg, “Cuba Has a New TV Alternative,” January 21, 2013; Miroff, “Cubans Pirate TV and Movies,” October 16, 2015; Serra, “Views from Cuba,” April 2015, 7.

On Stranger Tides.³⁵⁷ Although the U.S. Free Trade in Ideas Act of 1993 allows the sale or export of informational materials, even to countries under embargo, it does not appear that these are authorized royalty-paying broadcasts.³⁵⁸

Impact of Cuba’s IP Laws and Practices on Foreign Businesses

Cuba’s trademark and patent laws have evolved to address the requirements of TRIPS. As a result, U.S. and other foreign brand owners and inventors are filing applications to protect their IP in Cuba. These activities reportedly are motivated both by defensive interests—for example, to keep bad-faith applicants from “squatting” on well-known brands—and, in some cases, affirmative interests in future collaborations and other market opportunities in IP-intensive sectors such as pharmaceuticals and biotechnology.

In contrast to these positive developments, Cuba’s copyright laws and institutions have not been revised to meet global norms. As noted, copyright infringement is reportedly widespread and pervasive. Yet, in spite of these substantial piracy challenges, there appears to be strong interest in collaborations between foreign and Cuban content creators and distributors. The recent agreement between Sony Music Entertainment and the Cuban state entity Egrem (*Empresa de Grabaciones y Ediciones Musicales*) to license Egrem’s catalog worldwide offers market opportunities for both sides.³⁵⁹ In the case of films, U.S. industry representatives state that “Cuba could be a great market, similar to the Dominican Republic, growing to the size of Puerto Rico,” if piracy and infrastructure challenges are addressed.³⁶⁰ Cuban artists also could see real benefits, as their works are subject to unauthorized copying in Cuba.³⁶¹ As one U.S. industry representative stated, although there are large illegal markets for pirated content throughout Latin America, the difference in Cuba is that to date there has been virtually *no* legal market.³⁶²

While modernization of the Cuban copyright regime to address these problems could provide opportunities for U.S. and Cuban creators of copyright-sensitive products, the removal of U.S. restrictions would not be expected to have a large impact on U.S. firms in the near term, given the need for legal reforms and current economic conditions in Cuba.

The Dual Currency and Exchange Rates

Cuba’s dual currency and exchange rates create some uncertainty for foreign investors. Although the Cuban government intends to unify the dual currency, the date for unification is unknown. In addition, there are large uncertainties associated with the short-term effects of the reform process,

³⁵⁷ Miroff, “Cubans Pirate TV and Movies,” October 16, 2015.

³⁵⁸ Ibid.

³⁵⁹ Sony reportedly entered into the transaction using the “informational materials” exemption under the U.S. restriction for Cuba. Cobo, “Sony Enters Historic Agreement,” September 15, 2015.

³⁶⁰ Tartaglione and Jaafar, “U.S.-Cuba Thaw,” December 24, 2014.

³⁶¹ Miroff, “Cubans Pirate TV and Movies,” October 16, 2015.

³⁶² Legal representative, telephone interview by USITC staff, October 20, 2015.

including future exchange rate values, real wage rates, and inflation. Despite these concerns, sources indicate that most potential foreign investors consider currency unification just one among many factors they must consider in deciding whether or not to invest in Cuba, and not necessarily an absolute deterrent.³⁶³

The Dual Currency and Exchange Rate in Cuba

There are two official currencies circulating in the Cuban economy: the Cuban peso (CUP) and the convertible peso (CUC), which is pegged to the U.S. dollar (i.e., CUC1 = \$1). The CUP is used for wages paid by state-owned companies (over 70 percent of the labor force)³⁶⁴ and for domestically produced goods;³⁶⁵ Cubans use CUPs to purchase basic services and goods at government ration stores and from street vendors, secondhand shops, and some other stores.³⁶⁶ The CUC is used for foreign trade, in some areas of the private sector,³⁶⁷ in the tourism industry, at some restaurants and *paladares*, and at upscale stores.³⁶⁸ The dual currency began in the 1990s after the fall of the Soviet Union. The Soviet Union was Cuba's major trading partner and a source of economic and financial aid³⁶⁹ valued at \$4 billion–\$6 billion annually.³⁷⁰

Without Soviet support, Cuba fell into a serious economic downturn: GDP dropped, and trade and hard currency holdings collapsed.³⁷¹ As confidence in the Cuban peso fell, the U.S. dollar began to replace it.³⁷² In 1993–94 the U.S. dollar was legalized,³⁷³ and the convertible currency (CUC) was created.³⁷⁴ In 2004, the economic significance of the CUC grew when the government passed a series of measures requiring it to replace widespread use of the U.S. dollar.³⁷⁵

A dual exchange rate overlaps with the dual currency and was also introduced in the 1990s. In 1990–93, the Cuban peso suffered a massive devaluation against the dollar that was later assumed by the state foreign exchange agency, which covers transactions for households.³⁷⁶ However, the devaluation was never carried over into the transactions of state-owned, foreign, or joint venture

³⁶³ U.S. academic, telephone interview by USITC staff, October 16, 2015.

³⁶⁴ About 27 percent of the Cuban workforce is now employed outside the government. Cuban academic, Conference, "The Americas at a Turning Point," Inter-American Dialogue, Washington, DC, September 21, 2015.

³⁶⁵ EIU, "Country Report: Cuba," September 2015, 7.

³⁶⁶ Cuban Adventures, "Money and Currency in Cuba," n.d. (accessed September 22, 2015).

³⁶⁷ De Miranda-Parrondo, "Current Problems in the Cuban Economy," 2014, 56; *Economist*, "Day Zero or D-Day?" May 18, 2015.

³⁶⁸ Frank, "Government Likely to Bring an End," June 16, 2015; De Miranda-Parrondo, "Current Problems in the Cuban Economy," 2014, 56.

³⁶⁹ Smith and Walter, "Understanding a Cuban Transition," March 26, 2015, 3–4.

³⁷⁰ CIA, "Cuba," n.d. (accessed September 22, 2015).

³⁷¹ Smith and Walter, "Understanding a Cuban Transition," March 26, 2015, 3–4.

³⁷² Vidal and Pérez Villanueva, "Monetary Reform in Cuba," November 2014, 90.

³⁷³ Hufbauer and Kotschwar, *Economic Normalization with Cuba*, April 2014, 8; Vidal and Pérez Villanueva, "Monetary Reform in Cuba," November 2014, 90.

³⁷⁴ De La Torre and Ize, "Exchange Rate Unification: The Cuban Case," December 2013, 8.

³⁷⁵ Di Bella and Wolfe, "A Primer on Currency Unification," 2008, 51; Vidal, "Monetary and Exchange Rate Reform in Cuba," 2014, 70.

³⁷⁶ Vidal, "Monetary and Exchange Rate Reform in Cuba," 2014, 70.

companies,³⁷⁷ essentially creating a two-tiered economy.³⁷⁸ There is a large difference in the value of the two currencies. Cuban residents, who are paid in the Cuban peso, can purchase the convertible peso at the unofficial but legal *Cadeca*³⁷⁹ rate of one convertible peso for 25 Cuban pesos.³⁸⁰ State-owned and foreign companies must exchange CUCs for CUPs at the official rate of one to one (CUC1 = CUP1)³⁸¹ and use this rate in their accounting systems.³⁸² The grossly overvalued exchange rate of CUC1 = CUP1 used by state enterprises for foreign trade has penalized exports and favored imports.³⁸³ Neither currency is convertible outside Cuba.³⁸⁴

In 2011, the Communist Party issued guidelines for a long list of economic reforms, including currency reforms, giving itself five years—until the next Communist Party congress, scheduled for April 2016³⁸⁵—to enact them.³⁸⁶ In October 2013, the Cuban government confirmed that a timetable had been agreed on, but no details were provided.³⁸⁷ In March 2014, the Cuban government published resolutions that referred to the date of currency unification as “day zero” and indicated that currency unification would involve removing the CUC from circulation.³⁸⁸ The resolutions also provided instructions to state enterprises and organizations on how to settle accounts when day zero occurs, as well as how to set prices.³⁸⁹

The government has experimented with currency devaluations in specific sectors.³⁹⁰ Although the official exchange rate of CUP1:CUC1 remains in place, the Cuban government is reported to be experimenting with different exchange rates, with state entities in some sectors using varying rates of around CUP10:CUC1.³⁹¹ For example, for every \$100 of sugar it exports, the state-owned sugar

³⁷⁷ Ibid.; Vidal and Pérez Villanueva, “Monetary Reform in Cuba,” November 2014, 91.

³⁷⁸ World Finance, “Cuba to Ditch Complicated Dual-currency System,” January 21, 2014.

³⁷⁹ A *Cadeca* (*Casa de Cambio, S.A.*) is a government foreign exchange bureau.

³⁸⁰ The buy rate of the Cuban convertible currency is 25 CUP = 1 CUC; the sell rate is 1 CUC = 24 CUP.

³⁸¹ Companies using the 1-to-1 exchange rate are not permitted to freely exchange CUP to CUC, but have a limited amount of CUC they can access. Additionally, these companies cannot exchange CUC into CUP at the *Cadeca* rate. Cuban economist, interview by USITC staff, December 9, 2015.

³⁸² Frank, “Government Likely to Bring an End,” June 16, 2015; *Economist*, “Day Zero or D-Day?” May 18, 2015; EIU, “Cuba Prepares for Exchange-Rate Reform,” March 12, 2014; DeSilver, “What We Know about Cuba’s Economy,” May 28, 2015. Indeed, some companies have three sets of books (in CUC, CUP, and U.S. dollars). Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

³⁸³ Brookings, “Rethinking Cuba” event transcript, Washington, DC, June 2, 2015, 42 (Yaima Doimeadios, University of Havana); De La Torre and Ize, “Exchange Rate Unification: The Cuban Case,” December 2013, 9; *Economist*, “Double Trouble,” October 23, 2013.

³⁸⁴ Conversions of U.S. dollars to CUC are subject to a 10 percent surcharge. EIU, “Cuba Prepares for Exchange-Rate Reform,” March 12, 2014.

³⁸⁵ Symmes, “The Cuban Money Crisis,” April 1, 2015.

³⁸⁶ Echevarría and Amuchástegui, “Currency Reform Has Yet to Start,” July 2015; Frank, “Government Likely to Bring an End,” June 16, 2015; presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015; De La Torre and Ize, “Exchange Rate Unification: The Cuban Case,” December 2013, 2.

³⁸⁷ Latinnews.com, “Cuba’s Exchange Rate Unification Approaching,” March 2014.

³⁸⁸ Sullivan, “Cuba: Issues for the 114th Congress,” July 17, 2015, 12–13; Government of Cuba, *Gaceta Oficial* [Official Gazette] special issue, March 6, 2014.

³⁸⁹ EIU, “Cuba Prepares for Exchange-Rate Reform,” March 12, 2014.

³⁹⁰ Echevarría and Amuchástegui, “Currency Reform Has Yet to Start,” July 2015.

³⁹¹ Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015; presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015; EIU, “Country Report: Cuba,” January 2015, 7.

monopoly is now receiving 1,000 CUP (instead of 100 CUP), allowing it to invest and to pay its employees more.³⁹² In addition, most convertible peso stores are now accepting the Cuban peso at the *Cadeca* rate, and free-market sales of agricultural goods from farms and agricultural cooperatives to hotels and restaurants are now being based on rates of 10 CUP to 1 CUC.³⁹³

Impact of the Dual Currency and Exchange Rate System on Foreign Businesses

Policy analysts say that reforming the dual currency and exchange rates is important to attracting more investment.³⁹⁴ According to one report, the current system imposes a significant burden on the Cuban economy as well as on those doing business within it. The use of this system can ultimately mask the profitability, or lack thereof, of companies in Cuba; it also affects prices and implicitly taxes or subsidizes different sectors within the economy.³⁹⁵ This generates a high degree of risk for current and potential investors. However, according to Cuba specialists, the dual currency and exchange rates by themselves have not prevented foreign investors from entering the Cuban market. Instead, these currency issues are one more factor to consider among many when making decisions to invest.³⁹⁶ For foreign investors, Cuba's dual currency and exchange rates add confusion to an already complex business environment.³⁹⁷ Unification will ultimately ease business operations, but in the interim, the uncertainties associated with the process concern investors.³⁹⁸ For example, there are uncertainties about the timetable for unification, what the exchange rate will be, how real wages will be affected, and whether or not unification will cause inflation.³⁹⁹

³⁹² Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015; Frank, "Government Likely to Bring an End," June 16, 2015.

³⁹³ Amuchástegui, "Cuba's Currency Unification: Step-by-Step," 2014, 180; Frank, "Government Likely to Bring an End," June 16, 2015; Vidal and Pérez Villanueva, "Monetary Reform in Cuba," November 2014, 94. Reportedly, these experiments have not resulted in significant effects, likely due to other barriers to expanding supply, such as infrastructure constraints and problems meeting standards and SPS requirements. Cuban economist, interview by USITC staff, December 9, 2015.

³⁹⁴ Vidal and Pérez Villanueva, "Monetary Reform in Cuba," November 2014, 92; Vidal and Brown, "Cuba's Economic Reintegration," July 2015, 7; presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

³⁹⁵ "The dual currency system remains an enormous burden on the Cuban economy, distorting all decision making, negatively affecting the management of companies, and increasing financial risk. The over-valued official exchange rate of the Cuban peso, artificially pegged to the American dollar, has warped corporate balance sheets, skewed prices, and reduced competitiveness. The result is that—no matter the attractiveness of foreign investment laws—the dual exchange rate creates a high level of risk for foreign investors." Vidal and Brown, "Cuba's Economic Reintegration," July 2015, 7. See also Vidal and Pérez Villanueva, "Monetary Reform in Cuba," November 2014, 92.

³⁹⁶ Cuba specialist, telephone interview by USITC staff, November 12, 2015; U.S. academic, telephone interview by USITC staff, October 16, 2015. At a panel discussion, "Risk Factors for U.S. Organizations Entering the Cuban Market," the currency issue was not mentioned. 2nd U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015.

³⁹⁷ U.S. academic, telephone interview by USITC staff, October 16, 2015; Frank, "Government Likely to Bring an End," June 16, 2015.

³⁹⁸ U.S. academic, telephone interview by USITC staff, October 16, 2015.

³⁹⁹ *Ibid.*; Vidal and Brown, "Cuba's Economic Reintegration," July 2015, 7.

Unification is expected to increase productivity, improve the business climate, and raise growth in the long run⁴⁰⁰—if the Cuban government allows market forces to operate, efficiency gains to materialize, and competitive markets to emerge.⁴⁰¹ Winners and losers are, however, likely in the period immediately following implementation.⁴⁰² As the overvalued official exchange rate used in foreign trade depreciates to a new unified rate, companies in the exporting sector should benefit, while importers may suffer as exports become more competitive and imports more expensive.⁴⁰³

Depending on the unified exchange rate,⁴⁰⁴ people earning wages in CUP may see their purchasing power increase, which could lead to inflation and shortages, while people with incomes and/or savings denominated in CUC will be adversely affected.⁴⁰⁵ There is potential for inflation, recession, shortages, and even social unrest,⁴⁰⁶ depending on how unification is carried out and whether the “losers” are compensated.⁴⁰⁷ Because Cuba is not a member of the International Monetary Fund or World Bank, their financial support is not available to help buffer the negative effects of exchange rate devaluation,⁴⁰⁸ although the Cuban government is reportedly getting technical assistance from the Development Bank of Latin America (CAF).⁴⁰⁹ Some investors may be particularly concerned about how real wages will be affected by unification, and whether they will be globally competitive.

As noted above, foreign companies pay higher wages than they should because they pay their employees indirectly through a Cuban employment agency. The foreign company pays hard currency to the employment agency, which in turn pays the workers in CUP, resulting in a massive

⁴⁰⁰ Sullivan, “Cuba: Issues for the 114th Congress,” July 17, 2015, 13; EIU, “Cuba Prepares for Exchange-Rate Reform,” March 12, 2014; EIU, “National Assembly Reveals Economic Reform Trajectory,” July 23, 2015.

⁴⁰¹ EIU, “Country Report: Cuba,” September 2015; Vidal and Pérez Villanueva, “Monetary Reform in Cuba,” November 2014, 96.

⁴⁰² Latinnews.com, “Cuba’s Exchange Rate Unification Approaching,” March 2014; Cuban academic, interview by USITC staff, Havana, June 15, 2015. For more information about possible options for exchange rate unification, see De La Torre and Ize, “Exchange Rate Unification: The Cuban Case,” December 2013, 10–12.

⁴⁰³ Cuban academic, interview by USITC staff, Havana, June 15, 2015; De La Torre and Ize, “Exchange Rate Unification: The Cuban Case,” December 2013, 6; Brookings, “Rethinking Cuba” event transcript, Washington, DC, June 2, 2015, 42 (Yaima Doimeadios, University of Havana).

⁴⁰⁴ The post-unification equilibrium exchange rate is expected to lie between the two original exchange rates, eventually settling close to the bottom of the range. For further discussion, see De La Torre and Ize, “Exchange Rate Unification: The Cuban Case,” December 2013, 6.

⁴⁰⁵ *Economist*, “Double Trouble,” October 23, 2013; World Finance, “Cuba to Ditch Complicated Dual-currency System,” January 21, 2014. Many with access to the CUC have been converting their money into U.S. dollars and moving it offshore to protect themselves from the shock. Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

⁴⁰⁶ World Finance, “Cuba to Ditch Complicated Dual-currency System,” January 21, 2014; *Economist*, “Double Trouble,” October 23, 2013.

⁴⁰⁷ USITC, hearing transcript, June 2, 2015, 187 (testimony of Barbara Kotschwar, Peterson Institute).

⁴⁰⁸ Vidal, “Monetary and Exchange Rate Reform in Cuba,” 2014, 72.

⁴⁰⁹ According to a Cuba specialist, although Cuba is not a formal member, CAF is currently giving Cuba technical assistance on currency unification. Cuba specialist, telephone interview by USITC staff, November 12, 2015; presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015. In May 2015, the head of CAF said that CAF wanted to be the first multilateral lender to Cuba. Ore, “Latin America Development Bank CAF Eyes Presence,” May 28, 2015.

implicit tax on labor.⁴¹⁰ Although wage rates are expected to become more competitive, the outcome is still unknown.⁴¹¹

Because of the uncertainties associated with the short-run effects of currency and exchange rate unification, some potential investors may delay their decisions to invest.⁴¹² For these investors, this generates additional risk in what is already a complicated foreign investment process.⁴¹³ However, other investors more familiar with the investment environment may proceed with the foreign investment approval process, knowing that it will take two to three years. In several years, after the foreign investment has been approved by the government, the investor can decide on whether to move forward with the project, based on the status of currency unification (and other factors) at that time. Still other investors will pursue investment projects because they are willing to take on more risks to develop markets abroad.⁴¹⁴ In the long run, after normalization, foreign companies expect to face increased competition in the market, but should benefit from stronger demand after wages have had time to adjust.⁴¹⁵

State Trading, Storage, and Distribution

The Cuban government maintains a strong presence in the country's trading, storage, and distribution systems. It oversees nearly all imports through importing entities that are connected to government ministries,⁴¹⁶ and there are few, if any, mechanisms to allow the Cuban private sector to take advantage of trade opportunities.⁴¹⁷ Although the government controls most of the country's imports and exports,⁴¹⁸ it does allow some foreign-based firms in Cuba to import goods needed as inputs for the provision of services or the production in Cuba of goods for export.

State control over trade in Cuba limits the ability of foreign suppliers to supply the Cuban market. If U.S. restrictions are removed, growth in U.S. exports to Cuba likely will continue to depend on the purchasing decisions of Cuban importing entities. The degree of government control over storage and distribution channels may further limit potential U.S. exports to Cuba and deter potential investors.

⁴¹⁰ For example, foreign hotel operators pay for labor in dollars at the official exchange rate, but the employee receives payment in CUP at the unofficial exchange rate. Out of every dollar paid by the hotel operator, the worker receives only 1/24 of a dollar (about four cents), with the state retaining the remaining 23/24 dollar. De La Torre and Ize, "Exchange Rate Unification: The Cuban Case," December 2013, 12.

⁴¹¹ Feinberg, *The New Cuban Economy: What Roles?* December 2012, 13–14; Vidal and Pérez Villanueva, "Monetary Reform in Cuba," November 2014, 99; De La Torre and Ize, "Exchange Rate Unification: The Cuban Case," December 2013, 12.

⁴¹² U.S. academic, telephone interview by USITC staff, October 16, 2015.

⁴¹³ Ibid.

⁴¹⁴ Ibid.

⁴¹⁵ Feinberg, *The New Cuban Economy: What Roles?* December 2012.

⁴¹⁶ USITC, hearing transcript, June 2, 2015, 178 (testimony of Ricardo Torres Pérez, University of Havana).

⁴¹⁷ USITC, hearing transcript, June 2, 2015, 168 (testimony of Barbara Kotschwar, Peterson Institute).

⁴¹⁸ Ibid.; Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015.

State Trading

Article 18 of the Cuban constitution gives the state broad authority to control foreign trade.⁴¹⁹ Consequently, international trade with Cuba generally involves *empresas*, Cuban import purchasing and exporting entities, most of which are state-owned. Different *empresas* in Cuba import for individual sectors, and while they are considered to be independent companies and have their own management and leadership, they fall within the purview of any of several government ministries, depending on the sector (box 4.6).⁴²⁰ There are about 130 state-run importing entities connected to various ministries.⁴²¹ Each importing company has a list of products provided by the government that it is allowed to import. These products may overlap with those of other importing entities, but each *empresa* makes purchases for its own sector. *Empresa* purchases are also subject to budget allocations set by the overseeing ministry.⁴²²

Overall, the leadership in the Cuban importing entities is said to be “informed, shrewd, and very professional.”⁴²³ And, while limited to buying certain products within a budget, the *empresas* reportedly have some independence in selecting sellers, and undertake market research to identify potential suppliers. However, the selection process may favor established relationships,⁴²⁴ as new suppliers must submit financial documents to the Cuban entities to demonstrate the viability of their business in order to be approved.⁴²⁵ On the other hand, larger buyers, such as the Cuban state-owned chains of stores that sell food products, have been able to establish relationships with sellers and to ask their sector’s importing entity to purchase from those sellers.⁴²⁶

According to the Cuban government, about 240 entities are licensed to import and export in Cuba, a number that includes state-owned import purchasing entities, foreign companies that have licenses to import and export directly (such as certain hotel chains), and companies that merely facilitate imports and exports without making the purchases directly.⁴²⁷ However, Alimport is currently the only *empresa* that can import U.S. agricultural goods into Cuba.⁴²⁸ In contrast, goods from other trading partners can be purchased by all importing entities. Beyond the restrictions on purchasing U.S. goods, entities that are granted importing and exporting licenses do not appear to be limited by the Cuban government with respect to the countries with which they trade.⁴²⁹ In

⁴¹⁹ Cuban Constitution, <http://anterior.cubaminrex.cu/English/LookCuba/Articles/AboutCuba/Constitution/inicio.html>.

⁴²⁰ Previously, these companies were all connected to the Ministry of Foreign Trade and Investment.

⁴²¹ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

⁴²² See chapter 2 for further discussion of the import budget as it relates to Cuba’s balance of payments.

⁴²³ USITC, hearing transcript, June 2, 2015, 29 (testimony of Terry Harris, Riceland Foods).

⁴²⁴ USITC, hearing transcript, June 2, 2015, 94 (testimony of Marco Palma, Texas A&M University); U.S. Grains Council, written testimony to the USITC, June 2, 2015, 6; industry representative, interview by USITC staff, Washington, DC, May 27, 2015.

⁴²⁵ U.S. Grains Council, written testimony to the USITC, June 2, 2015, 6; industry representative, interview by USITC staff, Washington, DC, May 27, 2015.

⁴²⁶ Industry representative, interview by USITC staff, Washington, DC, May 27, 2015.

⁴²⁷ Cuban government official, interview by USITC staff, Havana, June 18, 2015; Cuban government official, interview by USITC staff, Varadero, Cuba, June 19, 2015; legal representative, telephone interview by USITC staff, December 4, 2015.

⁴²⁸ Cuban imports of those U.S. medical goods that are permitted under TSRA can be purchased by Medicuba or another *empresa* authorized by MINCEX. Industry representative, email message to USITC staff, January 12, 2016.

⁴²⁹ Industry representative, interview by USITC staff, Varadero, Cuba, June 19, 2015.

practice, firms allowed to import or export directly tend to be foreign firms, such as the large hotel chains, that use the goods as inputs to production or the provision of services. Licenses are more likely to be granted to such firms because their imports will not enter the Cuban domestic market for consumption and thus will not disrupt this market or government pricing controls.⁴³⁰

Box 4.6: Alimport and Other Cuban Importing Entities

Of the approximately 130 *empresas* operating in Cuba, some of the larger ones are of note as they are responsible for a large share of Cuban imports of goods. Alimport (*Empresa Cubana Importadora de Alimentos*), for example, purchases bulk agricultural commodities for the ration stores and certain other stores that sell to the public and falls under the purview of the Ministry of Foreign Trade and Investment. Medicuba, the Cuban import purchaser of medical equipment, falls under the Ministry of Public Health, while Construimport, which purchases foreign construction machinery, is connected to the Ministry of Construction. Likewise, imported goods for the tourist sector are purchased through ITH (*Comercializadora ITH, S.A.*), an importing entity connected to the Ministry of Tourism.

Alimport imports most of Cuba's bulk and intermediate agricultural products, including food ingredients for its food processing sector. It imports roughly 80–90 percent of all agricultural products into Cuba and has sole authority to purchase agricultural products from the United States. Since agricultural products account for the vast majority of U.S. exports to Cuba, most U.S. exports are sold to Alimport. Alimport chiefly supplies Cuba's rationing outlets, some stores that sell in the Cuban convertible peso (CUC), school lunch programs, hospitals, and other government institutions. It also supplies some products to ITH for resale to the tourism sector.

In addition to importing and exporting goods, the *empresas* may carry out a number of other functions. For example, Alimport's logistics group charts Cuban and foreign-flag vessels and monitors transportation of agricultural products to Cuba. ITH, besides purchasing both Cuba-grown and imported agricultural goods for sale in tourist hotels and restaurants, also leases refrigerated and dry storage space, retail space, handling equipment, and cargo-lifting equipment to operators in the tourism sector. ITH also facilitates wholesale trade shows, brokers customs, supplies technical advice on tourism operations, and occasionally provides wholesale transactions in CUCs.

Sources: Cuban government official, interview by USITC staff, Havana, June 19, 2015; presenter, Caribbean-Central American Action 39th Annual conference, Miami, November 17, 2015; USDA, FAS, *Cuba's Food and Agriculture Situation Report*, 2008; Government of Canada, *Agri-Food Past, Present and Future Report—Cuba*, March 2012; industry and Cuban government representatives, interviews with USITC staff, Havana, June 13–18, 2015.

Cuba's growing domestic private sector is unable to import directly, however.⁴³¹ Because of this, many restaurant operators travel abroad (often to Miami) to purchase goods such as tablecloths, napkins, cups, and equipment, as well as certain ingredients such as nuts and spices that are not available in the domestic market.⁴³² Cuban economists estimate that the value of these and other

⁴³⁰ Legal representative, interview by USITC staff, Miami, June 22, 2015.

⁴³¹ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

⁴³² Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015; Cuban industry representatives, interviews by USITC staff, June 15, 2015 and June 17, 2015; USITC, hearing transcript, June 2, 2015, 195 (testimony of Jorge Piñon, University of Texas at Austin); legal representative, interview by USITC staff, Miami, June 22, 2015; presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015; participant, Caribbean-Central American Action 39th Annual Conference, Miami, November 16, 2015.

U.S. goods sent to Cuba ranges from \$2.0 billion to \$3.5 billion annually.⁴³³ Due to Cuban restrictions, these goods may continue to move through unofficial channels even in the absence of U.S. restrictions. According to one Cuban government official, Cuba has negotiated and signed an agreement with Brazil to import goods for the private sector and cooperatives, and may be willing to make similar deals with the United States.⁴³⁴ However, as of December 2015 only one Cuban cooperative had been known to be licensed to engage in foreign trade directly. Also, limitations on currency convertibility will make these transactions problematic, if not impossible, on a larger scale.⁴³⁵ Further, by allowing the private sectors greater access to foreign trade, such deals could give private firms an advantage over state-owned firms.⁴³⁶

Storage and Distribution

Storage and distribution of goods in Cuba is mostly state controlled. Exporters to Cuba are unable to store and distribute their goods within the country and, for the most part, merely deliver the goods to the Cuban port.⁴³⁷ As a result, they have little opportunity to interact with buyers to promote their products and understand their needs, and little ability to monitor storage conditions to ensure that their products remain in good condition.⁴³⁸

The limited anecdotal evidence available suggests that Cuban storage capacity is limited.⁴³⁹ Warehouse conditions are reportedly problematic, and power outages regularly occur at warehouses and at customs posts throughout the country, leading to food spoilage.⁴⁴⁰ Cuba also lacks refrigerated warehouse capacity,⁴⁴¹ limiting potential U.S. exports of perishable goods.⁴⁴²

While the new infrastructure at Mariel port allows for improved and expanded warehouse conditions and modern cold storage, there continue to be problems with maintaining a continuous cold chain from the port to distant and rural destinations within Cuba.⁴⁴³ The country is said to lack a fleet of refrigerated trucks,⁴⁴⁴ and observers suggest that the scarcity of the equipment needed to move perishable goods is a greater trade impediment than the state of the roads and other

⁴³³ Cuban academic, interview by USITC staff, Havana, June 15, 2015.

⁴³⁴ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

⁴³⁵ Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015.

⁴³⁶ Feinberg and Miller, written submission to the USITC, June 19, 2015, 3.

⁴³⁷ USITC, hearing testimony, June 2, 2015, 25 (testimony of Bill Christ, U.S. Grains Council).

⁴³⁸ Cuba specialist, telephone interview by USITC staff, November 13, 2015.

⁴³⁹ USITC, hearing testimony, June 2, 2015, 95 (testimony of William Messina, University of Florida); Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 67.

⁴⁴⁰ Industry representative, interview by USITC staff, Washington, DC, May 27, 2015; Palma, written testimony to the USITC, June 2, 2015, 7.

⁴⁴¹ Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 67; U.S. government official, interview by USITC staff, Washington, DC, October 8, 2015.

⁴⁴² Rosson, statement to the Senate Agriculture, Nutrition and Forestry Committee, April 21, 2015.

⁴⁴³ U.S. academic, telephone interview by USITC staff, October 19, 2015.

⁴⁴⁴ Presenter, Caribbean-Central American Action conference, Miami, November 16–17, 2015; Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015.

infrastructure.⁴⁴⁵ Cuban officials recognize that the country lacks adequate storage.⁴⁴⁶ However, officials also suggest that if the United States were to become a distribution point under a scenario of unrestricted trade relations, Cuba would be able to receive smaller, more frequent shipments of goods, alleviating to some extent the stress on its limited warehousing capacity.⁴⁴⁷

As it makes improvements to its distribution network, the Cuban government's resistance to foreign involvement in distribution is reported to be softening. The government now invites foreign companies to invest in certain distribution activities.⁴⁴⁸ One Florida firm is attempting to gain Cuban government approval to open a warehouse location to distribute goods to the private sector, as allowed under current U.S. regulations.⁴⁴⁹ Whether the Cuban government approves this proposal may signal the degree to which U.S. firms may be able to participate in product distribution if U.S. restrictions are lifted.

Cuban Customs Duties and Procedures

As an original contracting party to the General Agreement on Tariffs and Trade (GATT) and a member of the World Trade Organization (WTO),⁴⁵⁰ Cuba adheres to the provision of various WTO agreements involving the imports of goods, including custom procedures and duties. As noted above, the Cuban government plays a central role in importing and exporting through permit procedures and regulations. However, specific publicly available information on customs procedures and their implementation is scarce, making it difficult to determine whether these act or could act as barriers to trade. Information that is available suggests that customs duties on imports are relatively low for a developing country, and that while customs procedures may be relatively bureaucratic, they are not as restrictive as other barriers created by the heavy state control over all aspects of trade. In general, a more efficient and transparent customs system would benefit foreign companies operating in Cuba, especially those facing additional bureaucracy resulting from trading with *empresas*.⁴⁵¹

Cuban Customs Duties

As a WTO member, Cuba offers most-favored-nation (MFN) tariff rates to most other WTO members. In 2014, Cuba applied an average ad valorem duty of 10.6 percent on goods from other WTO members, well below its average MFN bound duty of 21 percent.⁴⁵² In that year, the Federation of International Trade Associations described Cuba's duty rates as "fairly reasonable,"

⁴⁴⁵ Participant, Caribbean-Central American Action conference, Miami, November 16–17, 2015. See "Cuban Infrastructure" below.

⁴⁴⁶ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

⁴⁴⁷ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

⁴⁴⁸ Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015.

⁴⁴⁹ Guzzo, "Tampa Firm Clearing Hurdles," October 30, 2015.

⁴⁵⁰ Cuba has been a member of the WTO since April 1995, and a member of GATT since January 1, 1948. WTO, "Members and Observers" (accessed October 20, 2015).

⁴⁵¹ Legal representative, telephone interview by USITC staff, December 4, 2015.

⁴⁵² WTO, ITC, UNCTAD, "World Tariff Profiles 2015," 2015, 67.

noting that Cuba had reduced duties since 1996.⁴⁵³ Goods exported from the United States to Cuba, however, do not receive MFN treatment and are currently subject to duties averaging 16.6 percent.⁴⁵⁴

Customs Procedures in Cuba

Information on Cuban customs procedures is limited. However, Cuba is the only Latin American country to be party to the International Convention on the Simplification and Harmonization of Customs Procedures (Kyoto Convention) signed in 1995, and ratified the revised Kyoto Convention in 2009,⁴⁵⁵ suggesting that improving customs procedures is a focus of the Cuban government. Cuba's Chamber of Commerce, the *Cámara de Comercio de la República de Cuba*, is tasked with cooperating with foreign entities and expanding trade relations between Cuba and the world.⁴⁵⁶ Information provided by the Chamber on customs procedures for trading with Cuba includes the following: (1) foreign companies are not required to have an office or prior registration in Cuba to conduct business with national entities; (2) there are no import quotas; (3) all goods entering into Cuba are subject to customs inspections; (4) Cuba respects the bans associated with Article XX of the GATT;⁴⁵⁷ (5) sanitary and phytosanitary (SPS) regulations conform with the WTO's guidelines; and (6) receipts and payments cannot be made using U.S. dollars or include transactions involving U.S. banks.⁴⁵⁸ Although the bulk of Cuban imports flow through one of the country's many state-trading enterprises, some foreign firms are allowed to import directly. Little is known about these firms' experiences with direct importing and exporting.

Private Travel

As mentioned above, travel by Cubans to the United States to purchase supplies for their small businesses is an important channel through which some U.S. exports to Cuba flow. However, recent Cuban regulations restrict this channel. In September 2014 Cuba passed Resolution 206, which raised the duties and restricted the amount of imports of consumer goods, such as televisions, shampoo, clothing, detergent, tires, and furniture that can be brought in via passenger luggage or mail.⁴⁵⁹ The entire list of restricted goods was published in a set of rules totaling 41

⁴⁵³ Federation of International Trade Associations, "Cuba: Selling and Buying," October 2014.

⁴⁵⁴ USDA, FAS, *Cuba: Food and Agricultural Import Regulations*, December 2, 2015, 9.

⁴⁵⁵ *Aduano General de la República de Cuba* [Cuban General Customs Office], "Customs Control of Cargo and International Means of Transport" (accessed October 15, 2015).

⁴⁵⁶ *Cámara de Comercio de la República de Cuba* [Cuban Chamber of Commerce], "Acerca de la Cámara de Comercio de la República de Cuba" [About the Cuban Chamber of Commerce], <http://www.camaracuba.cu/index.php/es/acerca-de/acerca-de-la-ccrc> (accessed on November 23, 2015).

⁴⁵⁷ Article XX includes general exceptions to the trade measures established in GATT and covers measures to protect, among other things, public morals, human and animal health, and national treasures. Article XX of the GATT can be accessed at https://www.wto.org/english/docs_e/legal_e/gatt47_02_e.htm#articleXX.

⁴⁵⁸ *Cámara de Comercio de la República de Cuba* [Cuban Chamber of Commerce], "Para comerciar con Cuba" [To do business with Cuba], <http://www.camaracuba.cu/index.php/es/negocios/para-comerciar-con-cuba> (accessed on November 23, 2015).

⁴⁵⁹ *PanAm Post*, "Cuba Imposes New Restrictions on Importing," September 1, 2014.

pages.⁴⁶⁰ According to Cuban officials, the new restrictions were put into place to deter black market dealers who travel with or mail “personal” goods for resale. However, these new restrictions also limit the ability of private businesses to import needed inputs and of travelers to bring in consumer goods for personal or familial use.⁴⁶¹ Due to the quotas and higher fees, along with their inability to import directly, entrepreneurs must rely more heavily on state-run suppliers for goods.

Sanitary and Phytosanitary Measures

Governments carry out SPS measures in order to protect human, animal, and plant health or life from risks arising from contaminants, toxins, additives, or disease-causing organisms in food, beverages, or feedstuffs, as well as risks from the entry or spread of plant- or animal-borne pests or diseases.⁴⁶² While most countries impose some such measures, when SPS measures are unwarranted, unscientific, discriminatory, or unduly burdensome,⁴⁶³ they can create significant barriers to food and agricultural exports.

As a member of the WTO, Cuba is subject to the provisions of the WTO’s Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). There are few reports of Cuban SPS measures acting as trade barriers, and Cuba’s implementation of SPS measures does not appear to be politically motivated in most cases.⁴⁶⁴ More open communication between U.S. and Cuban officials could be useful in resolving SPS barriers to trade that arise.⁴⁶⁵

SPS Measures in Cuba

The SPS Agreement seeks to balance a country’s right to protect human, animal, and plant health with the need for a smooth flow of goods for international trade.⁴⁶⁶ The agreement encourages WTO members to base health and safety regulations on standards developed by three international expert bodies: for animal health, the World Organization for Animal Health (OIE); for plant health, the International Plant Protection Convention (IPPC); and for food safety, the Codex Alimentarius Commission (Codex). Cuba is a member of all three organizations.

To ensure transparent requirements, the SPS Agreement requires WTO members to notify the WTO Secretariat of intentions to impose new or changed SPS measures that could affect trade. Cuba appears to notify SPS measures actively, although its notifications are less numerous than

⁴⁶⁰ *Guardian*, “Cuba Imposes Restrictions on Goods,” September 1, 2014. The restrictions are detailed in Resolution 206/2014 (Gaceta Oficial No. 30), which is available at <http://www.cubadebate.cu/wp-content/uploads/2014/07/Gaceta-Aduana.pdf>.

⁴⁶¹ Trotta and Acosta, “Cubans Angered by New Consumer Import Restrictions,” September 1, 2014.

⁴⁶² WTO, “Sanitary and Phytosanitary Measures: Introduction” (accessed September 23, 2015); USTR, *2014 Report on Sanitary and Phytosanitary Measures*, 2014, 1.

⁴⁶³ USTR, *2014 Report on Sanitary and Phytosanitary Measures*, 2014, 1.

⁴⁶⁴ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

⁴⁶⁵ USITC, hearing transcript, June 2, 2015, 47, 121 (testimony of Devry Boughner Vorwerk, Cargill); U.S. government official, interview by USITC staff, Washington, DC, October 8, 2015.

⁴⁶⁶ WTO, *Sanitary and Phytosanitary Measures: Ensuring Safe Trading*, 3 (accessed October 23, 2015).

other countries, possibly because its imports are concentrated in a smaller number of products and sources.⁴⁶⁷ No requests to resolve specific trade concerns with Cuba were made to the WTO's SPS committee during 2006–14.⁴⁶⁸

Cuban food safety requirements appear to be in line with international standards.⁴⁶⁹ The Cuban Ministry of Health generally considers food additives as acceptable if they are recognized as suitable for human consumption by Codex standards.⁴⁷⁰ The same is true of the Codex's maximum residue limits for pesticides and other contaminant residues in foodstuffs.⁴⁷¹ Likewise, Cuba's labeling, sanitary product registration, and export documentation requirements are comparable to those of other Latin American countries.⁴⁷² Import permits for meat products may require a Cuban ministry official to conduct a farm and/or processing facility inspection, which can be hampered by travel restrictions.⁴⁷³

Impact of SPS Measures on U.S. Exports

Agricultural products, the top U.S. export to Cuba, are the goods most likely to be affected by Cuban SPS measures. However, both U.S. government officials and U.S. agricultural industry representatives from sectors with significant exports to Cuba indicated that Cuban SPS measures have not been a barrier to U.S. exports to Cuba. Rather, sources state that Cuban SPS measures are mostly science-based and that Cuban scientists are well trained.⁴⁷⁴ Industry and government officials interviewed by Commission staff have reported only three instances where Cuban SPS measures were barriers to trade. The first barrier is unresolved, while the second and third were resolved and trade has resumed. The circumstances of each are described below.

The first case concerns Cuba's rejection of U.S. exports of cattle that have a harmless strain of bluetongue. Shipments of U.S. cattle to Cuba must meet Cuban requirements that they test negative for bluetongue (a noncontagious viral disease that affects ruminants and is especially dangerous to sheep).⁴⁷⁵ There are two strains of bluetongue, one that is considered harmful, and one that is not.⁴⁷⁶ Cattle in the Southern United States frequently test positive for the non-harmful

⁴⁶⁷ During 2006–14, Cuba submitted 6 notifications for SPS measures, compared to 60 from the Dominican Republic and 643 from the United States. WTO, SPS Information Management System, Notifications database (accessed October 26, 2015).

⁴⁶⁸ The WTO's SPS committee is a forum for member countries to address the implementation and enforcement of the SPS Agreement. Through this committee, members discuss trade issues and work with related technical organizations. During 2006–14 there was 1 specific trade concern request for the Dominican Republic and 10 for the United States. WTO, SPS Information Management System, Specific Trade Concerns database (accessed October 26, 2015).

⁴⁶⁹ USDA, FAS, *Cuba: Food and Agricultural Import Regulations and Standards*, December 2, 2015, 1–5.

⁴⁷⁰ *Ibid.*, 4.

⁴⁷¹ *Ibid.*, 4.

⁴⁷² *Ibid.*, 1.

⁴⁷³ *Ibid.*, 6.

⁴⁷⁴ U.S. academic, telephone interview by USITC staff, October 19, 2015; USDA, FAS, *Cuba's Food and Agriculture Situation Report*, 2008, 33.

⁴⁷⁵ OIE, "Bluetongue (BT)," 1; U.S. academic, telephone interview by USITC staff, October 19, 2015; USDA, APHIS, *Import Health Requirements of Cuba for Cattle from the United States*, February 2, 2006, 1, 3.

⁴⁷⁶ Industry representative, telephone interview by USITC staff, November 6, 2015.

strain.⁴⁷⁷ However, Cuban testing requirements do not distinguish between the two strains.⁴⁷⁸ There are reports in multiple years of large portions of the U.S. cattle selected by Cuban buyers being rejected by Cuban veterinary officials.⁴⁷⁹ This problem, which the U.S. cattle industry faces in a number of countries, effectively prohibits most Cuban imports of live cattle from warmer regions of the United States—the cattle that would be best suited for the Cuban climate.⁴⁸⁰ Use of a testing system that distinguishes between the harmful and harmless strains of bluetongue would likely result in more U.S. cattle exports to Cuba.

In the second instance, U.S. poultry meat exports to Cuba were temporarily banned by Alimport based on SPS concerns, even though the restrictions were inconsistent with OIE guidelines and with the policies actually imposed by Cuban veterinary authorities. In June 2015, Alimport announced that U.S. exporters would not be eligible to compete for poultry meat contracts for August and September delivery because outbreaks of highly pathogenic avian influenza (HPAI) in the United States could threaten delivery. However, Cuban veterinary authorities maintained that only U.S. states with reported cases of HPAI (located in the upper Midwest) were subject to the ban; no cases of HPAI had been reported in Georgia or Alabama, the primary suppliers of poultry meat to Cuba. Cuban veterinary officials were receptive to informational exchanges with U.S. animal scientists from the University of Georgia and Auburn University in support of OIE-consistent guidelines.⁴⁸¹

Nonetheless, Alimport imposed the restrictions. As a result, U.S. poultry exports to Cuba fell from \$7.6 million in June 2015 to zero in August 2015.⁴⁸² Alimport's decision to exclude U.S. suppliers from the poultry meat tenders favored Brazilian exporters, whose poultry exports to Cuba doubled in August 2015.⁴⁸³ The restrictions were short-lived, though, and U.S. poultry meat exports to Cuba resumed in October 2015.⁴⁸⁴

In the third instance, also involving poultry, U.S. poultry exports to Cuba were also temporarily limited by Cuban SPS measures in response to cases of HPAI in the United States about 10 years ago.⁴⁸⁵ In that instance, a U.S. animal health expert met with Alimport to explain U.S. protocol for testing and destroying infected birds and testing procedures for poultry meat for export. Cuban officials were receptive, and trade was only stopped for 15 days.⁴⁸⁶

Often when an SPS measure in a given country becomes an unnecessary barrier to U.S. exports, the United States Trade Representative and the U.S. Department of Agriculture engage with

⁴⁷⁷ Ibid.

⁴⁷⁸ Ibid.

⁴⁷⁹ U.S. academic, telephone interview by USITC staff, October 19, 2015; USDA, FAS, *Cuba's Food and Agriculture Situation Report*, 2008, 26.

⁴⁸⁰ Industry representative, telephone interview by USITC staff, November 6, 2015.

⁴⁸¹ Industry representative, interview by USITC staff, Miami, June 13, 2015; U.S. academic, telephone interview by USITC staff, October 19, 2015.

⁴⁸² GTIS, Global Trade Atlas database (accessed October 27, 2015).

⁴⁸³ Ibid.

⁴⁸⁴ U.S. government official, interview by USITC staff, Washington, DC, October 8, 2015.

⁴⁸⁵ Industry representative, interview by USITC staff, Miami, June 13, 2015.

⁴⁸⁶ Ibid.

government officials from the country involved to help resolve the issue. In the case of Cuba, U.S. policies on government-to-government communication have limited the direct channels available to resolve such conflicts. The revision of these policies in August 2015 and restoration of diplomatic relations between the United States and Cuba now allow U.S. government officials to build relationships with Cuban counterparts.⁴⁸⁷ It could also make it easier for Cuban officials to perform sanitary inspections at U.S. plants.⁴⁸⁸ This, in turn, could enable information exchanges to resolve trade conflicts resulting from SPS measures.⁴⁸⁹

Cuban Transportation Infrastructure

Infrastructure affects all facets of trade and investment, including the movement of goods and personnel, communications, production, and services. As such, infrastructure has the potential to be a key constraint that limits the performance of U.S. and non-U.S. firms in exporting to and doing business in Cuba.⁴⁹⁰

Historically, Cuba's infrastructure has known both ups and downs. At the time of the 1959 revolution, Cuba had one of the most advanced transportation infrastructure networks in Latin America. However, by the end of the Cold War, the lack of capital available domestically and from foreign investors left the system in need of repair.⁴⁹¹ More recently, a resurgence in investment partnerships between the Cuban government and Brazil, Russia, and other countries has aided the repair and modernization of Cuba's infrastructure. As a result, Cuba is considered the most connected island in the Caribbean in terms of transportation,⁴⁹² and the infrastructure used today to transport goods is considered by some to be adequate to handle trade at ports of entry and distribution requirements within the country (table 4.1).⁴⁹³ Nonetheless, the current state of Cuba's infrastructure cannot keep pace with Cuba's growth.⁴⁹⁴ In addition, because the Cuban government still maintains tight control over the use of the internal infrastructure systems by operating as the sole distributor of goods throughout the island,⁴⁹⁵ it is difficult to determine the extent to which transport infrastructure in Cuba might act as a barrier to trade.

⁴⁸⁷ U.S. government official, interview by USITC staff, Washington, DC, October 8, 2015.

⁴⁸⁸ Cuban government officials stated that travel to the United States for inspections is problematic and that they have not inspected U.S. poultry plants since 2002. Cuban government official, interview by USITC staff, Havana, June 18, 2015.

⁴⁸⁹ U.S. government official, interview by USITC staff, Washington, DC, October 8, 2015.

⁴⁹⁰ USITC, hearing transcript, June 2, 2015, 55–56 (testimony of Marco Palma, Texas A&M University).

⁴⁹¹ BG Consultants, "Cuba's Surface Transportation Network," August 3, 2015.

⁴⁹² Jones Lang LaSalle, "Navigating the Uncharted Waters," June 2, 2015.

⁴⁹³ BG Consultants, "Cuba's Maritime Transportation, Ports, and Related Facilities," Fall 2015.

⁴⁹⁴ Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015.

⁴⁹⁵ Cuba specialist, telephone interview by USITC staff, November 13, 2015.

Table 4.1: Cuba's infrastructure at a glance

Type of Infrastructure	Total
Airports with paved runways	64
Railways	5,199 miles
Standard gauge	5,092 miles
Narrow gauge	107 miles
Roadways	37,815 miles
Paved	18,529 miles
Unpaved	19,286 miles
Major ports and terminals	8 ^a

Source: ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014]; CIA, *Factbook* (accessed January 15, 2016).

^a Major seaports include Antilla, Cienfuegos, Guantánamo, Havana, Matanzas, Mariel, Nuevitas Bay, and Santiago de Cuba. Analysts suggest that Caibarin, Cárdenas, Isabela, and Nueva Gerona may also be considered to be major seaports based on volume of activity. Cuba specialist, telephone interview by USITC staff, November 13, 2015.

Airport Infrastructure

Owing to Cuba's economic reliance on tourism, the government invests heavily in airport infrastructure. Recent upgrades to international airports have helped to bring Cuba up to international standards and could facilitate more trade. Cuba has 10 international airports and is connected by air to 251 cities worldwide via 39 airlines.⁴⁹⁶ Seven of Cuba's 161 domestic airports have paved runways of longer than 9,900 feet that can accommodate large commercial aircraft.⁴⁹⁷ Havana's José Martí International Airport, the largest in the country, also has good facilities for managing freight. Its Aerovaradero Freight Terminal has a 600-ton freight-handling capacity, in addition to two refrigeration and freezing chambers, and features 50,000 square feet of warehousing capacity as well.⁴⁹⁸ Most airports in Cuba have adequate fuel- and cargo-handling equipment, as well as air traffic control equipment for civil aircraft. However, the condition of this equipment is largely unknown.⁴⁹⁹

Recent upgrades to airport infrastructure involve jointly funded projects between the Cuban government, third-party companies, and foreign governments. In particular, Grupo Odebrecht, through a \$150 million credit from the Brazilian National Development Bank, is expected to remodel airport terminals in Havana.⁵⁰⁰ Additionally, the Russian government is pursuing investors for the construction of a cargo airport of at least \$200 million to be built on the grounds of the former military base in San Antonio de los Baños. This airport would serve the Port of Mariel.⁵⁰¹ As a result, continuing investments in airport infrastructure could increase the trade potential for all trading partners and improve access to markets throughout the island.

⁴⁹⁶ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

⁴⁹⁷ BG Consultants, "Cuba's Air Transportation System," August 1, 2015.

⁴⁹⁸ Havana Airport, <http://havana.airportcuba.net/>; BG Consultants, "Cuba's Air Transportation System," August 1, 2015.

⁴⁹⁹ BG Consultants, "Cuba's Air Transportation System," August 1, 2015.

⁵⁰⁰ *Havana Times*, "Cuba to Get More Brazilian Investment," April 18, 2013.

⁵⁰¹ Werner, "Russia seeks partners in Abu Dhabi to fund Cuban cargo airport project," *Cuba Standard Monthly*, March 2015, 18.

Port Infrastructure

As an island nation, Cuba sees its port infrastructure as an integral element connecting it to the international trade system. There are more than 70 ports in Cuba, 31 of which are involved in international trade, and 8 to 12 of which can be categorized as “major.”⁵⁰² Cuba recently completed the construction of a new international port, the Port of Mariel, to replace the Port of Havana as the main hub of international trade and to accommodate the larger ships that will pass through the area after the Panama Canal expansion is completed. The Port of Havana previously handled 60 percent of all cargo, but recent developments have made Mariel the largest port in the country, handling 85–90 percent of foreign trade.⁵⁰³ The port of Mariel has been dredged to accommodate the “New Panamax” class of vessels with drafts of up to roughly 50 feet. Because of a tunnel under the channel at Havana Bay, ships using the Havana port are limited to ships with drafts of approximately 33 feet.⁵⁰⁴ The Port of Havana will therefore chiefly handle tourism-related traffic, such as cruise ships. The Cuban government has designated other ports as import only, export only, transshipment centers, or specialized ports with varying infrastructure and equipment in place.⁵⁰⁵

The investments in the Port of Mariel have significantly improved access to the island for importers. Reportedly, the potential removal of U.S. restrictions and consequent increased trade with the United States was taken into consideration when developing the size and capacity of the port.⁵⁰⁶ Today, the Mariel port has 700 meters of docks for the container terminal, a freight center, storage yards, water supply and waste treatment networks, and infrastructure for electricity supply.⁵⁰⁷ Mariel is estimated to have the capacity to handle 822,000 to 1 million containers a year, although so far it has reached only 30 to 40 percent of that number.⁵⁰⁸ The railway line was extended to connect the port to an existing line, allowing for a rail capacity out of the port of 120,000 twenty-foot equivalent units (TEUs) that can be expanded to 300,000 TEUs.⁵⁰⁹ In addition, Cuba reportedly could increase the waterfront infrastructure at Mariel threefold to reach 2,140 meters of docks.⁵¹⁰ Mariel can serve as a hub and major transfer point for cargo within the Caribbean region and Cuba itself.

⁵⁰² This is a nonspecific classification that varies based on the definition being used. Here, major ports are those with high trade volumes, although some included may not have a gantry crane. Ports often identified as major include Caibarién, Cárdenas, Cienfuegos, Havana, Isabella, Mariel, Matanzas, Nueva Gerona, Nuevitas, and Santiago.

⁵⁰³ Cuban government official, interview by USITC staff, Mariel, Cuba, June 16, 2015.

⁵⁰⁴ Cuban government official, interview by USITC staff, Mariel, Cuba, June 16, 2015; Frank, “Cuba Port Upgrades and Free-Trade Zones,” Winter 2014.

⁵⁰⁵ BG Consultants, “Cuba’s Maritime Transportation, Ports, and Related Facilities,” Fall 2015.

⁵⁰⁶ Cuban government official, interview by USITC staff, Mariel, Cuba, June 16, 2015.

⁵⁰⁷ Macguire, “Cuba Libre: Could Port Herald New Economic Age?” November 30, 2013.

⁵⁰⁸ Trotta, “Odebrecht Sees Cuban Port Expanding Sooner,” January 30, 2015.

⁵⁰⁹ Cuban government official, interview by USITC staff, Mariel, Cuba, June 16, 2015. One 20-foot-long container is equivalent to 1 TEU.

⁵¹⁰ Trotta, “Odebrecht Sees Cuban Port Expanding Sooner,” January 30, 2015.

However, some initial problems have appeared at Mariel. Delays in reaching the dock at Mariel to unload goods can last several days, costing shippers over \$20,000 per day.⁵¹¹ Such delays are due, in part, to the narrow entryway and to regulations that do not allow ships to enter the port under certain wind conditions deemed dangerous.⁵¹² Dredging is still underway at Mariel to correct this limitation,⁵¹³ and windbreaks will need to be updated and installed to reduce wait times.⁵¹⁴ A weather center and a monitoring center to measure waves are among the other improvements planned for the port.⁵¹⁵ Additionally, ships are not allowed to sail into the port after 6 p.m., as that is considered “nighttime;” ships must wait to dock until the next morning.⁵¹⁶ These issues are particularly problematic for larger ships that receive perishables from distant ports, as the delays may keep them from delivering goods before they spoil.⁵¹⁷ Delays also negatively affect turnaround time on vessels, resulting in fewer trips per year and lost revenues.⁵¹⁸

At Cuba’s other ports, there are still many problems to be addressed to improve the handling of imports. Obstacles to trade include vessel size constraints, slow loading, and the deterioration of port equipment owing to a lack of spare parts, maintenance, and repairs. Little funding is available to address these limitations. This situation has translated into less trade via seaports over time.⁵¹⁹

The Road System and Land Transportation

Roads are an important component of Cuba’s freight transportation system. They remain the most widely used segment of the system in terms of both total freight transported and freight traffic weighted by kilometers traveled.⁵²⁰ About 70 percent of the total amount of goods transported within Cuba is moved by road, while less than 30 percent is moved by rail and less than 1 percent by water and air (table 4.2). In terms of volume per kilometer traveled, 37 percent of goods are transported by water, 35 percent by road, 27 percent by rail, and less than 1 percent by air (table 4.3).

Nonetheless, roads in Cuba suffer from a lack of investment. Cuba’s highway system was originally built for military purposes, and as a result roads often bypass major cities and towns that have since been connected to the highway network via unpaved secondary roads.⁵²¹ Currently, Cuba has

⁵¹¹ Industry representative, interview by USITC staff, Washington, DC, May 27, 2015, and Miami, June 13, 2015.

⁵¹² Cuba specialist, telephone interview by USITC staff, November 13, 2015.

⁵¹³ Industry representative, interview by USITC staff, Washington, DC, May 27, 2015.

⁵¹⁴ Cuba specialist, telephone interview by USITC staff, November 13, 2015.

⁵¹⁵ Cuban government official, interview by USITC staff, Mariel, Cuba, June 16, 2015.

⁵¹⁶ Industry representative, interview by USITC staff, Miami, June 13, 2015.

⁵¹⁷ Industry representative, interview by USITC staff, Washington, DC, May 27, 2015.

⁵¹⁸ Industry representative, interview by USITC staff, Miami, June 13, 2015.

⁵¹⁹ Palma, written testimony to the USITC, June 2, 2015, 7; BG Consultants, “Cuba’s Maritime Transportation, Ports, and Related Facilities,” Fall 2015.

⁵²⁰ Portela, “Back on Track? Cuba Revives Passenger Rail,” July 2015.

⁵²¹ BG Consultants, “Cuba’s Surface Transportation Network,” August 3, 2015.

37,815 miles of roads, of which about 18,259 miles (48 percent) are paved and about 19,286 miles (51 percent) are unpaved.⁵²²

Table 4.2: Summary of freight transportation in Cuba

Freight transportation (thousands of tons)	2009	2010	2011	2012	2013	2014
By rail	9,926.1	12,774.8	16,466.4	16,617.2	16,879.4	16,892.8
By car/roads	41,567.2	31,853.7	31,196.6	36,956.3	41,963.9	41,383.0
By sea/port	452.9	1,057.6	527.6	385.7	377.6	432.6
By air	9.7	10.5	8.6	9.6	7.5	8.9
Total	51,955.9	45,696.6	48,199.2	53,968.8	59,228.4	58,717.3

Source: ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], table 13.3.

Table 4.3: Summary of freight traffic in Cuba

Freight traffic (millions of ton-km) ^a	2009	2010	2011	2012	2013	2014
By rail	2,790.9	1,852.2	1,912.8	2,714.4	1,533.7	1,777.3
By car/roads	2,315.1	2,973.0	2,461.4	2,647.2	2,505.3	2,344.8
By sea/port	3,550.2	3,076.8	2,469.8	1,881.3	1,984.7	2,487.6
By air	49.3	49.9	42.9	32.5	33.9	32.7
Total	8,705.5	7,951.9	6,886.9	7,275.4	6,077.6	6,642.4

Source: ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], table 13.4.

^a This measures the volume of freight carried in terms of metric tons times kilometers traveled.

In addition to making access more difficult, the use of gravel roads also shortens the lives of vehicles used to distribute goods throughout the island. During 2005–08, for example, Cuba imported hundreds of Chinese buses that are now reported to be in poor condition because of the many roads that are poorly finished or unpaved.⁵²³ Road quality appears to differ by region, with those in the eastern part of the country suffering more from neglect.⁵²⁴ Nevertheless, although problems with Cuba’s road infrastructure are extensive, they reportedly require less catch-up investment than the rest of the country’s infrastructure, as noted below.⁵²⁵

Railway System

As noted above, almost 30 percent of the volume of freight hauled in Cuba is transported by rail. Most of this cargo consists of sugarcane and sugar byproducts, fuel, cement, foodstuffs, heavy machinery, agricultural supplies, and produce.⁵²⁶ Following the collapse of the sugar industry at the end of the 1980s, Cuba experienced a substantial reduction in rail capacity.⁵²⁷ Since then, Cuba has both expanded its rail network and converted most of the remaining track from narrow gauge to

⁵²² CIA, *World Factbook* (accessed January 13, 2016).

⁵²³ USITC, hearing transcript, June 2, 2015, 209–10 (testimony of Jorge Piñon, University of Texas at Austin).

⁵²⁴ BG Consultants, “Cuba’s Surface Transportation Network,” August 3, 2015.

⁵²⁵ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

⁵²⁶ Portela, “Back on Track? Cuba Revives Passenger Rail,” July 2015.

⁵²⁷ Government of Cuba, MINCEX, “Transportation Sector,” in *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015).

standard gauge, which now makes up nearly 98 percent of the total 5,199 miles of track in Cuba.⁵²⁸ The fact that Cuba and the United States predominantly use the same gauge track could benefit U.S. firms because they would not have to accommodate a different railway system when conducting trade with Cuba.⁵²⁹ Additionally, many warehouses in Cuba are said to have a direct rail connection, which could ease the efforts of U.S. exporters to get their shipments to destinations throughout the country.⁵³⁰

For the most part, the main lines of the Cuban railway system have been updated and function at relatively high standards.⁵³¹ Nonetheless, the rail network still needs upgrading and updating in several areas so as to increase efficiency and reduce costs of transport.⁵³² For example, while the current system widely features rail connections to ports, access to piers is often inadequate or is in need of repairs.⁵³³ The rail signaling system needs substantial improvement.⁵³⁴ So does the locomotive fleet, an outdated, piecemeal collection containing U.S.-built engines from the 1950s or even from the early 20th century, as well as Russian-, Czech-, Hungarian-, Canadian-, and Chinese-made engines.⁵³⁵

Efforts to improve the rail system are underway. In July 2015, 12 miles of newly built track from Guanajay to Mariel entered into service, linking the new Mariel container terminal and Special Economic Development Zone to Havana.⁵³⁶ Both commuter and freight trains will run on a 40-mile stretch of previously existing track that was brought back into service and repaired to allow increased traffic.⁵³⁷ Further investment in the railway system will be undertaken by UVZ, a Russian company that is investing \$26 million in a rail logistics hub. UVZ is also undertaking the renovation of a rail maintenance and assembly plant in Santa Clara.⁵³⁸

Impact of Cuban Transportation Infrastructure on U.S. and Other Foreign Firms

In spite of recent improvements, Cuba's extensive transportation infrastructure needs updates to improve freight traffic via rail, roads, ports, and airports. Problems with transportation infrastructure have not been cited as a major obstacle for those currently trading with and

⁵²⁸ ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, table 13.5.

⁵²⁹ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 16, 2015; presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

⁵³⁰ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

⁵³¹ BG Consultants, "Cuba's Surface Transportation Network," August 3, 2015, 3.

⁵³² Portela, "Back on Track? Cuba Revives Passenger Rail," July 2015.

⁵³³ BG Consultants, "Cuba's Rail Road Industry," June 2015.

⁵³⁴ *Ibid.*, 1.

⁵³⁵ Portela, "Back on Track? Cuba Revives Passenger Rail," July 2015; BG Consultants, "Cuba's Rail Road Industry," June 2015.

⁵³⁶ Portela, "Back on Track? Cuba Revives Passenger Rail," July 2015.

⁵³⁷ *Ibid.*

⁵³⁸ *Cuba Standard Monthly*, "Old Buddies, New Business Partners," July 2015.

operating in Cuba. Still, a more efficient and reliable transportation network within Cuba would support the growth of U.S. exports to Cuba if U.S. trade restrictions are removed.⁵³⁹

At the same time, Cuba’s infrastructure limitations could offer U.S. firms an advantage over more distant trading partners. For example, exports from countries far from Cuba need to ship goods in very large vessels of 25,000–30,000 tons in order to be competitive.⁵⁴⁰ Only some of Cuba’s major ports are equipped to handle such large vessels. By comparison, U.S. exporters are able to ship using smaller vessels—as small as 6,000 to 10,000 tons—to various smaller Cuban ports that are often closer to the population centers they are trying to reach.⁵⁴¹

Further, smaller, more frequent shipments could translate into cost savings; that is, suppliers do not have to warehouse large shipments or worry about deterioration of product in storage.⁵⁴² Also, if the Cuban government will allow such direct shipments to other ports beyond Mariel, such shipments would reduce trucking costs to distribute the goods across the country.⁵⁴³ Because the Cuban government manages the import and distribution of most imported goods, the degree to which infrastructure constraints may affect the transport and distribution of goods within Cuba is unknown to most foreign suppliers to Cuba.

Telecommunications Infrastructure

Telecommunications infrastructure has been identified by some as a substantial barrier to trade and investment with Cuba. Recent investment in this infrastructure has led to slightly better connectivity on the island, mostly in mobile services, but significant work remains. In this sector, large foreign investments will be necessary. But because of potential security sensitivities inherent in the sector, the investment and incorporation of needed equipment into the system may proceed at a slow pace, curtailing foreign investment in other sectors within Cuba.⁵⁴⁴ Poor telecommunications infrastructure may also impact trade in that difficulties in communicating with Cuban counterparts can hamper the execution of export contracts.⁵⁴⁵

Telecommunications Infrastructure in Cuba

Cuba’s telecommunications infrastructure is severely underdeveloped compared to that of other countries in the region. Indeed, much of the fixed-line voice network operated by *Empresa de Telecomunicaciones de Cuba* (ETECSA), Cuba’s monopoly telecommunications services provider, is composed of traditional copper wiring installed in the early to middle 20th century, particularly along the so-called “last mile” lines running between end users and local central offices as well as

⁵³⁹ For a discussion of potential U.S export opportunities related to Cuban infrastructure, see chapter 6.

⁵⁴⁰ USITC, hearing transcript, June 2, 2015, 89 (testimony of Terry Harris, Riceland Foods).

⁵⁴¹ USITC, hearing transcript, June 2, 2015, 90 (testimony of Terry Harris, Riceland Foods).

⁵⁴² Ibid.

⁵⁴³ Zahniser et al., *U.S.-Cuba Agricultural Trade*, 2015, 21.

⁵⁴⁴ Industry representatives, interview by USITC staff, Washington, DC, October 22, 2015.

⁵⁴⁵ Palma, written testimony to the USITC, June 2, 2015, 7.

the lines connecting the various central offices within cities.⁵⁴⁶ Most long-distance networks connecting towns or cities consist of coaxial cable installed in the 1970s, although a small number of microwave towers are also in use.⁵⁴⁷ Over the past few years, ETECSA has digitized its fixed-line voice network, achieving a digitization rate of 99 percent by the end of 2014.⁵⁴⁸ ETECSA began to install fiber optic networks in the late 1990s, mainly around government offices, military facilities, and important tourist resorts. Starting in 2004, ETECSA also began constructing fiber optic networks in select cities, including Havana, Villaclara, Cienfuegos, Ciego de Avila, Holguin, Santiago de Cuba, Bejucal, Wajay, and Camaguey.⁵⁴⁹ Overall, ETECSA spent roughly \$15 million to upgrade and expand its fixed-line infrastructure during 2005–10, with roughly two-thirds of this sum going to fiber optic cabling and related network equipment.⁵⁵⁰

ETECSA offers mobile services to the Cuban population using GSM technologies,⁵⁵¹ a 2G standard capable of handling voice telephone calls and text messages.⁵⁵² After a decade of construction and expansion, the GSM network has spread throughout the island, making mobile service available to roughly 85 percent of the population.⁵⁵³ Although higher-bandwidth 3G networks have been activated in select locations, such networks are mainly available to foreign visitors and reportedly offer slow download speeds and inconsistent service quality.⁵⁵⁴ Over the past decade, ETECSA has signed roaming agreements with more than 140 telecom carriers around the world, allowing customers of those companies to use their phones in Cuba. Both Sprint and Verizon signed roaming agreements with ETECSA in 2015, following the relaxation of restrictions by the Obama Administration.

Cuba's international telecommunications infrastructure consists of a single undersea cable, named ALBA-1, and two largely unused satellite connections offered through Intelsat and Newcom.⁵⁵⁵ Constructed at a cost of roughly \$70 million⁵⁵⁶ and activated in 2013, ALBA-1 is a 1,860-km fiber optic cable running between Venezuela and Cuba, with a branch connecting with Jamaica.⁵⁵⁷

⁵⁴⁶ Guzman, written testimony to the USITC, June 2, 2015, 2; Cereijo, *Republic of Cuba Telecommunications Infrastructure Assessment*, December 2010, 1.

⁵⁴⁷ Cereijo, *Republic of Cuba Telecommunications Infrastructure Assessment*, December 2010, v.

⁵⁴⁸ Cuban government official, interview by USITC staff, Havana, June 17, 2015; Cereijo, *Republic of Cuba Telecommunications Infrastructure Assessment*, December 2010, 31.

⁵⁴⁹ Cereijo, *Republic of Cuba Telecommunications Infrastructure Assessment*, December 2010, v.

⁵⁵⁰ *Ibid.*, iv–v.

⁵⁵¹ ETECSA, http://www.etcসা.сu/?page=telefonía_movil (accessed November 17, 2015).

⁵⁵² Cuba's mobile network operates in the 900MHz band across the island. An 850MHz band also operates in select cities, mainly Havana, Varadero, Cayo Coco, and Cayo Guillermo. Cereijo, *Republic of Cuba Telecommunications Infrastructure Assessment*, December 2010.

⁵⁵³ Cuban government official, interview by USITC staff, Havana, June 17, 2015.

⁵⁵⁴ Grosbois, "Internet in Cuba Only for the Rich," December 5, 2014; ETECSA, http://www.etcসা.сu/?page=telefonía_movil (accessed November 17, 2015); USITC, hearing transcript, June 2, 2015, 245–46 (testimony of Kent Bressie, Harris, Wiltshire & Grannis).

⁵⁵⁵ On July 1, 2015, virtually all international satellite traffic was reportedly rerouted to the ALBA-1 undersea cable. Bischof, "In and Out of Cuba," 2015; Lancaster, *Cuba Telecoms, Mobile, and Broadband Markets*, January 19, 2015, 7; Press, "Cuban International Traffic Shifts," July 12, 2015.

⁵⁵⁶ ALBA-1 was reportedly financed by a \$70 million loan from the government of China. Tomas, "Undersea Fiber Optic Cable Due," June 10, 2008.

⁵⁵⁷ Qiu, "Cuba Trials Internet Traffic," January 29, 2013. ALBA-1 has a design capacity of 5.12 terabits per second.

Regarding domestic Internet infrastructure, the government of Cuba reportedly awarded a contract to build a national fiber optic network in 2000. Although the degree of completion is unknown, most knowledgeable observers have concluded that at least a partial fiber-optic backbone connects Cuba's provinces with the ALBA-1 undersea cable landing station at Santiago de Cuba.⁵⁵⁸ Virtually all global Internet traffic is now transmitted to Cuba over the ALBA-1 cable and is accessible in Internet cafés, hotels, places of employment, universities, Wi-Fi hotspots, and, to a lesser extent, people's homes.

Lack of Internet Connectivity and Impact on Businesses

Access to the Internet in Cuba is limited and problematic, and day-to-day operations are hampered by a lack of connectivity in a number of ways. Businesses and entrepreneurs currently working in Cuba have been forced to develop creative means to work around the lack of connectivity. Computer programmers are said to work offline and transfer their work to a flash drive that is used to deliver their work, or they use dial-up connections through landlines that connect and upload or download throughout the night.⁵⁵⁹ Where faster Internet speeds are available, they are still far below the speeds required for day-to-day business in developed countries. Even government agencies, with access to the fastest Internet connections, often give visitors materials on CDs because of difficulties in emailing large files. Hard copies of materials are also requested and exchanged to minimize the need for downloading files.⁵⁶⁰

Although the government has blocked access to certain websites, including those of Cuban entrepreneurs,⁵⁶¹ other sources indicate that most foreign websites are accessible from Cuba, if Internet access is available.⁵⁶² In fact, some sources believe that limiting Internet traffic on a large scale would require levels of investment that the Cuban government may not be able to afford.⁵⁶³

Mobile wireless Internet service is not yet available. In 2014, Cuba began to offer mobile email services via a government-controlled email system, and it recently introduced some access to banking via mobile phone. However, employees are otherwise unable to access email outside of the office or their homes, unless they are at one of the few available Wi-Fi hotspots. Credit card services suffer from similar problems. Such services need access to the Internet to operate, currently limiting most credit card use to merchants in hotels, one of the few areas where better Internet speeds are available.⁵⁶⁴

⁵⁵⁸ Industry representatives, interviews by USITC staff, Washington, DC, June 17, 2015 and July 13, 2015.

⁵⁵⁹ Brookings, "Rethinking Cuba" event transcript, Washington, DC, June 2, 2015, 68 (John McIntire, Cuba Empreunde Foundation).

⁵⁶⁰ USITC, hearing transcript, June 2, 2015, 246 (testimony of Jorge Piñon).

⁵⁶¹ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

⁵⁶² Cuba specialist, telephone interview by USITC staff, November 24, 2015.

⁵⁶³ Presenter, U.S.-Cuba Corporate Counsel Summit, New York, October 7, 2015.

⁵⁶⁴ Industry representative, telephone interview by USITC staff, November 24, 2015.

While some speculate that the lack of infrastructure is a means to prevent a degree of connectivity that might be destabilizing to the government, others suggest that the Cuban government simply has not had the resources to invest in this area. Further, Miguel Díaz-Canel, the current vice-president and assumed successor to Raúl Castro, has been known to support Internet connectivity. The government intends to meet the goals of the International Telecommunications Union's Connect 2020 program, aiming to have 7.4 million mobile users within the next four years, with 60 percent of those users connected to the Internet and 50 percent of all users connected to the Internet through their homes.⁵⁶⁵ If the Cuban government meets these ambitious goals, the issues of connectivity that are a hindrance to foreign investment in the short term may lessen in the medium term.

Overall, the rudimentary, low-bandwidth nature of Cuba's telecommunications network, which impedes the delivery of Internet and data networking services, acts as a deterrent to companies contemplating setting up business operations in Cuba.⁵⁶⁶ In recent years, Cuba has invested in upgrading the equipment needed to provide modern telecom services and speeds; however, the country's telecommunications infrastructure needs are formidable and will require a great deal of additional investment. ZED Mariel is intended to be fitted with modern telecommunications equipment to meet the demands of foreign businesses housed within the zone.⁵⁶⁷ Overall, however, Cuba's telecommunications and Internet system would not likely support the volume of data or the security desired by large multinationals.

⁵⁶⁵ Cuban government officials, interview by USITC staff, Havana, June 17, 2015.

⁵⁶⁶ Cuba specialist, interview by USITC staff, November 24, 2015.

⁵⁶⁷ Cuban government official, interview by USITC staff, Havana, June 17, 2015.

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Chapter 5

Agricultural Products

Cuba is highly dependent on imports to feed its population, importing roughly 70 to 80 percent of its domestic food requirements each year.⁵⁶⁸ Cuba's agricultural imports are mostly staples in the Cuban diet, especially those products that either cannot be efficiently grown in Cuba's tropical climate, or for which domestic production has not kept pace with demand. These include wheat, rice, corn, soybeans and related products, dry beans, meats, and dairy products. During 2005–14, these products accounted for almost three-quarters of all agricultural imports by Cuba (table 5.1). Many staples, including the bulk of Cuban agricultural imports from the United States, are imported for distribution to the local population through a state-sector distribution system, consisting of state-run ration and non-ration stores (box 5.1).

The United States is an important participant in Cuba's agricultural import market. It consistently ranks among Cuba's top three suppliers of food and agricultural products, although the U.S. share of the market has fallen in recent years. U.S. exports of agricultural products have been permitted since the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA). However, certain restrictions, such as the inability of U.S. exporters to offer credit, have weakened the competitiveness of U.S. agricultural products in the Cuban market.⁵⁶⁹

As noted in chapter 1, the Committee requested that the Commission's report include an overview of Cuba's imports of goods since 2005, identifying major supplying countries, products, and market segments. It also asked for a description of how U.S. restrictions on trade affect Cuban imports, and estimates of U.S. exports of goods to Cuba in the event that restrictions on trade and travel are lifted. This chapter provides this information for the food and agricultural sectors.⁵⁷⁰

The U.S. restrictions have had a negative impact on agricultural exporters' ability to compete in the Cuban market, and many U.S. agricultural interests view Cuba as providing opportunities to expand their exports if restrictions on trade and travel are removed. This chapter highlights recent trends in Cuban imports of agricultural products from the United States and competitor countries that appear to be strongly influenced by U.S.-Cuba trade relations. Sectors where there are prospects

⁵⁶⁸ WFP, *Cuba Overview* (accessed May 28, 2015). Cuban government officials reported that 70 percent of Cuban food needs are imported. Cuban government official, interview by USITC staff, Havana, June 15, 2015. Witness testimony stated that imports account for a large portion of Cuban food consumption, with estimates ranging from 60 percent to higher than 80 percent. USITC, hearing transcript, June 2, 2015, 44 (testimony of Devry Boughner Vorwerk, Cargill); 54 (testimony of Marco Palma, Texas A&M University); 58 (testimony of William Messina, University of Florida).

⁵⁶⁹ See chapter 3 for a discussion of the effects of U.S. restrictions on U.S. agricultural exports.

⁵⁷⁰ This chapter provides a qualitative analysis of the potential for U.S. exports to Cuba in the event that U.S. restrictions are removed, while chapter 8 provides the Commission's quantitative analysis. These two chapters complement each other, as model results reported in chapter 8 are relatively similar to views of industry representatives and academics reported in this chapter.

for expanded U.S. exports to Cuba are identified, along with estimates from both academic and industry sources of what exports might be if restrictions on trade and travel are removed.

Table 5.1: Cuban imports of agricultural products from the world, 2005–14^a (million dollars)

	2005	2006	2007	2008	2009	2010	2011 ^b	2012 ^b	2013 ^b	2014 ^b
Wheat	94.3	70.9	122.8	249.9	167.6	195.3	269.3	238.3	249.5	235.0
Corn	64.2	57.3	110.0	190.1	123.8	135.8	209.1	226.8	245.9	204.1
Rice	227.9	182.3	233.9	477.4	193.1	215.8	283.2	158.1	190.5	173.6
Wheat flour	37.9	47.8	65.2	65.9	29.2	16.4	4.8	(^c)	(^c)	5.7
Soybeans	40.5	31.9	40.6	66.7	61.6	41.9	71.8	72.6	79.2	54.5
Soybean meal	35.9	38.3	63.1	93.0	100.4	98.0	122.5	116.0	104.8	182.3
Soybean oil	60.7	29.1	60.1	107.7	53.0	96.8	101.5	100.3	89.1	86.6
Other animal feed	14.3	21.3	40.8	68.4	44.2	60.5	56.9	75.0	105.2	96.8
Pulses	62.8	81.7	73.3	106.3	75.8	39.6	51.1	48.3	67.4	68.5
Poultry	85.9	68.6	103.0	169.1	174.7	139.5	138.4	209.8	206.4	202.2
Pork	25.7	33.4	23.0	27.5	23.1	28.2	19.0	16.1	16.3	14.3
Beef	19.2	42.3	20.6	30.0	13.8	24.7	12.0	9.8	13.8	14.1
Processed meats	10.1	14.1	19.5	24.4	31.1	39.1	32.8	19.3	23.0	19.9
Eggs	0.6	0.4	0.3	2.4	2.1	2.0	2.5	3.9	4.4	4.4
Milk powder	157.7	130.0	171.9	218.4	30.5	117.6	178.3	146.6	193.2	221.3
Other dairy	18.3	18.5	35.3	21.0	16.1	26.8	25.0	20.7	25.4	26.1
Processed foods	51.1	60.6	70.2	88.3	52.4	75.7	58.8	66.5	87.9	92.0
Alcoholic beverages	13.8	14.8	20.5	24.5	13.8	20.4	17.8	17.7	27.9	34.3
Seafood	27.2	26.9	37.1	38.2	33.6	21.0	24.6	26.6	27.5	28.4
Wood and paper	50.7	61.7	75.8	96.5	47.3	63.1	74.0	88.7	88.2	50.7
Other	151.6	150.7	190.6	201.1	131.5	155.9	148.1	170.4	150.8	163.1
Total	1,250.4	1,182.6	1,577.6	2,366.8	1,418.7	1,614.3	1,901.4	1,831.4	1,996.5	1,978.2

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015); USITC estimates.

^a See appendix H for a list of the HS subheadings used in the product groupings in the table.

^b During 2011–14, values include USITC estimates of the value of Cuban rice imports from Vietnam.

^c Less than \$50,000.

Box 5.1: Cuba's Official Food Distribution System

State sector distribution

Nearly all agricultural imports and most domestically produced foods are distributed through the state sector in Cuba. A significant share of Cuba's food imports and domestic production are sold to Cubans at subsidized prices through the state-run ration stores. These stores are stocked by the Ministry of Agriculture's food collection and distribution agency, Acopio. Domestic production within state-mandated quota levels must be sold to Acopio. The Cuban food importing agency, Alimport, is also involved in providing supplies for the ration program, sourcing and importing whatever cannot be produced domestically. Purchases of food for the program reportedly cost the Cuban government an estimated \$1 billion each year.^a

Ration booklets (*libretas*), which can be used only in the ration stores, are available to every Cuban. Food products in ration stores are sold at about 12 percent of the market value.^b Products available through the state ration system are reportedly sufficient for about 10 days' consumption.^c Food items covered by the booklet have changed over time as available supplies of particular food items have fluctuated. As of 2012,

ration stores sold a monthly allotment of chicken, ground meat (or a soy substitute), sausage, eggs, rice and grain products, sugar, jam, vegetable oil, coffee, and either beans or corn.^d

Since the ration program only supplies less than half of the food Cubans consume, most Cubans must buy food through other state or non-state outlets at high prices; such purchases consume up to 80 percent of the income of the average Cuban working in the state sector.^e To help meet this demand for additional food, the state also operates non-ration stores. Some of these stores accept only the regular Cuban pesos in which workers are paid, while others accept only convertible pesos (CUCs). Cubans typically acquire CUCs from remittances from family members in the United States and elsewhere overseas, from tips earned working in the tourist sectors, or from black market activities. The CUC stores are an important source of government revenue because the Cuban government applies a markup of approximately 200 percent to the prices in these stores.^f

Non-state food distribution

The non-state sector plays an increasingly important role in improving Cubans' access to food beyond what is available through state channels, and it provides an outlet for farmers to sell surplus food production that is not purchased by the state. Non-state food outlets include urban and organic gardens that sell produce, agricultural markets, and small stores operated by agricultural cooperatives. Food sold through these outlets is chiefly sourced from domestic production in excess of state quotas, barring certain products that are reserved for state distribution.^g The Cuban government first permitted food sales through non-state outlets in 1993 in an effort to improve access to food and discourage black market activity.

Sources: Alvarez, "Cuba's Agricultural Markets," 2004; Alvarez, "Overview of Cuba's Food Rationing System," July 2004; USDA, FAS, OGA, *Cuba's Food and Agriculture Situation Report*, 2008; Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013; Tamayo, "Cuba's Food Ration Stores Mark 50th Anniversary," July 11, 2013; *Havana Times*, "Raciones para Habaneros" [Rations for Havana residents], February 24, 2015; CubaNotes.com, "If You Live in Havana," March 10, 2015; Rios, "Cubans See Their Ration Cards Get Thinner," September 2, 2010; Cuban government and industry officials, interviews by USITC staff, Havana, June 13–18, 2015; USITC, hearing transcript, June 2, 2015, 71 (testimony of William Messina, University of Florida).

^a Tamayo, "Cuba's Food Ration Stores Mark 50th Anniversary," July 11, 2013.

^b Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 192.

^c *Ibid.*, 208.

^d *Ibid.*, 130.

^e Siegelbaum, "Cuba Economic Reforms," December 31, 2013.

^f Harris, "Rice Marketing with a Cuban Flavor," August 13, 2015.

^g These include bovine, buffalo, or equine meat; fresh milk; coffee; tobacco; cocoa and derivatives; or rice.

Cuban Import Overview⁵⁷¹

Cuban Imports from the World

During 2005–14, Cuba’s imports of agricultural, fish, and forestry products fluctuated upward from \$1.2 billion to \$2.0 billion, an average annual increase of about 5 percent.⁵⁷² Most of the increase occurred during 2006–08, when imports doubled to peak at \$2.4 billion in 2008.⁵⁷³ Imports fell sharply in 2009 to \$1.4 billion, and then grew steadily each year through 2013 to reach close to \$2 billion before declining slightly in 2014. However, imports of certain product categories rose much faster than others. For example, between 2005 and 2014, the value of imported animal feed, including corn, soybean meal, and distillers’ dry grain, increased by 17 percent annually, reflecting the steady growth of Cuba’s livestock production over the period. Imports of processed foods and alcoholic beverages also grew significantly during 2005–14, in response to the rapid development of Cuba’s tourism sector over the past decade.⁵⁷⁴

During 2005–14, Cuba’s agricultural imports became increasingly concentrated among a few major suppliers (table 5.2). In 2014, the top five suppliers—the EU (particularly France, Spain, and Germany), Brazil, the United States, Argentina, and Canada—accounted for almost 80 percent of Cuba’s agricultural imports, compared with 63 percent in 2005. The United States was the largest supplier during most of the period (2005 through 2010 and again in 2012), but was the second- or third-largest supplier in 2011, 2013, and 2014. Cuban imports from the United States were at their highest level of the period in 2008 and at their lowest level in 2014. Over this time period, Brazil and Argentina emerged as major sources, each with annual growth in sales to Cuba of about 15 percent. Cuban imports of agricultural products increased almost every year of the period, and the EU was the leading supplier of agricultural imports in both 2013 and 2014. Most of the growth in imports from these countries was at the expense of the United States. In 2014, Cuba imported \$285 million in agricultural products from the United States, as compared with \$701 million in 2008, the highest level of the period (table 5.2).

⁵⁷¹ Unless otherwise noted, Cuban import data in this chapter are based on Cuba’s trading partners’ exports to Cuba, as reported by GTIS Global Trade Atlas, and USITC estimates. See chapter 1, box 1.1 for further explanation of data sources and other related information.

⁵⁷² “Agricultural, fish, and forestry products” refers to products eligible under the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA). A list of such products is available at <http://www.fas.usda.gov/sites/default/files/2014-04/schedulebeligiblecommodities06-28-06.pdf> (accessed October 2, 2015). For purposes of this chapter, the term “agricultural products” is used interchangeably with the term “agricultural, fish, and forestry products.”

⁵⁷³ The value of food imports hit a record high in 2008 in response to two factors. One was lower domestic production in the wake of a series of hurricanes that caused extensive damage to Cuba’s domestic production and food stocks that year. The other was generally higher global prices for many of Cuba’s agricultural imports, including wheat, rice, and soybeans. Messina, “The 2008 Hurricane Season and Its Impact,” 2009, 421–26.

⁵⁷⁴ In 2014, 3.0 million tourists visited Cuba, compared with 2.3 million in 2005. ONEI, *Turismo: Llegada de Visitantes Internacionales* [Tourism: international visitor arrivals], December 2015.

Table 5.2: Cuban imports of agricultural products by country, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
EU	174.8	173.3	193.9	209.4	171.3	272.3	367.2	389.8	408.2	468.9
France	31.4	5.6	12.2	61.5	38.2	89.8	204.7	176.7	189.6	111.0
Spain	50.4	51.9	73.8	69.0	48.0	69.7	70.7	83.2	94.4	100.5
Germany	10.5	17.3	19.9	13.7	34.7	45.3	22.2	17.5	17.5	66.2
Brazil	110.3	149.5	184.5	346.7	172.2	298.5	396.7	392.9	347.3	349.3
United States	352.2	330.0	439.5	701.0	524.5	348.8	352.6	456.1	347.7	285.0
Argentina	72.3	72.1	71.4	49.2	28.7	69.2	85.2	88.7	275.5	261.5
Canada	79.3	67.1	97.9	180.6	80.7	106.9	118.4	130.2	170.5	169.5
Vietnam ^a	195.8	131.2	187.1	424.8	200.9	216.8	252.8	92.4	113.4	100.3
Mexico	38.5	24.4	44.4	82.7	42.8	61.5	47.4	64.1	72.7	81.2
New Zealand	39.7	43.3	82.5	87.4	2.3	37.1	56.3	15.7	49.7	56.6
All other	187.4	191.7	276.5	285.0	195.4	203.2	224.8	201.5	211.5	205.9
Total	1,250.4	1,182.6	1,577.6	2,366.8	1,418.7	1,614.3	1,901.4	1,831.4	1,996.5	1,978.2

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015); USITC estimates.

^a For 2011–14, imports from Vietnam are calculated by USITC based on values from the USDA PSD database and Vietnamese monthly prices for 5 percent broken rice data available in GTIS, Global Trade Atlas (accessed June 4, 2015) and USDA, PSD database (accessed June 4, 2015).

Cuban Imports from the United States

In supplying the Cuban market, several factors favor U.S. agricultural products over those of competitor countries. U.S. products enjoy a cost advantage because of the production and marketing efficiency of U.S. exporters and the proximity of U.S. ports, resulting in lower transportation costs and faster delivery times (especially important for perishable commodities).⁵⁷⁵ U.S. suppliers are also able to provide deliveries of smaller shipments and serve less accessible Cuban ports using smaller ships, as compared with suppliers from countries farther from Cuba.⁵⁷⁶ In addition, the U.S. suppliers can provide these shipments on a “just-in-time” basis; this offers another advantage, given Cuba’s lack of domestic storage capacity and poor internal rail and road networks (see “Cuban Infrastructure” section in chapter 4).⁵⁷⁷

At the same time, U.S. suppliers face a number of challenges stemming from the U.S. restrictions on trade and travel with Cuba, including their inability to offer credit and to travel to Cuba to facilitate transactions.⁵⁷⁸ In addition, Cuban policy requires that all agricultural imports from the United States go through Alimport, while exporters from competitor countries can sell to other entities (see “State Trading” in chapter 4). As Alimport is the sole Cuban importer of U.S. agricultural products, its actions have a major impact on the value and composition of U.S. agricultural exports to Cuba. Alimport reportedly bases its purchasing decisions in part on a desire

⁵⁷⁵ Messina, “Cuba’s Agricultural and Food Sectors,” June 22, 2015; USITC, hearing transcript, June 2, 2015, 15 (testimony of Jay Waldvogel, Dairy Farmers of America); 25 (testimony of Bill Christ, U.S. Grains Council); 36 (testimony of Devry Boughner Vorwerk, Cargill). The quantitative analysis in chapter 8 uses an enhanced gravity model that incorporates impediments to trade, such as distance between countries.

⁵⁷⁶ Harris, “Rice Marketing with a Cuban Flavor,” August 13, 2015.

⁵⁷⁷ USITC, *U.S. Agricultural Sales to Cuba*, July 2007, 2-5; USITC, hearing transcript, June 2, 2015, 89–90 (testimony of Terry Harris, Riceland Foods).

⁵⁷⁸ See chapter 3 for a description of U.S. restrictions and their effect on agricultural exporters.

to diversify its supplier base to avoid overdependence on one country, especially on the United States.⁵⁷⁹

The trend in Cuban imports of agricultural products from the United States can be split into two fairly distinct periods: pre- and post-2008. Following the enactment of TSRA in 2000, U.S. agricultural exports grew from just \$4 million in 2001 to \$701 million in 2008, and accounted for 30 percent of all Cuban imports of agricultural products in 2008 (table 5.2).⁵⁸⁰ During 2001 to 2008, the United States exported a broad range of products, including wheat, rice, soybeans, animal feed, dry beans, poultry, pork, and milk powders (table 5.3). But after 2008, U.S. agricultural exports declined and became more concentrated in a few major products.⁵⁸¹ By 2014, the top three agricultural product groups—poultry, soybean meal, and soybeans—accounted for 86 percent of U.S. agricultural exports to Cuba, compared with an average of 35 percent between 2005 and 2008. Meanwhile, U.S. exports of other products dropped sharply or stopped altogether, including soybean oil, wheat, rice, dried beans, and milk powders.

Table 5.3: Cuban imports of agricultural products from the United States, 2005–15^a (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Wheat	50.7	44.1	70.2	135.2	72.9	17.8	1.7	0.0	0.0	0.0	0.0
Corn	54.9	40.1	109.0	189.9	119.1	86.1	122.8	133.5	56.9	28.2	4.9
Rice	39.2	39.4	24.0	6.9	0.0	0.0	0.0	^(b)	0.0	0.0	0.0
Soybeans	32.7	31.7	40.5	66.6	61.5	41.9	58.7	62.3	39.4	30.6	10.3
Soybean meal	18.5	34.1	53.4	46.2	49.2	12.2	9.9	41.4	69.3	67.3	55.1
Soybean oil	25.7	20.9	20.1	21.9	22.3	27.0	0.0	0.0	0.0	0.0	0.0
Other animal feed	5.3	8.4	20.3	35.2	26.0	23.2	25.9	37.9	25.7	9.4	0.0
Pulses	11.7	22.6	2.0	0.1	4.3	5.6	7.7	0.0	0.0	0.0	0.0
Poultry	58.3	44.7	77.9	136.0	141.2	103.0	97.1	158.0	144.5	147.7	77.8
Pork	7.5	14.1	6.0	12.7	10.7	15.3	9.2	9.2	8.8	1.3	0.0
Beef	0.0	0.1	0.7	0.5	0.4	0.6	0.9	0.2	0.2	0.0	0.0
Milk powder	29.7	12.6	0.0	13.3	^(b)	0.5	0.1	0.0	0.0	0.0	0.0
Processed foods	2.3	1.1	1.1	2.2	2.9	2.7	3.0	2.6	0.8	0.1	0.0
Wood and paper	6.4	9.7	9.0	16.3	1.7	1.0	1.5	0.0	0.0	0.0	0.0
Other	9.2	6.4	5.3	18.0	12.3	12.0	14.1	10.9	1.8	0.3	0.4
Total	352.2	330.0	439.5	701.0	524.5	348.8	352.6	456.1	347.7	285.0	148.5

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015); USITC DataWeb/USDOC (accessed February 8, 2016).

^a See appendix H for a list of the HS subheadings used in the product groupings in the table.

^b Less than \$50,000.

Several factors contributed to the sharp drop in U.S. exports to Cuba since 2008, some restriction-related and others not. As noted in chapter 4, several observers state that Alimport reduced its purchases of U.S. agricultural goods after 2008 for political reasons. Previously, the Cuban government had entered into contracts with U.S. food companies with the expectation that they would lobby the U.S. government to bring about changes in the laws and regulations on trade with

⁵⁷⁹ U.S. academic, telephone interview by USITC staff, October 19, 2015.

⁵⁸⁰ Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 7.

⁵⁸¹ The small rise in 2010 has been associated with the Pope's visit and is said to help show the importance of tourism to Cuba's purchases of agricultural products from overseas markets. Messina, written testimony to the USITC, June 2, 2015, 4.

Cuba.⁵⁸² However, as it became clear to Alimport that this strategy had not led Congress to remove U.S. restrictions, it decided to reduce U.S. food purchases.⁵⁸³ In addition, the 2009–14 drop in U.S. agricultural exports to Cuba is associated with the global recession beginning in 2008 that depressed remittances and tourism to Cuba, as well as the price of nickel, a major Cuban export.⁵⁸⁴ These factors meant that the Cuban government had less cash available and became more dependent on financing for its purchases of agricultural products—financing that was not available from the United States. The strong U.S. dollar during this period also may have weakened the competitiveness of U.S. exports relative to those supplied by other countries.⁵⁸⁵

In 2015, U.S. agricultural exports to Cuba continued to decline. The drop in poultry exports, from \$147.7 million to \$77.8 million, was driven in part by the restrictions the Cuban government put in place due to an avian flu outbreak.⁵⁸⁶ However, those restrictions were only in effect for two months, and the decline was not limited to poultry, as exports of soybeans and grains to Cuba also fell sharply. As noted in chapters 2 and 4, it is likely that other factors, such as the Cuban government’s desire to press for an end to the U.S. restrictions by purchasing from suppliers other than the United States, contributed to the decline in 2015. Falling prices also played a role in the lower export values in 2015; the average unit prices for U.S. exports of poultry, soybeans, and corn fell by between 14 and 22 percent compared to 2014.⁵⁸⁷ Cuban demand for poultry that was not met by the United States in 2015 was primarily filled by an increase in imports from Brazil, while demand for corn was largely met by increased imports from Argentina.⁵⁸⁸ The decline in U.S. soybean exports to Cuba was due to lower overall Cuban soybean consumption, as the volume of total Cuban soybean imports fell 56 percent.⁵⁸⁹

⁵⁸² For example, the Sysco Corporation stated that Alimport urged them to advocate for an end to the embargo in exchange for its purchases of U.S. goods. Echevarría, “Business Veteran Changes Direction,” June 2012, 8; Rosson, statement to the Senate Committee on Agriculture, Nutrition, and Forestry, April 21, 2015; U.S. academic, telephone interview by USITC staff, March 10, 2015.

⁵⁸³ Palma, written testimony to the USITC, June 2, 2015, 4; U.S.-Cuba Trade and Economic Council, “Economic Eye on Cuba,” January 8, 2015, 1.

⁵⁸⁴ Rosson, statement to the Senate Committee on Agriculture, Nutrition, and Forestry, April 21, 2015.

⁵⁸⁵ USITC, hearing transcript, June 2, 2015, 54 (testimony of Marco Palma, Texas A&M University).

⁵⁸⁶ See “Poultry” below.

⁵⁸⁷ GTIS, Global Trade Atlas database (accessed February 18, 2016).

⁵⁸⁸ Ibid.; USDA, PSD Online (accessed February 16, 2016); INDEC, Sistema de consulta de comercio exterior de bienes [International trade in goods database] (accessed February 16, 2016).

⁵⁸⁹ USDA, PSD Online (accessed February 19, 2016).

Summary of Effects of the Removal of U.S. Restrictions

Overall Effects

Cuba's relatively small population and low per capita income mean that even over the long term, Cuba will remain a small market for U.S. agricultural products.⁵⁹⁰ However, for certain agricultural commodities and products, the Cuban market has the potential to occupy a significantly larger share of U.S. export sales than it now does. The United States is a major producer and a competitive exporter of a number of commodities—including grains, meat, soybeans, and soybean products—for which Cuba relies heavily on imports to supply its needs. Advantages of low delivery cost and proximity enhance U.S. producers' ability to supply the Cuban market, suggesting that U.S. suppliers likely would be highly price competitive in certain agricultural imports to Cuba if the financing and travel restrictions were lifted.⁵⁹¹

According to industry representatives in most agricultural sectors, being able to offer Cuba credit to purchase U.S. products and eliminating the third-party bank financing requirement would provide the biggest boosts to exports if trade relations were normalized.⁵⁹² Representatives from the wheat, corn, soybean, and dry bean industries in particular highlighted these financial restrictions as the most significant obstacles to their ability to compete in the Cuban market. Moreover, some note that removing travel restrictions would also increase demand for U.S. products, not only from U.S. tourists consuming such items directly, but also by increasing Cubans' purchasing power through higher tourism revenues.⁵⁹³ Several sources mentioned that lifting travel restrictions would further increase U.S. agricultural exports to Cuba by allowing Cubans to inspect U.S. exporters' facilities and by facilitating business relationships between the two countries.⁵⁹⁴

Several estimates have been made of U.S. agricultural sales to Cuba absent the restrictions. John Block, Secretary of Agriculture during the Reagan administration, has stated that if the restrictions were removed U.S. agricultural exports to Cuba would exceed \$1 billion,⁵⁹⁵ equivalent to about half of all Cuban agricultural imports in 2014. Researchers at Texas A&M University estimated U.S. agricultural exports to Cuba could reach \$0.9 billion annually within five years of removing restrictions,⁵⁹⁶ assuming a more open Cuban economy, less regulation by both governments, and

⁵⁹⁰ Even in 2008, the year when U.S. agricultural exports to Cuba peaked, they represented less than one-half of 1 percent of all U.S. agricultural exports. GTIS, Global Trade Atlas database (accessed May 28, 2015).

⁵⁹¹ U.S. Grains Council, written testimony to the USITC, June 2, 2015, 6.

⁵⁹² Cargill, written testimony to the USITC, June 2, 2015, 3–5; Riceland Foods, written testimony to the USITC, June 2, 2015; U.S. Grains Council, written testimony to the USITC, June 2, 2015, 5; Keesling, statement to the Senate Committee on Agriculture, Nutrition, and Forestry, April 21, 2015.

⁵⁹³ Cargill, written testimony to the USITC, June 2, 2015, 5.

⁵⁹⁴ Ibid., 4–5; Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

⁵⁹⁵ Vinik, "Trade with Cuba? We Already Do," July 2, 2015.

⁵⁹⁶ Rosson, Adcock, and Manthei, "Economic Impacts," March 2010, 2.

strong tourism and remittances.⁵⁹⁷ For certain commodities, including corn, rice, and wheat, industry representatives expect that the majority of Cuban imports will come from U.S. suppliers if restrictions are removed.⁵⁹⁸

Even if U.S. restrictions were removed, future U.S. agricultural sales to Cuba will depend on several factors. Key among these are the purchasing power of the Cuban economy and the extent to which Cuba succeeds in its policy of import substitution through boosting domestic agricultural production (box 5.2).⁵⁹⁹ Also unknown is how the U.S. relationship with Alimport would change if restrictions were removed. U.S. agricultural exports depend to some degree on Alimport's interest in buying from the United States and the terms Alimport sets out in its contracts.⁶⁰⁰ Alimport's decisions appear to be driven by a number of economic and political factors, many of which are independent of changes in U.S.-Cuba policy.⁶⁰¹ Representatives from the U.S. corn industry, for example, reported that their Cuban sales were limited by the fact that Alimport generally issues tenders twice a year and inclines to tender only to companies with which it has an established relationship.⁶⁰² It is also unknown whether lifting restrictions would change the Cuban government's requirement that imports from the United States be handled exclusively through Alimport, or whether the government would allow other Cuban importing companies to purchase agricultural products from the United States.

Box 5.2: Cuban Agricultural Policy and Domestic Production

Cuba's domestic agricultural production affects demand for many agricultural imports, with higher Cuban production potentially resulting in lower imports. This has become a particularly important factor in recent years, as Cuba has pursued a policy of import-substituting agricultural production to improve performance and reduce reliance on products from abroad, including from the United States.

Policy background

President Raúl Castro has expressed concern that the agricultural sector operates at just 60 percent of its 1989 productive capacity and suffers from a lack of investment. To address these concerns, the government introduced land reforms in 2008 that aimed to increase domestic production and productivity by leasing idle state-owned land to individual farmers, cooperatives, or state farming entities. Further reforms were introduced in 2011, in a more comprehensive package known as the *lineamientos* (guidelines). The *lineamientos* aim to improve virtually every aspect of the agricultural economy and to boost import-substituting production. For example, they suggest measures to increase credit availability, allow agricultural

⁵⁹⁷ In chapter 8, the Commission estimates that U.S. agricultural exports to Cuba in selected sectors would reach \$797 million with the removal of U.S. restrictions, more than double current levels. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁵⁹⁸ Some observers see excessive optimism in the expectations about potential opportunities that the opening of Cuban market would provide to U.S. industries. USITC, hearing transcript, June 2, 2015, 306 (testimony of Robert Vastine, Georgetown University).

⁵⁹⁹ A number of limiting factors affect Cuban agricultural production, including a lack of inputs needed for production growth and lack of investment in the agricultural sector. García Álvarez and Cruz, "Dynamics of the Agricultural Sector," 2015, 166.

⁶⁰⁰ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

⁶⁰¹ Ibid.

⁶⁰² USITC, hearing transcript, June 2, 2015, 24–25 (testimony of Bill Christ, U.S. Grains Council).

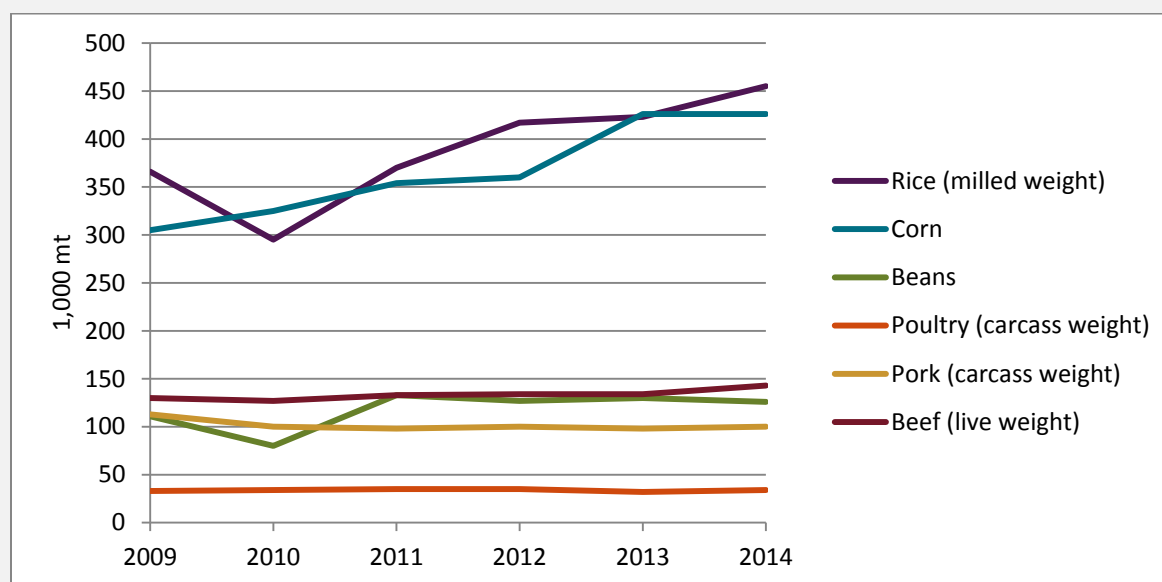
cooperatives to market their own products, and attract foreign investment. Reportedly, implementation of most of the measures is slow, with some government agencies reluctant to relinquish the control they have historically had over agricultural matters such as crop selection.

In addition, Cuba has reduced restrictions and provided incentives for foreign investment in the agriculture and food processing sectors in recent years, partly as another way of reducing reliance on imports. Foreign investment as a strategy for increasing import substitution was mentioned in the *lineamientos*, and in 2015, the Ministry of Foreign Trade and Investment published over 326 sector-specific projects in its *Portfolio of Opportunities for Foreign Investment*, with a particular focus on foreign investment aimed at reducing imports. Cuba is seeking foreign investors for 40 agro-food ventures, including investment in soybean processing and in pork, poultry, and rice production. The project guidelines stipulate that some of these proposed projects be located in the new port of Mariel, as part of the Cuban government’s focus on developing the area.

Production trends since 2008 and effect on import volumes

Cuba does not rely heavily on imports for all types of food—domestic producers supply almost all of its fruits and vegetables, most of its pork and eggs, and about half of its beans. Field crops, poultry meat, and dairy are the products for which Cuba relies most heavily on imports and thus are the focus of import substitution policies. Rice, for example, is a staple of the Cuban diet, and the global rice crisis of 2007–08 strengthened the Cuban government’s resolve to reduce its reliance on rice imports. As a result, the Cuban government put specific assistance programs in place for grain producers, and land devoted to rice production has increased substantially. Over the past five years, rice area has averaged 203,000 hectares (ha) per year, up from an average of 135,000 ha during 2005–08 (before the land reforms).^a This increase is also partially the result of assistance the Cubans have received from Brazil, Japan, and Vietnam to improve rice production. Similarly, corn area has averaged 180,000 ha, up from an average of 146,000 ha in 2005–08.^b The increased land devoted to grain has raised production volumes, despite consistently low yields (see figure below).

Cuban production of selected agricultural products, 2009–14



Source: USDA, PSD database (accessed September 24, 2015); ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014]; ONEI, *Anuario Estadístico de Cuba 2013* [Statistical Yearbook of Cuba 2013].

Note: See appendix [table J.7](#).

Because most reforms are still being implemented, their effects on import levels are unclear. But as of 2014 results were mixed, with rice and pork imports down and corn and poultry imports up compared to before the 2008 reforms began. Not all declines in imports are due to import substitution; thus, an alternative way to assess the success of import substitution policy is through the share of domestic consumption supplied by domestic production. Rice and pork are the commodities for which Cuban production has increased as a share of consumption in recent years—from 30 percent in crop year (CY) 2007/08 to 50 percent in CY 2014/15 for rice, and from 91 to 95 percent over the same years for pork.^c

Sources: Nova González, “Cuban Agriculture and the Current Economic Transformation,” April 1, 2012; García Álvarez and Nova González, “Food Production and Import Substitution,” 2014; Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015); Werner, “Commitments on the Record,” May 2015; USDA, PSD database (accessed September 24, 2015); U.S. academic, telephone interview by USITC staff, October 19, 2015.

^a USDA, PSD database (accessed September 24, 2015).

^b Ibid.

^c Ibid.

U.S. Agricultural Exports to the Dominican Republic

In analyzing the potential for U.S. agricultural exports to Cuba under normalized trade relations, the Commission considered current trends in U.S. agricultural exports to the Dominican Republic, a country with which the United States has long had normal trade relations, and which is similar in several respects to Cuba.⁶⁰³ As noted in chapter 2, Cuba and the Dominican Republic are similar in climate, population, and geographic location (including proximity to the United States), and both rely on imports for a large part of the food they consume. During 2012–14, the Dominican Republic imported a broad range of agricultural goods from the United States. With an average annual value of \$1.1 billion, these goods accounted for about 1 percent of total U.S. agricultural product exports.⁶⁰⁴ The United States was a major supplier of the Dominican Republic’s agricultural imports during this period, with at least an 80 percent market share in beef, dried beans, pork, poultry meat, rice, soybean meal, and wheat (table 5.4). The United States had a higher market share for these products in the Dominican Republic than in the Caribbean as a whole. Additionally, U.S. agricultural exports to the Dominican Republic were more diverse than for the Caribbean as a whole. The United States also has a free trade agreement (FTA) with the Dominican Republic, but the U.S. share of Dominican Republic imports was similarly high before the FTA entered into force.⁶⁰⁵

⁶⁰³ USITC, hearing transcript, June 2, 2015, 22 (testimony of Bill Christ, U.S. Grains Council); Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 19.

⁶⁰⁴ Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 19.

⁶⁰⁵ U.S. market shares were about as high for most of these commodities in 2005, the last year before the FTA entered into force: above 95 percent for beef, corn, poultry meat, and wheat; at least 80 percent for pork, rice, soybeans, and soybean meal; and 56 percent for dried beans, 37 percent for soybean oil, and 6 percent for milk powder (the EU had a 76 percent share). This is true even though applied most-favored-nation (MFN) duties for the Dominican Republic in 2005 were higher than 2014 Cuban applied MFN duties for beef, pork, most poultry meats, pulses, and rice. WTO, 2005 Applied Dominican Republic Tariff Rates (accessed July 6, 2015).

Table 5.4: Dominican Republic (DR), Cuban, and Caribbean agricultural imports: 2012–14 average value and U.S. share

	Imports from the United States		U.S. Share of Imports		
	Million dollars		Percent		
	DR	Cuba	DR	Caribbean	Cuba
Beef	30.4	0.1	99.3	39.5	1.1
Corn	92.2	72.9	36.8	40.6	32.3
Dried beans	19.2	0.0	83.8	29.3	0.0
Milk powder	30.9	0.0	26.4	8.5	0.0
Pork	38.7	6.5	95.0	58.4	41.5
Poultry meat	45.9	150.0	98.7	73.5	72.8
Rice	8.5	0.0	97.8	51.5	0.0
Soybeans	0.1	44.1	61.7	68.6	64.1
Soybean meal	106.9	59.4	88.8	74.7	44.2
Soybean oil	63.5	0.0	45.8	35.8	0.0
Wheat	160.8	0.0	94.5	51.7	0.0
All agricultural products	1,473.0	362.9	48.8	37.3	18.8

Source: GTIS Global Trade Atlas (accessed December 9, 2015).

U.S. State-level Effects

In reviewing the literature, the Commission found only one quantitative assessment of the possible effects on specific U.S. states of ending U.S. restrictions on export financing and travel to Cuba. Trade impacts for 13 states were reported in a 2010 study by researchers at Texas A&M University, with estimates based on state shares of U.S. production for specific products and applied to estimates of increases in national exports (table 5.5).⁶⁰⁶ Of the 13 states for which estimates were given, California and Arkansas had the greatest export gains, mostly from increased sales of rice, wheat, and dairy products.

The state-level gains reported by the Texas A&M study are lower than some estimates provided by industry groups and elected officials. For example, Senator Amy Klobuchar (D-MN)—reporting figures from the Minnesota Department of Agriculture—estimated that the December 2014 changes to U.S.-Cuba policy alone would result in an additional \$20 million in exports from Minnesota to Cuba.⁶⁰⁷ This is considerably higher than the \$10 million suggested by the Texas A&M study. Additional information, including information on effects for states not covered by the Texas A&M study, are included on a sector-by-sector basis in the sections below.

⁶⁰⁶ The national trade impact estimates that this report's state-level estimates are based on appear in table 2 of Rosson, "Estimated Economic Impacts," March 11, 2010. Rosson's paper was prepared for the House Committee on Agriculture (U.S. House of Representatives) in relation to the public hearing on H.R. 4645, the Travel Restriction Reform and Export Enhancement Act. The paper assumed that increases in U.S. exports to Cuba are net increases to total U.S. exports and that food and beverage consumption and imports from Cuba's tourism industry would follow a similar pattern to other Caribbean countries. The estimates were based on results from the USITC's July 2007 report, *U.S. Agricultural Sales to Cuba: Certain Economic Effects of U.S. Restrictions*. Rosson, "Estimated Economic Impacts," March 11, 2010, 1.

⁶⁰⁷ USITC, hearing transcript, June 2, 2015, 40 (testimony of Senator Amy Klobuchar, D-MN).

Table 5.5: Estimated effect on exports of eliminating U.S. export financing and travel restrictions to Cuba on agricultural exports, by state, change from base year 2009 (thousand dollars)

	Grains (corn, wheat, rice)	Dry milk and other dairy	Poultry meats	Beef, pork and products	Soy complex	All other	Total
Arkansas	29,757	(^a)	3,555	(^a)	338	2,292	35,942
California	20,462	10,216	1,141	(^a)	(^a)	24,924	56,742
Illinois	3,223	256	(^a)	629	1,169	1,277	6,555
Louisiana	8,648	(^a)	(^a)	(^a)	86	1,968	10,702
Minnesota	2,895	2,329	919	1,081	722	2,068	10,014
Missouri	5,414	(^a)	431	388	523	1,657	8,413
Nebraska	2,715	(^a)	131	2,415	622	1,100	6,982
New York	458	4,058	367	(^a)	(^a)	1,590	6,472
North Carolina	872	(^a)	3,500	1,085	(^a)	3,044	8,500
Oklahoma	2,148	(^a)	658	522	(^a)	807	4,136
Texas ^b	5,344	(^a)	1,859	2,346	(^a)	8,800	18,349
Virginia	505	(^a)	910	(^a)	(^a)	1,805	3,220
Wisconsin	816	11,578	815	249	(^a)	2,085	15,544
Total (13 states)	83,255	28,438	14,285	8,716	3,459	53,418	191,570

Source: Rosson, Adcock, and Manthei, "Economic Impacts," March 2010.

Notes: Product groups may not include all products listed. E.g., "Beef, pork and products" may contain only pork products, and "Grains (corn, wheat, rice)" may contain only one or two of the grains listed.

^a Only the top product categories for each state were available. Any export impact for this state under this product was included in "All other."

^b Estimates were updated for Texas in November 2015 and were as follows: grain \$6.1 million, dairy \$0.3 million, poultry meats \$10.0 million, beef and meat products \$0.5 million, and other (animal feeds, cotton, and potatoes) \$1.7 million. Adcock, Ribera, and Rosson, "The Potential for Texas Agricultural Exports to Cuba," November 2015, 6.

Sector Profiles

Overall U.S. agricultural exports to Cuba would likely see significant gains from lifting restrictions on trade. However, growth would not be uniform across all products. Some sectors may see immediate expansion, while other higher-value products would more likely see additional sales after tourism, incomes, and foreign capital in Cuba have grown. A number of agricultural products were profiled for this report, based both on export trends between 2005 and 2014 and on their potential for export growth. The products included wheat, rice, corn, soy complex (soybeans, soybean meal, soybean oil), dried beans, poultry meat, pork, beef, and dairy products. For each sector, the U.S. and Cuban industries are profiled in order to show import demand and U.S. competitiveness in the Cuban market. The profile then evaluates opportunities to expand exports if U.S. restrictions are lifted, highlighting in particular the opportunities and limitations unique to that sector.

Wheat

Following the removal of U.S. restrictions, U.S. wheat exports⁶⁰⁸ to Cuba would likely resume and could expand to previous levels after several years.⁶⁰⁹ U.S. exports could possibly exceed \$150 million annually,⁶¹⁰ particularly if the primary obstacle to U.S. wheat exports to Cuba—the inability to offer credit—is eliminated. However, U.S. exports could still be subject to purchasing decisions by Alimport.

U.S. Industry

In 2014, the United States was the world’s fifth-largest wheat-producing country, with production of 55 million metric tons (mt) valued at \$11.9 billion. This production level accounted for nearly 10 percent of global wheat production that year.⁶¹¹ In 2014, the top five wheat-producing states were Kansas, North Dakota, Montana, Washington, and South Dakota, which together contributed nearly one-half of domestic production.⁶¹² The U.S. wheat industry is highly export dependent, with half of production destined for export markets during 2005–14.⁶¹³ In 2014, U.S. exports of wheat were 25.6 million mt, valued at \$7.8 billion,⁶¹⁴ roughly 19 percent of global wheat exports by value. The United States ranked second in world wheat exports in 2014, closely following the EU, which had a 20 percent share. The competitiveness of the U.S. wheat industry in global markets is based on several factors, including low production costs and highly efficient transportation and handling systems. In 2014, the top export markets for U.S. wheat were Japan, Mexico, Brazil, the Philippines, and Nigeria, which together made up over half of exports.⁶¹⁵

Cuban Industry and Market

With a climate unsuited to wheat production, Cuba does not grow wheat commercially but imports it for its domestic flour milling industry (table 5.6).⁶¹⁶ In 2010, there were five flour mills owned and operated by the Cuban Ministry of Food, as well as one joint venture between the Cuban government and a Mexican company, which together produced 100,000 mt of flour.⁶¹⁷ Between crop year (CY) 2009/10 and CY 2013/14 per capita wheat consumption was fairly steady, averaging nearly 70 kg, after falling from a peak of nearly 80 kg in CY 2007/08 (table 5.6). Over 95 percent of

⁶⁰⁸ See appendix H for a complete list of the Harmonized System (HS) subheadings comprising this sector. The HS is an internationally standardized system of numbers used to classify traded products.

⁶⁰⁹ Industry representative, email message to USITC staff, October 13, 2015.

⁶¹⁰ National Association of Wheat Growers and U.S. Wheat Associates, written submission to the USITC, May 20, 2015, 5.

⁶¹¹ USDA, PSD Online (accessed April 16, 2015).

⁶¹² USDA, NASS, Annual Crop Production Survey database, accessed through QuickStats (accessed April 16, 2015).

⁶¹³ USDA, PSD Online (accessed April 16, 2015).

⁶¹⁴ GTIS, Global Trade Atlas database (accessed April 16, 2015).

⁶¹⁵ Ibid.

⁶¹⁶ USITC, *U.S. Agricultural Sales to Cuba*, July 2007, 4-7.

⁶¹⁷ Lyddon, “Focus on Cuba,” May 15, 2013, 2.

imports are non-durum wheat used mostly for bread, while the remainder is durum wheat used for pasta production.⁶¹⁸

Table 5.6: Cuba: Wheat production, consumption, and trade by crop year (1,000 mt)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Production	0	0	0	0	0	0	0	0	0	0
Imports	751	660	902	871	765	834	773	794	754	850
Consumption	751	660	902	871	765	834	772	789	753	849
Exports	0	0	0	0	0	0	1	5	1	1
Per capita consumption (kg)	66.5	58.4	79.8	77.1	67.8	73.9	68.5	70.0	66.8	75.4

Source: USDA, FAS, PSD Online (accessed August 26, 2015); World Bank, "Population," WDI database (accessed August 26, 2015).

Cuba is the largest wheat and wheat product importer in the Caribbean.⁶¹⁹ The EU (largely France) and Canada are the primary wheat suppliers (table 5.7), rather than the United States. According to wheat industry representatives, U.S. product is made uncompetitive by transaction requirements stemming from U.S. restrictions on trade (e.g., regulations requiring the use of a third-party, foreign bank) and shipping restrictions (e.g., restrictions that limit vessel trade flows in the Caribbean, which are estimated to nearly double freight rates).⁶²⁰ During 2005–09, Cuba was the 24th-largest market for U.S. wheat, with annual sales averaging about 300,000 mt (\$75 million). However, exports fell sharply in 2010, and no U.S. wheat has been shipped to Cuba since 2011. Industry sources reported that Cuba imported from countries other than the United States largely because of the inability of U.S. exporters to extend credit⁶²¹ and the decision by the Cuban government to abandon the policy of purchasing U.S. products to influence the U.S. Congress to lift U.S. restrictions.⁶²² By contrast, Canada reportedly extends Cuba credit to purchase up to 150,000 mt of its wheat each year.⁶²³

⁶¹⁸ GTIS, Global Trade Atlas database (accessed June 18, 2015).

⁶¹⁹ National Association of Wheat Growers and U.S. Wheat Associates, written submission to the USITC, May 20, 2015, 1.

⁶²⁰ *Ibid.*, 3–5.

⁶²¹ Cuban government official, interview by USITC staff, Havana, June 17, 2015.

⁶²² Lyddon, "Focus on Cuba," May 15, 2013, 2; industry representative, interview by USITC staff, Washington, DC, May 27, 2015; Palma, written testimony to the USITC, June 2, 2015, 4; Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 109.

⁶²³ Cuban government official, interview by USITC staff, Havana, June 17, 2015.

Table 5.7: Cuba: Wheat imports by major supplier and the United States, 2005–14

Country/region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Quantity (1,000 mt)										
France	0.0	16.5	0.0	98.0	54.0	296.3	554.0	553.6	494.6	336.8
Canada	173.5	97.0	127.2	154.1	178.9	218.2	204.0	202.3	227.1	226.9
Germany	0.0	0.0	0.0	0.0	97.7	82.6	0.0	^(a)	0.0	161.5
Mexico	16.5	0.0	0.0	22.0	^(a)	5.5	0.0	15.5	7.6	6.9
Argentina	98.6	26.3	118.5	0.0	0.0	0.0	0.0	0.0	25.0	0.0
Russia	0.0	0.0	0.0	0.0	22.5	75.6	0.0	0.0	0.0	0.0
United States	316.8	243.2	290.9	361.1	295.6	82.5	5.3	0.0	0.0	0.0
All others	0.0	27.3	3.3	0.0	27.5	25.3	0.0	25.1	0.0	82.9
Total	605.4	410.2	539.9	635.2	676.2	786.0	763.4	796.5	754.4	815.0
Value (million dollars)										
France	0.0	2.4	0.0	27.5	12.0	73.2	194.4	156.7	162.8	96.2
Canada	27.8	16.4	34.1	72.2	50.0	51.4	73.1	68.4	74.6	64.7
Germany	0.0	0.0	0.0	0.0	21.8	23.4	0.0	^(b)	0.0	46.4
Mexico	3.6	0.0	0.0	14.9	^(b)	1.1	0.0	6.6	3.4	2.3
Argentina	12.1	3.8	17.1	0.0	0.0	0.0	0.0	0.0	8.8	0.0
Russia	0.0	0.0	0.0	0.0	5.3	23.5	0.0	0.0	0.0	0.0
United States	50.7	44.1	70.2	135.2	72.9	17.8	1.7	0.0	0.0	0.0
All others	0.0	4.2	1.4	0.0	5.6	4.9	0.0	6.6	0.0	25.5
Total	94.3	70.9	122.8	249.9	167.6	195.3	269.3	238.3	249.5	235.0

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015).

^a Less than 50 mt.

^b Less than \$50,000.

Effects of the Removal of U.S. Restrictions

If trade restrictions are removed and U.S. suppliers are able to offer competitive financing options, U.S. wheat exports to Cuba would likely grow because of U.S. proximity to Cuba and reliability of supply.⁶²⁴ Although U.S., EU, and Canadian wheat are all of similarly high quality, U.S. wheat is more competitive than EU and Canadian wheat, given that Cuba is only a two-day sail from the U.S. Gulf, compared to one week from Canada and two weeks from the EU.⁶²⁵ According to U.S. Wheat Associates, the United States could supply 80–90 percent of Cuba’s wheat imports if Cuba were to resume purchases,⁶²⁶ similar to the U.S. share in other Caribbean nations.⁶²⁷ Exports could exceed \$150 million annually, compared to zero trade in 2012–14.⁶²⁸

⁶²⁴ Keesling, statement to the Senate Committee on Agriculture, Nutrition, and Forestry, April 21, 2015.

⁶²⁵ National Association of Wheat Growers and U.S. Wheat Associates, written submission to the USITC, May 20, 2015, 2.

⁶²⁶ Comments by Alan Tracy, president of U.S. Wheat Associates, as reported by the AP, “U.S. Agriculture Has Big Appetite,” December 19, 2014. Also see table 5.4.

⁶²⁷ Commission modeling estimates similarly large U.S. exports of wheat to Cuba, with a larger dollar value but smaller market share. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁶²⁸ National Association of Wheat Growers and U.S. Wheat Associates, written submission to the USITC, May 20, 2015, 5.

U.S. State-level Effects

States that are major producers of hard red winter wheat—Kansas, Texas, Oklahoma, and Montana—would be the most likely to benefit directly from the return of U.S. wheat exports to Cuba.⁶²⁹ Past U.S. wheat sales to Cuba were predominantly of hard red winter wheat, because it can be used to make bread and is available in Gulf ports.⁶³⁰ Texas and Oklahoma would have a proximity advantage over other states that produce hard red winter wheat. However, producers of this wheat class in all states would likely benefit from greater demand. States that are major producers of other wheat classes would also benefit, since there is some degree of substitutability between classes.⁶³¹ For example, the North Dakota Grain Growers Association estimates that open trade with Cuba could mean up to \$40 million annually for North Dakota’s agriculture industry,⁶³² with much of that growth coming from wheat. With rising Cuban incomes and changes in consumer preferences over time, Cuban imports of other U.S. wheat classes—i.e., soft red winter wheat that is used for cookies and crackers and durum wheat that is used for pasta—could also expand.⁶³³

Rice

Following the removal of U.S. restrictions, U.S. rice exports⁶³⁴ to Cuba would likely resume, potentially reaching \$40 to \$60 million within two years.⁶³⁵ U.S. rice would continue to face competition from Vietnam, which offers credit terms unlikely to be matched by U.S. industry. Cuban consumers prefer the quality of U.S. rice, but Alimport purchasing decisions could still limit U.S. exports.

U.S. Industry

During 2005–14, the United States accounted for about 1 percent of global rice production and was the world’s 11th-largest producer.⁶³⁶ U.S. production was stable during this period and remained close to the period average of 9.4 million mt, apart from a record-high crop of 11 million mt in 2010.⁶³⁷ Rice is produced in six states, with Arkansas and California accounting for about 70 percent of production, and Louisiana, Mississippi, Texas, and Missouri making up the remaining 30 percent.⁶³⁸ Nearly all U.S. rice exports to Cuba were long-grain white rice, mostly produced in the southern United States.⁶³⁹

⁶²⁹ Industry representative, email message to USITC staff, October 13, 2015.

⁶³⁰ Ibid.

⁶³¹ North Dakota, Washington, and South Dakota are major wheat-producing states but are not major producers of hard red winter wheat. Industry representative, email message to USITC staff, October 13, 2015.

⁶³² Knutson and Nowatzki, “North Dakota Ag Group Finds Kinship,” November 12, 2015.

⁶³³ Industry representative, email message to USITC staff, October 13, 2015.

⁶³⁴ See appendix H for a complete list of the HS subheadings comprising this sector.

⁶³⁵ USITC, hearing transcript, June 2, 2015, 30 (testimony of Terry Harris, Riceland Foods).

⁶³⁶ USDA, PSD Online (accessed April 16, 2015).

⁶³⁷ Production was converted from hundredweight to metric tons. USDA, NASS QuickStats (accessed April 16, 2015).

⁶³⁸ USDA, NASS Annual Crop Production Survey database, accessed through QuickStats (accessed April 16, 2015).

⁶³⁹ Rice produced in California is mostly medium-grain rice, which was not exported to Cuba.

The United States is a major rice exporter, and the U.S. rice industry is highly export dependent, with half its domestic production exported during 2005–14.⁶⁴⁰ The global competitiveness of the U.S. rice sector is based on advanced and efficient production, a reputation for high quality, the ability to supply various rice types and forms of rice, and highly efficient transportation and logistics.⁶⁴¹ In 2014, the United States exported 3.4 million mt of rice valued at \$2 billion, making it the fifth-largest rice exporter in the world, with a market share of about 7 percent.⁶⁴² The value of U.S. rice exports averaged about \$1.3 billion during 2005–07, before jumping almost 60 percent in 2008—largely because of higher prices.⁶⁴³ Values were relatively stable for the remainder of the period, averaging \$2.2 billion. In 2014, the top export markets for U.S. rice were Mexico, Haiti, Japan, Turkey, and Canada, which together accounted for over half of U.S. rice exports. Before the embargo, the United States was the primary source for Cuban rice imports, and Cuban consumers were willing to pay a premium for U.S. rice because of its taste, appearance, and cooking qualities.⁶⁴⁴ In 2005 and 2006 Cuba accounted for 4 percent of U.S. rice exports and was a top 10 market. After that, however, U.S. exports to Cuba fell sharply, and there were virtually no exports after 2008. U.S. rice reportedly lost market share in Cuba largely because of increased competition on price and credit availability, particularly from Vietnamese rice.⁶⁴⁵

Cuban Industry and Market

Cuba's per capita rice consumption is the highest in the Western Hemisphere, and rice is regarded as essential to the daily Cuban diet.⁶⁴⁶ About one-half of the rice consumed in Cuba is produced domestically, with Cuban rice production reaching 455,000 mt in CY 2014/15 (table 5.8). The Cuban government promotes rice growing in over 150 Cuban municipalities, and about 80 percent of Cuban rice is produced by cooperatives and independent farmers.⁶⁴⁷ Following the CY 2007/08 global rice price spike, the Cuban government worked to reduce reliance on imports by boosting domestic production.⁶⁴⁸ This effort contributed to annual growth of 11 percent between CY2010/11–2014/15.⁶⁴⁹ A number of measures were put in place by the Cuban government beginning in 2008 with the aim of modifying institutional structures, expanding markets, improving infrastructure, and expanding production.⁶⁵⁰ One such measure was the investment of \$450 million in rice production (installing state-of-the-art technology for farm machinery, drying sheds, and seed) beginning in May 2011, with technical assistance received from Brazil, China, Japan, and

⁶⁴⁰ USDA, PSD Online (accessed April 16, 2015).

⁶⁴¹ USITC, *Rice: Global Competitiveness of the U.S. Industry*, April 2015, 134–40.

⁶⁴² Global rice export rankings were based on USDA PSD data for export volumes in milled rice equivalent because of unofficial trade and exports from major rice exporters that are not included in the GTIS Global Trade Atlas database. GTIS, Global Trade Atlas database (accessed April 16, 2015); USDA, PSD Online (accessed April 16, 2015).

⁶⁴³ GTIS, Global Trade Atlas database (accessed April 16, 2015).

⁶⁴⁴ Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 2.

⁶⁴⁵ USITC, hearing transcript, June 2, 2015, 62 (testimony of William Messina, University of Florida); 118 (testimony of Terry Harris, Riceland Foods).

⁶⁴⁶ Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 12.

⁶⁴⁷ *Cuba News*, "Cuba to Invest \$450 Million," June 2012, 12.

⁶⁴⁸ Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 12. Cuba's provinces are divided into municipalities.

⁶⁴⁹ *Ibid.*

⁶⁵⁰ The measures span across many agricultural sectors, including rice. García Álvarez and Cruz, "Dynamics of the Agricultural Sector," 2015, 163.

Vietnam.⁶⁵¹ Still, the cost of rice production in Cuba remains much higher than in other rice-producing countries—in 2010, it was estimated to be seven times higher than in Vietnam⁶⁵²—so imports remain an important source of supply. Between CY 2012/13 and 2014/15, imports accounted for just under half of consumption, down from an average of 64 percent of consumption between CY 2005/06 and 2011/12 (table 5.8).

Table 5.8: Cuba: Rice production, consumption, and trade by crop year (1,000 mt, milled rice equivalent)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Production	239	282	283	283	366	295	370	417	423	455
Area harvested (1,000 ha)	127	143	136	156	216	176	210	203	210	215
Yield (paddy) (mt/ha)	2.9	3	3.2	2.79	2.6	2.6	2.7	3.2	3.1	3.26
Imports	594	574	652	463	468	642	469	369	400	483
Consumption	833	856	935	746	834	937	839	786	823	938
Exports	0	0	0	0	0	0	0	0	0	0
Per capita consumption (kg)	73.8	75.7	82.7	66.0	73.9	83.1	74.4	69.7	73.1	80.4

Source: USDA, FAS, PS&D Online (accessed May 20, 2015); World Bank, “Population,” WDI database (accessed May 20, 2015).

Vietnam is the major supplier to the Cuban rice import market, which prefers white (milled) rice as opposed to unmilled “paddy” rice (which requires domestic milling) (table 5.9).⁶⁵³ The rice Cuba imports from Vietnam has certain disadvantages vis-à-vis rice produced in the United States. First, it is lower quality, with a high percentage of broken kernels.⁶⁵⁴ In addition, rice from Vietnam takes 24–28 days in transit, whereas rice shipped from the United States would take about 3 days in transit. According to Cuban government officials, the longer transit raises the price of Vietnamese rice by \$48 per ton, an amount that is relatively small but not insignificant in the context of overall rice prices.⁶⁵⁵ On the other hand, a large part of the Vietnam-Cuba rice trade is completed through government-to-government sales, with credit terms of up to 720 days.⁶⁵⁶ Brazil has supplied most of the remainder of Cuban rice imports since 2012.

⁶⁵¹ *Cuba News*, “Cuba to Invest \$450 Million,” June 2012, 12.

⁶⁵² Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 63.

⁶⁵³ Although official statistics on Cuban rice imports from Vietnam during 2011–14 are unavailable, estimates of Vietnam’s share of total Cuban rice imports are as high as over 70 percent. Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 12.

⁶⁵⁴ Rice imported from Vietnam is of low quality, with at least 15 percent broken kernels. Cuban government official, interview by USITC staff, Havana, June 15, 2015; Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015. Vietnamese rice also has different cooking characteristics from U.S. rice, which is preferred in Cuba. USITC, hearing transcript, June 2, 2015, 78, 89 (testimony of Terry Harris, Riceland Foods).

⁶⁵⁵ Cuban government official, interview by USITC staff, June 15, 2015. Long grain white rice prices typically average \$300–\$600 per metric ton (USITC, *Rice: Global Competitiveness of the U.S. Industry*, April 2015, 89).

⁶⁵⁶ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

Table 5.9: Cuba: Rice imports by major supplier and the United States, 2005–14

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Quantity (1,000 mt)									
Vietnam	399.9	453.1	477.9	510.5	450.0	472.3	503.0	213.0	289.0	243.0
Brazil	0.0	13.2	0.0	57.6	1.6	^(a)	42.0	116.0	107.5	105.0
Argentina	^(a)	0.0	0.0	0.0	^{0.3}	0.9	12.7	^(a)	0.0	28.7
United States	153.9	157.5	59.8	12.6	0.0	0.0	0.0	^(a)	0.0	0.0
All other	5.0	27.6	87.4	0.4	0.6	10.4	0.6	0.6	16.9	0.5
Total	558.7	651.4	625.1	581.2	452.4	483.7	558.4	329.7	413.4	377.3
	Value (million dollars)									
Vietnam	186.8	131.2	184.4	422.5	191.0	209.2	252.8	92.4	113.1	100.3
Brazil	0.0	3.6	0.0	47.7	1.1	0.1	22.7	65.2	64.6	57.1
Argentina	^(b)	0.0	0.0	0.0	0.1	0.5	7.1	^(b)	0.0	15.8
United States	39.2	39.4	24.0	6.9	0.0	0.0	0.0	^(b)	0.0	0.0
All other	1.8	8.1	25.5	0.3	0.8	6.0	0.5	0.4	12.8	0.5
Total	227.9	182.3	233.9	477.4	193.1	215.8	283.2	158.1	190.5	173.6

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015); International Grains Council Daily Vietnam Rice Prices database (accessed June 13, 2015); USITC estimates.

Note: For 2011–14, data on imports from Vietnam are unavailable in GTIS. Values are calculated by the USITC based on USDA PSD values and Vietnamese monthly rice prices.

^a Less than 50 mt.

^b Less than \$50,000.

Effects of the Removal of U.S. Restrictions

Should normal trade relations be restored, the United States would likely regain a large share of the Cuban rice market, as long as suppliers' credit terms are competitive.⁶⁵⁷ The high quality of U.S. rice and the shorter shipping times vis-à-vis Vietnam, as well as the ability to use smaller vessels to access smaller Cuban ports, are competitive advantages that favor U.S. rice.⁶⁵⁸

The U.S. rice industry estimates⁶⁵⁹ that the United States could supply between 20 and 30 percent of Cuban rice imports within two years, or an additional \$40 to \$60 million in annual sales, and that the share would increase to more than 50 percent within five years and 75 percent within 10 years.⁶⁶⁰ The United States could also export paddy rice to be milled in Cuba should Cuban milling infrastructure modernize and expand.

U.S. State-level Effects

The states likely to benefit most from additional exports are Arkansas and Louisiana, which supply the largest share of long-grain rice production. Industry representatives estimate that these two

⁶⁵⁷ Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 21.

⁶⁵⁸ An industry anecdote points out that when U.S. rice was offered in the Cuban ration stores, it sold out before Vietnamese rice would sell. USITC, hearing transcript, June 2, 2015, 78–79 (testimony of Terry Harris, Riceland Foods).

⁶⁵⁹ Commission modeling estimates a similar market share (45 percent) for U.S. exports of rice for the five-year period (the only time frame estimated), but a larger dollar value. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁶⁶⁰ USITC, hearing transcript, June 2, 2015, 30 (testimony of Terry Harris, Riceland Foods).

states could see export growth of up to 100,000 mt (\$46 million) and together could account for around three-fourths of U.S. rice exports to Cuba during the first few years after trade normalization.⁶⁶¹ In southwest Louisiana, the rice processing and exporting sectors would also benefit.⁶⁶² Rice producers in Mississippi, Missouri, and Texas would also likely see some benefits.⁶⁶³

Corn

U.S. corn exports⁶⁶⁴ to Cuba could achieve close to a 100 percent market share,⁶⁶⁵ or approximately \$200 million based on 2014 trade,⁶⁶⁶ following the removal of U.S. restrictions, including those on the ability to extend credit. In the long term exports could grow further, as Cuban feed demand expands along with the Cuban livestock industry. The United States has a logistical advantage over major competitors, but Alimport purchasing decisions could potentially limit trade.

U.S. Industry

During 2005–14, the United States was the world’s leading corn producer, accounting for almost 40 percent of global production.⁶⁶⁷ Annual U.S. production varied from year to year but trended upward, reaching a record 361 million mt in 2014.⁶⁶⁸ During 2005–11, farm-level receipts grew annually by 23 percent to peak at a record \$77 billion in 2011 before falling back to \$52 billion in 2014.⁶⁶⁹ The top five corn-producing states in 2014 were Iowa, Illinois, Nebraska, Minnesota, and Indiana, which together accounted for 62 percent of production.⁶⁷⁰

The United States is also the world’s largest corn exporter, exporting about 15 percent of its corn production during 2005–14.⁶⁷¹ The global competitiveness of the U.S. corn sector is based on low production cost, highly efficient marketing and distribution systems, and reliability of supply. In 2014, U.S. corn exports were 49.8 million mt, valued at \$11.2 billion.⁶⁷² They made up 40 percent of global corn exports, followed by Brazil (17 percent), Ukraine (15 percent), and Argentina (13 percent).⁶⁷³ In 2014 the top five export markets for U.S. corn were Japan, Mexico, South Korea, Colombia, and Egypt, which together accounted for 70 percent of exports.⁶⁷⁴ Between 2005 and 2014, there were five years when Cuba was a top-15 U.S. corn export market, ranking as high as

⁶⁶¹ USITC, hearing transcript, June 2, 2015, 31 (testimony of Terry Harris, Riceland Foods).

⁶⁶² Ferrando, “Local Rice Farmers Hope,” September 22, 2015.

⁶⁶³ USITC, hearing transcript, June 2, 2015, 31 (testimony of Terry Harris, Riceland Foods). See also table 5.5 on state effects.

⁶⁶⁴ See appendix H for a complete list of the HS subheadings comprising this sector.

⁶⁶⁵ Comments by Kurt Shultz, USGC Director of Global Strategies, as reported by the Brownfield Ag News for America, “USGC trip to Cuba,” April 10, 2015.

⁶⁶⁶ Cuban corn imports in 2014 were \$204.1 million. GTIS, Global Trade Atlas database (accessed December 9, 2015).

⁶⁶⁷ USDA, PSD Online (accessed April 16, 2015).

⁶⁶⁸ USDA, NASS Annual Crop Production Survey database, accessed through QuickStats (accessed April 16, 2015).

⁶⁶⁹ Ibid.

⁶⁷⁰ Ibid.

⁶⁷¹ USDA, PSD Online (accessed April 16, 2015).

⁶⁷² GTIS, Global Trade Atlas (accessed April 16, 2015).

⁶⁷³ Ibid.

⁶⁷⁴ Ibid.

eighth in 2008, when U.S. corn exports to Cuba peaked at 785,600 mt (\$189.9 million).⁶⁷⁵ After 2008, U.S. corn exports to Cuba trended downward, falling to a period low of 137,200 mt (\$28.2 million) in 2014, as discussed below.

Cuban Industry and Market

Cuban corn production is mostly for human consumption and is notably inefficient; yields average 1.4 to 1.6 mt per ha, compared to the global average of 5.6 mt per ha.⁶⁷⁶ Between CY 2005/06 and CY 2014/15 Cuban corn production grew 2 percent annually, reaching 426,000 mt in CY 2014/15 (table 5.10). Corn consumption grew 4 percent annually between CY 2005/06 and CY 2014/15, mostly for feed use prompted by growth in the livestock industry.

Table 5.10: Cuba: Corn production, consumption, and trade by crop year (1,000 mt)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Beginning stocks	62	26	22	102	61	77	65	62	83	162
Production	363	350	369	326	305	325	354	360	426	426
Area harvested (1,000 ha)	156	140	141	129	204	226	143	153	178	178
Yield (mt/ha)	2	3	3	3	2	1	2	2	2	2
Imports	501	646	811	708	736	838	743	911	928	900
Consumption	900	1,000	1,100	1,075	1,025	1,175	1,100	1,250	1,275	1,300
Ending stocks	26	22	102	61	77	65	62	83	162	188
Per capita consumption (kg)	79.7	88.5	97.3	95.2	90.8	104.2	97.6	110.9	113.2	115.5

Source: USDA, FAS, PSD Online (accessed August 26, 2015); World Bank, "Population," WDI database (accessed August 26, 2015).

Corn is Cuba's third-largest agricultural import (table 5.1). Between 2005 and 2014, Cuban corn imports grew 5 percent a year to a record 947,100 tons in 2014. Again, this was largely to meet growing feed demand, with about 70 percent of imported corn destined for animal feed (table 5.10).⁶⁷⁷ The United States supplied between 74 and nearly 100 percent of imports between 2005 and 2009. After 2009, U.S. market share collapsed from nearly 100 percent to only 14 percent in 2014.⁶⁷⁸ In 2015, U.S. exports continued their rapid fall, dropping from 137.2 mt to just 26.2 mt, valued at \$4.9 million.⁶⁷⁹ Reportedly, other countries gained market share largely because of their ability to offer more attractive financing options, or because their companies established

⁶⁷⁵ Ibid.

⁶⁷⁶ USITC, hearing transcript, June 2, 2015, 23 (testimony of Bill Christ, U.S. Grains Council); USDA, PSD Online (accessed April 16, 2015).

⁶⁷⁷ USITC, hearing transcript, June 2, 2015, 23 (testimony of Bill Christ, U.S. Grains Council).

⁶⁷⁸ GTIS, Global Trade Atlas (accessed April 16, 2015).

⁶⁷⁹ USITC DataWeb/USDOC (accessed February 8, 2016); GTIS, Global Trade Atlas (accessed February 18, 2016).

relationships with Alimport.⁶⁸⁰ In 2014, major suppliers to the Cuban market included Argentina (45 percent), Brazil (19 percent), and Canada (16 percent) (table 5.11).

Table 5.11: Cuba: Corn imports by major supplier and the United States, 2005–14

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Quantity (1,000 mt)									
Argentina	102.7	126.0	7.2	0.1	26.3	128.4	159.2	106.1	443.2	424.4
Brazil	0.0	0.0	0.0	0.0	0.0	121.3	155.6	230.6	152.7	177.2
Canada	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	43.3	153.4
United States	509.4	356.1	651.9	785.6	670.4	448.6	450.0	485.3	185.0	137.2
Ukraine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0	54.7
All other	0.1	0.1	0.1	0.1	^(a)	0.1	^(a)	^(a)	^(a)	0.1
Total	612.2	482.3	659.2	785.8	696.7	698.4	764.8	822.0	874.3	947.1
	Value (million dollars)									
Argentina	9.2	17.1	0.9	0.1	4.6	22.9	41.7	27.7	125.7	93.2
Brazil	0.0	0.0	0.0	0.0	0.0	26.7	44.6	65.5	40.9	39.4
Canada	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	13.0	32.6
United States	54.9	40.1	109.0	189.9	119.1	86.1	122.8	133.5	56.9	28.2
Ukraine	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.4	10.6
All other	0.1	0.1	^(b)	^(b)	^(b)	0.1	^(b)	^(b)	^(b)	^(b)
Total	64.2	57.3	110.0	190.1	123.8	135.8	209.1	226.8	245.9	204.1

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015).

^a Less than 50 mt.

^b Less than \$50,000.

Effects of the Removal of U.S. Restrictions

With trading restrictions removed, the U.S. corn industry could be a significant supplier to Cuba⁶⁸¹ because of its price advantage and geographic proximity to the Cuban market.⁶⁸² Industry estimates that with less restrictive policies in place, Cuba could become the United States' 12th-largest corn export market.⁶⁸³ U.S. sales could see additional future growth as investment in Cuban livestock and poultry production prompts greater feed demand.⁶⁸⁴ However, corn exports would likely still be subject to Alimport's purchasing decisions, which are sometimes driven by factors other than suppliers' economic competitiveness.⁶⁸⁵

⁶⁸⁰ USITC, hearing transcript, June 2, 2015, 24 (testimony of Bill Christ, U.S. Grains Council); American Feed Industry Association, written submission to the USITC, June 18, 2015, 1.

⁶⁸¹ Commission modeling estimates that U.S. exports of corn could regain significant market share in Cuba (to over 60 percent of Cuban imports). See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁶⁸² USITC, hearing transcript, June 2, 2015, 25 (testimony of Bill Christ, U.S. Grains Council).

⁶⁸³ Gray, "Capturing the Market Opportunity in Cuba," October 1, 2015.

⁶⁸⁴ USITC, hearing transcript, June 2, 2015, 25–26 (testimony of Bill Christ, U.S. Grains Council).

⁶⁸⁵ USITC, hearing transcript, June 2, 2015, 24–25 (testimony of Bill Christ, U.S. Grains Council).

U.S. State-level Effects

Major corn-producing states, including Iowa, Illinois, Nebraska, Minnesota, and Indiana, would largely benefit from the removal of restrictions.⁶⁸⁶ For example, Minnesota could see an additional \$20 million of agricultural exports (much of that likely corn), according to the Minnesota's Department of Agriculture.⁶⁸⁷

Soybean Complex

The soybean complex consists of soybeans and the products created from soybean crushing, primarily oil and meal.⁶⁸⁸ The U.S. soybean industry would likely see growth in exports of these products, especially for soybean oil and meal, with trade restrictions removed. U.S. market share would likely grow for all three products because of the United States' competitive product and logistical advantage. The United States is already the leading supplier of soybeans and soybean meal to Cuba, and up until 2010 was also a leading supplier of soybean oil. Total U.S. exports to Cuba of soybean oil and meal should experience additional overall growth in the absence of restrictions. The United States may be able to increase its share of the Cuban soybean market, but growth will likely be constrained by Cuba's limited soybean crushing capacity.

Soybeans

U.S. Industry

The United States is the world's largest producer of soybeans, accounting for roughly one-third of global production in CY 2013/14.⁶⁸⁹ Midwestern states supplied over 80 percent of U.S. production during 2005–14, led by Iowa (15 percent) and Illinois (14 percent).⁶⁹⁰ Over that period the U.S. soybean industry became increasingly export-dependent, and in CY 2013/14, almost half the U.S. soybean crop was exported. Several factors make U.S. soybeans highly competitive in the global market. These include economies of scale and state-of-the-art technology for production and processing, as well as good internal transportation and port infrastructure.⁶⁹¹ Traditionally, the United States has been the world's largest soybean-exporting country. However, exports from Brazil exceeded those from the United States in 2013 and were similar in 2014, each with about 40 percent of global exports.⁶⁹² China is by far the largest destination for U.S. soybeans (about 61 percent on average during 2012–14), followed distantly by the EU and Mexico (about 7 percent

⁶⁸⁶ See also table 5.5 on U.S. state effects.

⁶⁸⁷ Meersman and Hughlett, "Cuba Has Market Potential for Minnesota," January 4, 2015; USITC, hearing transcript, June 2, 2015, 40 (testimony of Senator Amy Klobuchar, D-MN). As noted previously, this is significantly higher than the estimates given in the Texas A&M University study described above.

⁶⁸⁸ See appendix H for a complete list of the HS subheadings comprising this sector.

⁶⁸⁹ USDA, FAS, PSD Online (accessed April 23, 2015).

⁶⁹⁰ USDA, NASS, Quickstats (accessed April 29, 2015).

⁶⁹¹ See, e.g., USITC, *Brazil: Competitive Factors*, April 2012, 3-2, 6-9 to 6-18; USDA, ERS, *Soybeans and Oil Crops* (accessed May 11, 2015).

⁶⁹² Based on value. GTIS, Global Trade Atlas database (accessed April 28, 2015).

each).⁶⁹³ Cuba was a relatively minor destination for U.S. soybeans, accounting for less than 1 percent of exports during 2005–14.⁶⁹⁴

Cuban Industry and Market

Cuban soybean production is negligible, largely because Cuba’s tropical climate is inhospitable to this crop (table 5.12).⁶⁹⁵ Cuba imports soybeans to crush at its sole soybean processing plant.⁶⁹⁶ Recently, Cuba has expressed an interest in expanding its crushing capacity and is seeking foreign investors to build an additional plant with a 500,000-ton annual capacity.⁶⁹⁷ Soybeans are processed into soybean meal for animal feed in livestock production, and soybean oil for human use as cooking oil.⁶⁹⁸ Soybeans are also processed into soy milk, soy yogurt, and other soy foods as an important source of protein in the Cuban diet.⁶⁹⁹

Table 5.12: Cuba: Soybean production, consumption, and trade by crop year (1,000 mt)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Production	0	0	0	0	0	0	0	0	0	0
Imports	96	162	118	141	126	132	134	125	126	130
Consumption	96	162	123	139	126	132	132	130	126	130
Per capita consumption (kg)	8.5	14.3	10.9	12.3	11.2	11.7	11.7	11.5	11.2	11.5

Source: USDA, FAS, PS&D Online (accessed August 26, 2015); World Bank, “Population,” WDI database (accessed August 26, 2015).

During 2005–14, Cuban soybean imports fluctuated between about 100,000 mt and 150,000 mt (table 5.13). During 2006–10, the United States was the only supplier to Cuba, but during 2011–14, soybeans were increasingly sourced from South America, and by 2013 Argentina supplied more than one-half of Cuban imports. In 2015, U.S. soybean exports to Cuba continued to decline, falling from \$30.6 million to \$10.3 million.⁷⁰⁰ According to industry representatives, the easing of financial restrictions on trade with Cuba would likely increase U.S. market share in Cuba,⁷⁰¹ although total volumes will again be limited by Cuban processing capacity.⁷⁰²

⁶⁹³ Share based on value. GTIS, Global Trade Atlas database (accessed April 30, 2015).

⁶⁹⁴ On both a value and volume basis. GTIS, Global Trade Atlas database (accessed April 24, 2015).

⁶⁹⁵ In 2008, the Brazilian government announced plans to provide seed and technical assistance to grow soybeans in Cuba; however, this effort has reportedly been unsuccessful. Israel, “Brazil to Help Cuba Grow Soybeans,” May 31, 2008; *Havana Times*, “Brazilian Business Negotiations in Cuba,” September 4, 2012.

⁶⁹⁶ Industry representatives, telephone interviews by USITC staff, May 5, 2015 and May 6, 2015.

⁶⁹⁷ Industry representative, telephone interview by USITC staff, May 6, 2015; Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d., 29 (accessed December 9, 2015).

⁶⁹⁸ *Cuba Standard*, “U.S. Soybean Exporters Renew Pitch to Alimport,” September 13, 2013.

⁶⁹⁹ Garcia Uriarte and Ortega, “Recent History of Soy in Cuba,” January 1996.

⁷⁰⁰ USITC DataWeb/USDOC (accessed February 8, 2016).

⁷⁰¹ Industry representative, telephone interview by USITC staff, May 6, 2015.

⁷⁰² As previously discussed, Cuba imports soybeans to crush at its sole soybean processing plant. Industry representatives, telephone interviews by USITC staff, May 5, 2015 and May 6, 2015.

Table 5.13: Cuba: Soybean imports by major supplier and the United States, 2005–14

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Quantity (1,000 mt)										
United States	120.8	130.5	134.4	143.9	134.2	102.9	108.9	113.5	68.4	57.2
Argentina	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.9	47.5
Brazil	30.6	0.1	0.0	0.1	0.1	0.0	23.2	16.9	(^a)	0.0
All other	0.0	(^a)	(^a)	(^a)	0.0	0.0	(^a)	(^a)	(^a)	0.0
Total	151.4	130.7	134.5	144.0	134.2	102.9	132.1	130.3	140.3	104.7
Value (million dollars)										
United States	32.7	31.7	40.5	66.6	61.5	41.9	58.7	62.3	39.4	30.6
Argentina	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	39.6	24.0
Brazil	7.8	0.1	0.0	0.1	0.1	0.0	13.1	10.3	0.1	0.0
All other	0.0	(^b)	(^b)	(^b)	0.0	0.0	(^b)	(^b)	(^b)	0.0
Total	40.5	31.9	40.6	66.7	61.6	41.9	71.8	72.6	79.2	54.5

Source: GTIS, Global Trade Atlas database (accessed August 6, 2015).

^a Less than 50 mt.

^b Less than \$50,000.

Soybean Oil and Meal

U.S. Industry

Soybeans are crushed into soybean oil and soybean meal.⁷⁰³ Soybean oil is sold for human consumption as cooking oil, the primary cooking oil used in Cuba, while soybean meal is either used as animal feed or further processed into soy flour for distribution to food processors.⁷⁰⁴ Up until CY 2010/11, the United States was the world's largest producer of soybean oil, accounting for well over one-quarter of global production between CY 2004/05 and CY 2009/10.⁷⁰⁵ Following several years of strong production growth in China and stagnant production in the United States, China overtook the United States in CY 2010/11; by CY 2013/14 China accounted for 27 percent of global production, compared with 20 percent for the United States. Illinois, Iowa, Minnesota, and Indiana have the largest capacity for soybean crushing—the process by which both oil and meal are produced.⁷⁰⁶ In recent years, the United States exported about 10 percent of its domestic soybean oil production, and between 2012 and 2014 accounted for 10 percent of global exports, making it the world's third-largest exporter behind Argentina (44 percent) and Brazil (16 percent). Mexico and China are the most important markets for U.S. soybean oil.⁷⁰⁷ Traditionally Cuba has not been a major destination for U.S. soybean oil exports, and no exports have been recorded since 2010.

Because soybean oil and meal are co-products, production trends for soybean meal mirror those for soybean oil. Rapid growth in China soybean meal production meant that the U.S. share of global production fell from almost 27 percent in CY 2004/05 to about 19 percent in CY 2013/14, while

⁷⁰³ Trade data for soybean oil refer to HS 1507 and for soybean meal refer to HS 1208 and 2304.

⁷⁰⁴ FAOSTAT, Food Balance Sheet: Cuba, 2011 (accessed October 5, 2015). Soybean oil is among the items available through the ration store. Eppinger, "Cuba's Rationing System: Issues and Prospects," April 11, 2014.

⁷⁰⁵ Based on volume. USDA, PSD Online (accessed July 1, 2015).

⁷⁰⁶ Industry representative, telephone interview by USITC staff, May 5, 2015.

⁷⁰⁷ Based on value. GTIS, Global Trade Atlas database (accessed May 4, 2015).

China's share went from 17 percent to 29 percent in the same period.⁷⁰⁸ U.S. soybean meal is much more export-dependent than soybean oil, with almost 30 percent of meal production exported over the past three years. But as with soybean oil, the United States is the world's third-largest exporter of soybean meal, behind Argentina and Brazil. Mexico, the Philippines, and Canada were all major destinations for U.S. soybean meal exports throughout the period. While soybean meal is one of the few remaining commodities exported to Cuba by the United States, Cuba accounts for less than 2 percent of total U.S. soybean meal exports.⁷⁰⁹

Cuban Industry and Market

Cuban production of soybean oil and meal currently takes place at a single processing facility in Santiago de Cuba, on the southern coast of the island. Each year this facility refines about 28,000 mt of soybean oil and 85,000 mt of soy flour (made from soybean meal) using outdated equipment and infrastructure.⁷¹⁰ In order to increase crushing yields, this plant was slated for modernization in early 2015, although improvements are not expected to expand production enough to meet Cuban demand for soybean products.⁷¹¹ To raise domestic production capacity and to reduce the reliance on imports, a new soybean crushing facility was on the list of projects targeted for foreign direct investment.⁷¹² The Cuban government would like for a new facility to be developed in the more strategically located Cienfuegos or Artemisa provinces. With an annual milling capacity of 500,000 mt, the new plant would produce 85,000 mt of refined oil and 375,000 mt of soy flour for animal consumption.⁷¹³ Cuban production of soybean oil and meal rose during 2005/06–2014/15, in line with the growth in soybean imports (tables 5.14 and 5.15).

Table 5.14: Cuba: Soybean oil production, consumption, and trade by crop year (1,000 mt)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Production	17	29	22	25	23	24	24	24	23	24
Crush	94	160	120	136	126	132	132	130	126	130
Imports	91	48	85	79	88	81	85	76	89	95
Consumption	103	104	106	107	108	109	110	110	115	120
Per capita consumption (kg)	9.1	9.2	9.4	9.5	9.6	9.7	9.8	9.8	10.2	10.7

Source: USDA, FAS, PSD Online (accessed August 26, 2015); World Bank, "Population," WDI database (accessed August 26, 2015).

⁷⁰⁸ Based on volume. USDA, PSD Online (accessed April 27, 2015).

⁷⁰⁹ U.S. market share, by value, ranged from a period low of 8 percent in 2011 to a high of 89 percent in 2006. GTIS, Global Trade Atlas database (accessed May 4, 2015).

⁷¹⁰ Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2014*, n.d., 43 (accessed January 27, 2015).

⁷¹¹ In addition to updated machinery, the project reportedly also includes new waste recycling equipment and water treatment facilities. Palomares Calderón, "Inician Modernización de la Planta Procesadora de Soya" [Modernization of soy-processing plant is launched], December 18, 2014.

⁷¹² Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d., 29 (accessed December 9, 2015).

⁷¹³ Ibid.

Table 5.15: Cuba: Soybean meal production, consumption, and trade by crop year (1,000 mt)

	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Production	74	126	95	107	99	104	104	102	99	110
Crush	94	160	120	136	126	132	132	130	126	140
Imports	167	234	268	249	265	263	280	215	277	320
Consumption	261	360	363	356	364	367	365	336	376	422
Per capita consumption (kg)	23.1	31.9	32.1	31.5	32.2	32.5	32.4	29.8	33.4	37.5

Source: USDA, FAS, PS&D Online (accessed May 20, 2015); World Bank, "Population," WDI database (accessed May 20, 2015).

The United States was a significant supplier to the Cuban soybean oil market between 2005 and 2010, but did not export any soybean oil to Cuba between 2011 and 2014 (table 5.16). Brazil has been the largest supplier since 2006 and virtually the only supplier since 2011.

Table 5.16: Cuba: Soybean oil imports by major supplier and the United States, 2005–14

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Quantity (1,000 mt)										
Brazil	35.2	15.3	50.4	68.4	37.8	68.0	82.6	68.6	74.4	82.5
Russia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.5
Argentina	24.4	0.0	^(a)	0.0	0.7	7.3	0.0	15.0	7.5	0.0
United States	42.1	35.7	22.4	16.4	27.4	27.9	0.0	0.0	0.0	0.0
All other	^(a)	0.6	0.1	^(a)	^(a)	0.3	0.7	^(a)	0.2	0.2
Total	101.7	51.5	72.9	84.7	65.8	103.5	83.3	83.6	82.1	90.2
Value (million dollars)										
Brazil	20.5	7.6	39.9	85.8	29.8	62.8	100.5	83.1	81.1	80.1
Russia	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.4
Argentina	14.5	0.0	^(b)	0.0	0.8	6.5	0.0	17.2	7.7	0.0
United States	25.7	20.9	20.1	21.9	22.3	27.0	0.0	0.0	0.0	0.0
All other	^(b)	0.6	0.1	^(b)	^(b)	0.4	1.0	^(b)	0.3	0.2
Total	60.7	29.1	60.1	107.7	53.0	96.8	101.5	100.3	89.1	86.6

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015).

^a Less than 50 mt.

^b Less than \$50,000.

The United States was a significant supplier of soybean meal to Cuba throughout the period, with exports reaching their highest levels in 2007 (188,400 mt) (table 5.17). It was the largest supplier in 2005–07, 2009, and again in 2013 and 2014. U.S. exports of soybean meal to Cuba fell sharply in 2010 and 2011, to a low of 25,300 mt in 2011, before rising each year thereafter to reach 129,400 mt in 2014. Soybean meal is Cuba's fifth-largest agricultural import; the level of imports rose to 343,000 mt in 2014, double the 2005 level (table 5.17). Brazil was the largest supplier in 2008, 2010, 2011, and 2012. In 2014, Argentina was nearly the largest supplier at 122,600 mt, just behind the United States. In 2015, soybean meal was the only U.S. agricultural product for which exports to Cuba did not register a significant decline. Export volumes remained almost the same, although

export values declined from \$67.3 million to \$55.1 million (due mainly to lower prices), and values remained higher than in most years during the 2005–15 period.⁷¹⁴

Table 5.17: Cuba: Soybean meal imports by major supplier and the United States, 2005–14

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Quantity (1,000 mt)									
United States	93.3	164.4	188.4	120.0	131.8	30.2	25.3	79.8	128.9	129.4
Argentina	0.0	22.0	42.4	0.0	0.0	0.0	0.0	20.2	0.0	122.6
Brazil	77.9	0.0	0.0	129.7	126.7	254.4	263.3	175.1	61.6	90.9
All other	(^a)	(^a)	0.0	0.0	(^a)	(^a)	(^a)	(^a)	(^a)	0.1
Total	171.2	186.4	230.8	249.7	258.5	284.6	288.6	275.2	190.5	343.0
	Value (million dollars)									
United States	18.5	34.1	53.4	46.2	49.2	12.2	9.9	41.4	69.3	67.3
Argentina	0.0	4.2	9.7	0.0	0.0	0.0	0.0	8.6	0.0	60.8
Brazil	17.4	0.0	0.0	46.8	51.3	85.9	112.6	65.9	35.5	54.0
All other	(^b)	(^b)	0.0	0.0	(^b)	(^b)	(^b)	(^b)	(^b)	0.2
Total	35.9	38.3	63.1	93.0	100.4	98.0	122.5	116.0	104.8	182.3

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015).

^a Less than 50 mt.

^b Less than \$50,000.

Several factors have led to increased competition from Brazil in Cuba's soybean oil and meal markets. Although Alimport considers price in its agricultural purchasing decisions, it also weighs other factors, including the availability of credit offered by Brazil and other suppliers after 2008,⁷¹⁵ as well as its reported preference for imports from Brazil following Brazil's investment in expanding the port at Mariel.⁷¹⁶ Brazil, as a major exporter of soybean oil and meal, was well positioned to capitalize on these advantages.

Effects of the Removal of U.S. Restrictions

According to a U.S. soybean industry representative, the three main obstacles to U.S. soybean exports to Cuba are the lack of ability to offer credit, the increased transaction costs from the third-party bank financing requirement, and the inability to ship cargo on the return trip from Cuba rather than empty containers and vessels.⁷¹⁷ A delegation of soybean industry representatives who traveled to Cuba in 2013 were reportedly told by Alimport that U.S. financial restrictions were the major barrier to increased sales from the Cuban perspective.⁷¹⁸

While soybean export growth is constrained by limited Cuban crushing capacity in the near term, the United States is well positioned to gain market share if the restrictions were lifted.⁷¹⁹ Planned

⁷¹⁴ USITC DataWeb/USDOC (accessed February 8, 2016).

⁷¹⁵ Echevarría, "Feast or Famine," April–May 2015, 45.

⁷¹⁶ Ibid.

⁷¹⁷ Industry representative, telephone interview by USITC staff, May 6, 2015.

⁷¹⁸ *Cuba Standard*, "U.S. Soybean Exporters Renew Pitch to Alimport," September 13, 2013.

⁷¹⁹ Commission modeling estimates only slight growth in U.S. exports of soybeans to Cuba, in part because of the already high U.S. market share in Cuban imports of soybeans. See chapter 8 and appendix I for modeling methodology, assumptions, and results. Due to limited data availability, U.S. exports of soybean meal and oil could not be estimated.

investment in Cuba's existing soybean processing plant or construction of an additional plant could increase crushing capacity—and U.S. soybean exports to Cuba—over time. U.S. soybean meal and oil exports do not face such constraints in Cuba's domestic capacity and could grow as investment in Cuban livestock, dairy, and aquaculture production spurs growth in demand for feed. An increase in crushing capacity could result in lower imports of soybean meal and oil, which would be replaced by soybeans. Over time, investment and growth in Cuban livestock, poultry, and aquaculture production could lead to additional demand for soybeans and soybean products.

U.S. State-level Effects

Midwestern states, including Illinois and Iowa, are most likely to benefit from additional soybean exports, while increased exports of soybean meal and oil would mostly affect states with soybean processing facilities, such as Illinois, Iowa, Minnesota, and Indiana.⁷²⁰ Trade of soybeans in containers to supply a soybean processing facility at the Port of Mariel would reportedly favor Illinois soybeans because of easier container access.⁷²¹

Pulses

U.S. pulse exports⁷²² to Cuba would likely resume and reach a 10 to 15 percent market share (\$10 million annually) shortly following the removal of U.S. restrictions,⁷²³ and after 10 years could supply 50 to 90 percent of the market.⁷²⁴ The United States would almost exclusively export dry beans to Cuba, competing with Argentina and also with China, which offers extended credit terms unlikely to be matched by U.S. industry. Cuban consumers prefer the quality of U.S. dried beans, but Alimport has recently shifted to purchasing lower-priced dry peas and lentils, mostly from Canada. Absent the restrictions, Canada would likely continue to be Cuba's major source for dry pea and lentil imports because of their production advantage for those products.

U.S. Industry

Dry beans make up about 60 percent of U.S. pulse production and account for most of the U.S. pulses exported to Cuba in recent years.⁷²⁵ During 2005–14, U.S. production increased irregularly from 1.2 million mt to 1.3 million mt,⁷²⁶ reaching a value of \$1.0 billion by 2014.⁷²⁷ Globally, the United States ranked sixth in production in 2013, with a 5 percent share of total global production

⁷²⁰ See also table 5.5 on state effects.

⁷²¹ Industry representative, telephone interview by USITC staff, May 6, 2015.

⁷²² Pulses cover a range of leguminous vegetables, including dry beans, dry peas, lentils, chickpeas, and dry cowpeas. See appendix H for a complete list of the HS subheadings comprising this sector.

⁷²³ Northarvest Bean Growers Association, memo to USDA Secretary of Agriculture Mike Johanns, July 26, 2005.

⁷²⁴ Industry representatives, telephone interviews by USITC staff, October 2, 2015, and October 8, 2015.

⁷²⁵ Dry peas account for 34 percent and lentils for 7 percent of U.S. pulse exports to Cuba. USDA, NASS, *Crop Production 2014 Summary*, January 2015. For this reason, the discussion of the U.S. industry focuses on dry beans.

⁷²⁶ USDA, NASS, *Crop Production 2014 Summary*, January 2015.

⁷²⁷ USDA, NASS, *Crop Values 2014 Summary*, February 2015.

volume.⁷²⁸ The U.S. states with the largest production of dry beans are North Dakota, with 29 percent of total U.S. production in 2014, and Michigan, with 13 percent, followed by Nebraska, Idaho, and Minnesota, with about 10 percent each.⁷²⁹

The U.S. dry bean industry is highly export dependent and became increasingly so during 2005–14,⁷³⁰ in large part because of low and falling per capita consumption of dry beans in the United States since the early 2000s.⁷³¹ The U.S. export share of production (by volume) during this period ranged from a low of 23 percent in 2005 to a high of 43 percent in 2011. The United States was the second-largest global dry bean exporter in 2014,⁷³² behind China, and accounted for a 21 percent share of global exports that year. U.S. exports experienced significant growth from 279,000 mt in 2005 to 487,000 mt in 2014, with major markets in the EU, Canada, and Mexico accounting for about two-thirds of exports in 2014. The U.S. industry is competitive in global markets owing to its high level of mechanization, its efficiency, and its reputation for high quality.⁷³³

Cuban Industry and Market

During 2005–13, annual production of pulses (almost exclusively dry beans) in Cuba fluctuated widely (table 5.18). Between 2005 and 2006, production dropped by about one-third to 71,000 mt, its lowest level of the decade. Production then grew for the next several years, stabilizing at about 130,000 mt during 2011–13. Agricultural land reforms and food policy changes in the late 2000s, which focused on self-sufficiency in staple products, may have contributed to the growth in dry bean production.⁷³⁴ However, while these reforms succeeded in increasing domestic supply, production did not grow enough to satisfy demand.⁷³⁵ Most production occurs in the private sector, which has supplied over 95 percent of output since 2009;⁷³⁶ 45 percent of production goes to contract sales, while 37 percent is consumed on the farm or sold to farm workers. Another 6 percent of bean production is sold at farmers' markets.⁷³⁷ Although beans are a staple food in the Cuban diet,⁷³⁸ consumption fell by about one-quarter between 2005 and 2013. The Cuban monthly

⁷²⁸ FAOSTAT Production database, “Dry Beans” (accessed July 2, 2015); 2013 is the latest year for which data are available on a global basis.

⁷²⁹ USDA, NASS, *Crop Production 2014 Summary*, January 2015.

⁷³⁰ USDA, ERS, “Dry Beans” (accessed May 6, 2015).

⁷³¹ However, two recent trends in the United States may be affecting dry bean consumption patterns: increased public recognition of the possible health benefits of beans, and the increase in the Latino population, which consumes more beans on average than the U.S. population at large. Ag Marketing Resource Center, “Dry Edible Bean Profile” (accessed May 6, 2015).

⁷³² GTIS, Global Trade Atlas database (accessed July 6, 2015).

⁷³³ USDA, ERS, “Dry Beans” (accessed May 6, 2015).

⁷³⁴ The government implemented several agricultural reforms in 2009, including the lease of 1.6 million ha (4 million acres) of fallow state land to private farmers. In addition, policy changes were implemented to allow more direct interactions between producers and consumers, and internal prices were raised. *Cuba News*, “Cuba Reports Surge in Rice, Bean Output,” November 2011, 14.

⁷³⁵ Portela, “Despite Reforms, Food Output Shows Disappointing Results,” September 2012, 7.

⁷³⁶ ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, tables 9.10, 9.11, and 9.12.

⁷³⁷ ONEI, *Sector Agropecuario: Indicadores Seleccionados* [Selected indicators for the agricultural sector], February 2014, table 2.1.

⁷³⁸ USITC, *U.S. Agricultural Sales to Cuba*, July 2007, 4-15.

ration booklet includes beans, but the ration allowance has declined steadily from 1.25 pounds (lbs) per person per month in 2007⁷³⁹ to 0.6 lbs in 2012.⁷⁴⁰

Table 5.18: Cuba: Pulse production, consumption, and trade (1,000 mt)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	106	71	97	97	111	80	133	127	130	(^a)
Imports	207	250	201	232	107	91	84	77	101	116
Consumption	313	321	298	329	218	171	217	205	231	(^a)
Exports	0	0	0	0	0	0	0	0	0	0
Per capita consumption (kg)	27.8	28.4	26.3	29.1	19.3	15.2	19.2	18.2	20.5	(^a)

Sources: FAOSTAT, Production Database: Dried Bean Production (accessed August 26, 2015); World Bank, “Population,” WDI database (accessed August 26, 2015); GTIS, Global Trade Atlas database (accessed August 26, 2015).

^a Data for 2014 were not available.

Between 2005 and 2008, total imports of pulses (including dry beans, dry peas, and lentils) fluctuated between 200,000 mt and 250,000 mt. But from 2008–14, they fell by one-half, from 232,000 mt in 2008 to about 116,000 mt in 2014 (table 5.19).⁷⁴¹ Canada and China are the primary competitors in this market, although with different products. Canada exports mostly dry peas and lentils, which together made up 96 percent of Canada’s pulse exports to Cuba between 2010 and 2014, while China exports only dry beans.⁷⁴² In buying pulses, price is a major consideration for the Cubans, and they have bought peas and lentils from Canada because they have been cheaper than beans.⁷⁴³ During 2010–14, Canada’s market share ranged between about one-half to three-quarters, while China’s ranged from zero to a high of 34 percent. U.S. exports to Cuba were significant in the mid-2000s, but in 2012 Alimport stopped buying U.S. pulses (table 5.19). Although the United States exported dry peas and lentils to Cuba during 2005–08, from 2008 to 2011, U.S. exports to Cuba were exclusively dry beans.⁷⁴⁴

Reportedly, U.S. exports of dry beans to Cuba stopped because Cuba favored other suppliers, particularly China, owing to the relatively unfavorable terms of U.S. supply contracts, including financing requirements through third-country institutions.⁷⁴⁵ China reportedly offers credit terms of up to 365 days and may be bartering beans for sugar.⁷⁴⁶ According to industry sources, Alimport has refused to meet with U.S. bean suppliers since 2011 despite repeated efforts on the part of U.S. industry.⁷⁴⁷

⁷³⁹ USITC, *U.S. Agricultural Sales to Cuba*, July 2007, 4-15.

⁷⁴⁰ Carter, “Case Study #4-6: Cuba’s Food-Rationing System,” 2013, 4.

⁷⁴¹ GTIS, Global Trade Atlas database (accessed May 28, 2015).

⁷⁴² GTIS, Global Trade Atlas database (accessed October 5, 2015).

⁷⁴³ Industry representative, telephone interview by USITC staff, October 8, 2015.

⁷⁴⁴ GTIS, Global Trade Atlas database (accessed April 27, 2015).

⁷⁴⁵ Stephens, “Texas Businesses Stand Ready,” April 17, 2015.

⁷⁴⁶ Industry representatives, telephone interviews by USITC staff, October 2, 2015 and October 8, 2015.

⁷⁴⁷ Industry representatives, telephone interviews by USITC staff, June 9, 2015 and October 2, 2015.

Table 5.19: Cuba: Pulse imports by major supplier and the United States, 2005–14

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
	Quantity (1,000 mt)									
Canada	23.7	56.5	82.0	160.0	28.6	67.0	43.7	45.9	68.4	82.3
China	128.6	92.2	111.7	68.4	70.4	0.0	23.9	26.0	30.3	16.0
Argentina	1.2	28.4	2.0	2.7	2.0	16.1	5.8	5.5	1.3	16.0
United States	52.0	72.7	4.7	0.1	5.2	6.5	9.9	0.0	0.0	0.0
All other	1.7	0.6	0.2	0.7	1.3	1.0	0.4	^(a)	0.8	1.5
Total	207.2	250.4	200.6	232.0	107.4	90.6	83.8	77.5	100.8	115.7
	Value (million dollars)									
Canada	6.9	9.6	21.2	56.0	8.9	20.9	19.5	20.3	32.7	36.2
China	42.5	35.9	48.5	46.4	59.4	0.0	18.4	22.5	32.4	20.5
Argentina	0.6	13.1	1.4	3.1	2.2	12.1	5.0	5.4	1.4	9.8
United States	11.7	22.6	2.0	0.1	4.3	5.6	7.7	0.0	0.0	0.0
All other	1.1	0.5	0.2	0.7	1.1	1.1	0.5	^(b)	0.9	2.0
Total	62.8	81.7	73.3	106.3	75.8	39.6	51.1	48.3	67.4	68.5

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015).

^a Less than 50 mt.

^b Less than \$50,000.

Effects of the Removal of U.S. Restrictions

According to industry representatives, if financial restrictions were to be lifted, U.S. dry bean exports to Cuba would likely resume. In a July 2005 memo to the U.S. Secretary of Agriculture, the Northharvest Bean Growers Association forecast that the dry bean industry could recover export sales of more than \$10 million in a relatively short period if U.S. financing were allowed.⁷⁴⁸ This would represent a market share of 10 to 15 percent of Cuban imports. Industry sources believe that this estimate is still valid as of 2015.⁷⁴⁹ Industry representatives estimate that 10 years after trade relations are restored, the United States could supply between 50 and 90 percent⁷⁵⁰ of Cuban bean demand.⁷⁵¹ However, U.S. suppliers perceive selling to Cuba as risky and would like to see some sort of loan guarantee for export sales to reduce the risk of nonpayment.⁷⁵² Canada would likely remain the primary supplier of dry peas and lentils, as its climate is better suited to their production.⁷⁵³

U.S. State-level Effects

If normal trade relations were restored, U.S. dry bean farmers in North Dakota, Michigan, Nebraska, Minnesota, and Idaho would likely benefit the most. According to a representative of the U.S. Dry Beans Council, black beans would be the top U.S. export product, followed by pinto beans.

⁷⁴⁸ Northharvest Bean Growers Association, memo to USDA Secretary of Agriculture Mike Johanns, July 26, 2005.

⁷⁴⁹ Industry representative, telephone interview by USITC staff, June 9, 2015.

⁷⁵⁰ Industry representatives, telephone interviews by USITC staff, October 2, 2015 and October 8, 2015.

⁷⁵¹ Commission modeling estimates that U.S. exports of pulses could reach a nearly 30 percent share of the Cuban import market in five years, the only time frame that was estimated. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁷⁵² Industry representative, telephone interview by USITC staff, October 2, 2015.

⁷⁵³ Industry representatives, telephone interviews by USITC staff, June 9, 2015 and October 8, 2015.

Michigan is the leading producer of black beans, with 58 percent of U.S. production, while North Dakota is the leading producer of pinto beans, accounting for 62 percent of U.S. production.⁷⁵⁴

Poultry

Poultry⁷⁵⁵ is the top Cuban agricultural import, and the United States is the lead supplier. Given the already dominant U.S. position, it is unlikely that the removal of U.S. trade restrictions would lead to significantly more U.S. exports to Cuba in the short term, although it could increase shipping efficiency and lower transportation costs. In the long term, growth in Cuban incomes and of tourism in Cuba could raise U.S. poultry exports. As Cuban incomes increase, consumption of protein—including chicken—is likely to increase as well.⁷⁵⁶

U.S. Industry

Poultry is the leading Cuban agricultural import from the United States (table 5.3). U.S. poultry meat production (mostly chicken and turkey) totaled 44 billion lbs in 2014, an 8 percent increase from 41 billion lbs in 2005.⁷⁵⁷ Production grew between 2005 and 2008, fell in 2009, and expanded to record levels in 2014.⁷⁵⁸ Farm-level production was valued at more than \$38 billion during 2014, up almost 60 percent from \$24 billion in 2005.⁷⁵⁹ Georgia, Arkansas, North Carolina, Alabama, and Mississippi are the top-five chicken-producing states, with about 60 percent of the national production in 2014.⁷⁶⁰ The United States was the world's largest producer of poultry meat (chicken and turkey) during 2005–14, accounting for more than 23 percent of global production (20 percent of chicken and 49 percent of turkey by quantity).⁷⁶¹ The United States is also the world's leading poultry meat exporting country by volume; it supplied 35 percent of global exports during 2005–14, just ahead of Brazil, which supplied 34 percent.⁷⁶² In 2014, U.S. poultry exports were \$5.4 billion (about 20 percent of U.S. poultry production), nearly double the \$2.7 billion of poultry exported in 2005.⁷⁶³ The United States' poultry meat competitiveness is based on its highly integrated production system, access to high-quality animal feed, and high-yielding genetics.⁷⁶⁴ In addition, U.S. consumers have developed a preference for chicken breast meat, so that chicken leg quarters are readily available at competitive prices for export markets. Brazil, Thailand, the EU, and China are other global competitors. The United States exported poultry meat to over 150 countries in

⁷⁵⁴ USDA, ERS, “Dry Beans” (accessed October 15, 2015).

⁷⁵⁵ See appendix H for a complete list of the HS subheadings comprising this sector.

⁷⁵⁶ USITC, hearing transcript, 107 (testimony of Terry Harris, Riceland Foods); 107 (testimony of Bill Christ, U.S. Grains Council).

⁷⁵⁷ USDA, NASS, Data and Statistics, Quick Stats Lite (accessed April 23, 2015).

⁷⁵⁸ USDA, NASS, Data and Statistics, Quick Stats Lite (accessed February 1, 2016).

⁷⁵⁹ USDA, NASS, “Poultry Production and Value,” April 2006; USDA, NASS, “Poultry Production and Value,” April 2015.

⁷⁶⁰ North Carolina, Minnesota, Indiana, Missouri, and Arkansas are the top five turkey producers, with 57 percent of the U.S. total in 2014. USDA, NASS, “Poultry Production and Value,” April 2015.

⁷⁶¹ USDA, PSD Online (accessed April 27, 2015).

⁷⁶² The United States is the second leading global exporter of poultry meat in value terms, and also second behind Brazil in chicken meat exports. GTIS, Global Trade Atlas database (accessed April 28, 2015).

⁷⁶³ GTIS, Global Trade Atlas database (accessed April 28, 2015).

⁷⁶⁴ USITC, *Poultry: Industry and Trade Summary*, January 2014, 1.

2014, with the top five export markets—Mexico, Canada, Hong Kong, China, and Angola—accounting for nearly 54 percent of the total value. Cuba was the sixth-largest export market for U.S. poultry, accounting for 2.8 percent of the value of U.S. poultry exports. In 2014, U.S. poultry meat exports to Cuba totaled \$147.7 million, up 153 percent from \$58.3 million in 2005.⁷⁶⁵

Cuban Industry and Market

Cuba's domestic poultry industry is dominated by the state-owned Union of Companies of the National Poultry Conglomerate, or *Unión de Empresas Combinado Avícola Nacional* (UECAN) in Spanish. However, UECAN focuses on the production of eggs rather than meat, and most domestic poultry meat production is from small independent and backyard operations.⁷⁶⁶ During 2005–14, Cuban broiler meat production was fairly stable, averaging 33,000 mt (table 5.20).⁷⁶⁷ Cuba imported 196,300 mt in 2014, a two-thirds increase from nearly 117,000 mt in 2005.⁷⁶⁸ About 80 percent of Cuba's poultry consumption during this period came from imports. Between 2005 and 2014, Cuban per capita consumption grew over 50 percent, from 12.6 kg to 19.5 kg. The increase was almost exclusively attributable to larger supplies available to consumers, directly resulting from higher imports.

Table 5.20: Cuba: Broiler meat production, consumption, and trade (1,000 mt)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	29	31	34	33	33	34	35	35	32	34
Imports	113	115	126	176	176	178	134	196	182	186
Consumption	142	146	160	209	209	212	169	231	214	220
Per capita consumption (kg)	12.6	12.9	14.2	18.5	18.5	18.8	15.0	20.5	19.0	19.5

Source: USDA, FAS, PS&D Online (accessed August 26, 2015); World Bank, "Population," WDI database (accessed August 26, 2015).

^a Quantity is in product weight and includes only broiler meat. See table 5.21 for trade volumes for all poultry meat.

Chicken is a primary source of animal protein in the Cuban diet. Chicken meat has been included as part of the subsidized Cuban ration system since about 1995, when the monthly chicken ration was set at three ounces per person.⁷⁶⁹ Per capita consumption has been boosted by increases in the monthly ration, which has been as large as 16 ounces per person with an additional allocation of 12 ounces per person to replace fish (the availability of fish appears to be limited).⁷⁷⁰ The ration allocation, however, can vary from month to month. In addition, inclusion of a given amount of chicken meat among the ration allocation does not necessarily guarantee that the product will be available for purchase. Most imported chicken for local consumption is distributed through ration stores and meat markets.

⁷⁶⁵ GTIS, Global Trade Atlas database (accessed April 28, 2015).

⁷⁶⁶ El Sitio Avícola, "Cuban Poultry: A Promising Future," June 16, 2014; El Sitio Avícola, "Cuban Poultry Production Is Booming," January 20, 2015.

⁷⁶⁷ Cuban data suggest slightly greater production, with an average of 43,300 mt during 2009–14. The difference appears to be an additional 9,500 mt of production reported from state-owned poultry companies. ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, table 9.24.

⁷⁶⁸ GTIS, Global Trade Atlas database (accessed August 6, 2015).

⁷⁶⁹ García Alvarez, "Overview of Cuba's Food Rationing System," 2004.

⁷⁷⁰ *Havana Times*, "Raciones para Habaneros" [Rations for Havana residents], February 24, 2015.

The United States was Cuba's largest import supplier of poultry meat during 2005–14, accounting for almost three-quarters of imports (table 5.21). Brazil was the next largest supplier, with 22 percent of the Cuban import market. The concentration of the chicken industry in the southeastern United States, next door to Cuba, minimizes transportation costs relative to global competitors for chicken meat sales. However, the recent appreciation in the dollar relative to other currencies may have partially offset some of this geographic advantage.

Table 5.21: Cuba: Poultry imports by major supplier and the United States, 2005–14^a

Supplier	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Quantity (1,000 mt)										
United States	76.5	79.1	97.3	144.6	146.8	141.1	99.0	150.6	137.4	143.7
Brazil	31.9	32.1	29.1	33.0	31.7	40.1	35.4	38.8	38.0	45.4
Canada	0.8	1.0	0.8	0.5	0.8	0.2	1.4	8.1	6.5	4.6
All other	7.3	4.4	1.3	0.6	0.9	0.5	1.6	2.2	3.2	2.7
Total	116.5	116.6	128.5	178.6	180.1	181.9	137.4	199.7	184.8	196.3
Value (million dollars)										
United States	58.3	44.7	77.9	136.0	141.2	103.0	97.1	158.0	144.7	147.8
Brazil	23.6	20.1	22.6	31.6	31.8	35.6	35.9	34.7	44.4	42.8
Canada	0.6	0.9	0.6	0.4	0.8	0.3	2.3	13.1	10.2	6.2
All other	3.4	2.9	1.8	1.1	1.0	0.7	3.0	4.0	7.1	5.5
Total	85.9	68.6	103.0	169.1	174.7	139.5	138.4	209.8	206.4	202.2

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015).

^a Quantity is in product weight and includes all poultry meat. (Table 5.20 includes only broiler meat, so trade values do not match.)

In contrast to almost all other sectors, U.S. restrictions have had limited impact on U.S. chicken meat exports to Cuba. Based on abundant supplies of competitively priced frozen chicken leg quarters, U.S.-based trading companies have been able to regularly secure the largest share of Alimport's quarterly contract offerings. Moreover, traders mentioned that the credit and payment restrictions limit the number of U.S. poultry exporters interested in the Cuban market, which is an advantage for those that do export there.⁷⁷¹

In June 2015, Alimport announced that U.S. exporters would be ineligible to bid on contracts for delivery of chicken meat during August and September 2015. The reason stated was that outbreaks of highly pathogenic avian influenza (HPAI) in the United States could threaten fulfillment of those contracts. Alimport's reasoning was unclear, as Cuban veterinary authorities continued to maintain import restrictions on only those U.S. states where HPAI infections have been confirmed.⁷⁷² These restrictions, combined with lower prices and, possibly, political factors, contributed to a 26 percent drop in the volume of U.S. poultry meat exports to Cuba in 2015 (a decline of 47 percent in terms

⁷⁷¹ Industry representative, telephone interview by USITC staff, May 6, 2015.

⁷⁷² Most of the infected operations are turkey and egg operations in upper Midwest states, primarily Iowa and Minnesota. Leading chicken production areas in the Southeast, including Georgia and Alabama, have been unaffected. According to Cuban veterinary authorities, suppliers outside the affected areas would be eligible to ship chicken meat to Cuba if U.S. exporters were allowed to enter bids and be awarded contracts. Industry representative, interview by USITC staff, Miami, June 13, 2015.

of value).⁷⁷³ The beneficiary of this change in Alimport policy was Brazilian exporters. In fact, Brazilian poultry meat exports to Cuba more than doubled by both volume and value in 2015.⁷⁷⁴

Effects of the Removal of U.S. Restrictions

As noted above, the United States is already the top supplier of Cuban poultry imports because of competitive pricing and logistics.⁷⁷⁵ However, removal of financing and travel restrictions could result in modest growth of U.S. poultry exports.⁷⁷⁶ U.S. chicken is priced lower than that of other suppliers (such as Brazil), and with the restrictions gone, U.S. companies would be able to offer more competitive credit terms. Increased tourism could also spur additional demand for higher-value poultry products.⁷⁷⁷ Further, removing restrictions might also facilitate government-to-government interaction to more quickly resolve trade frictions, such as problems with HPAI.

U.S. State-level Effects

The states most likely to benefit are the primary broiler-producing states, including Georgia, Arkansas, North Carolina, Alabama, and Mississippi. U.S. poultry exports to Cuba are almost entirely frozen chicken leg quarters, which can be sourced from these states.

Pork

Although Cuba is self-sufficient in pork production,⁷⁷⁸ and pork imports accounted for less than 1 percent of all agricultural imports in 2014 (table 5.1), U.S. pork exports to Cuba would likely grow following the removal of U.S. restrictions. Initially, exports would likely consist of low-value pork muscle cuts and variety meats, which would compete with frozen pork from Canada. Over time, exports could expand to include higher-value pork cuts for the hotel, restaurant, and institutional sectors (mostly due to increased tourism). The efficiency of U.S. pork production and short shipping distance would be competitive advantages for U.S. pork exports.

U.S. Industry

The United States is a major global pork producer and exporter. In 2014, it was the world's largest pork exporter, accounting for about one-third of global exports. Other major global exporters

⁷⁷³ USDOC (February 8, 2016); GTIS, Global Trade Atlas database (accessed February 18, 2016).

⁷⁷⁴ GTIS, Global Trade Atlas database (accessed February 18, 2016). Further discussion of Cuba's sanitary and phytosanitary regime appears in chapter 4.

⁷⁷⁵ The U.S. accounted for an average of 75 percent of Cuban imports during 2005–14. GTIS, Global Trade Atlas database (accessed August 6, 2015); industry representative, interview by USITC staff, Miami, June 13, 2015.

⁷⁷⁶ Commission modeling estimates an increase in market share of U.S. poultry products in Cuban imports, from 74 percent to about 87 percent. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁷⁷⁷ Industry representative, interview by USITC staff, May 27, 2015; Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 19–21.

⁷⁷⁸ Cuban government official, interview by USITC staff, Havana, June 15, 2015. See appendix H for a complete list of the HS subheadings comprising this sector.

include the EU and Canada.⁷⁷⁹ One-third of U.S. pork production comes from Iowa, by far the largest U.S. pork-producing state in 2014. North Carolina and Minnesota were the next-largest producing states, with 12 percent and 11 percent of U.S. production, respectively. The top export markets for U.S. pork are Japan, Mexico, Canada, China and Hong Kong, and South Korea.

The U.S. industry is competitive in global markets largely because of efficiencies from vertical integration as well as moderate concentration, with the four largest firms accounting for almost two-thirds of all hogs slaughtered in the United States in 2011 (the latest data available).⁷⁸⁰ In addition, the United States is a major producer of corn and soybeans, which are the primary ingredients in much swine feed; feed accounts for the majority of the cost of raising swine for pork. As a result, U.S. producers are among the most cost efficient in the world. A survey of commercial swine production costs in 15 countries found that in 2014, only parts of Brazil had lower production costs than producers in the United States.⁷⁸¹

Cuban Industry and Market

Cuban pork production remained fairly stable over 2005–14, and in recent years was close to 100,000 mt carcass weight equivalent (CWE) annually (table 5.22). Swine in Cuba are raised on both state-owned and private farms. In 2014, state farms accounted for 35 percent of the total swine herd, 30 percent of the piglet crop, and 59 percent of swine slaughtered.⁷⁸² Corn and soybean meal, the main ingredients in feeding rations for swine produced in the United States, are not produced in high enough quantities in Cuba to serve the same purpose there. As a result, Cuban researchers have developed a variety of alternative diets for swine. These diets include such ingredients as processed food waste from hotels and institutions, such as hospitals and schools, as well as fish silage, sweet potato, citrus pulp, sugarcane molasses, and sugarcane juice.⁷⁸³ Over the past decade, Cuba’s pork consumption averaged approximately 120,000 mt CWE annually, or 10.5 kg per capita, mostly supplied by domestic production. Imports have generally declined, with a period high of 20,000 mt CWE in 2006 and a low of 5,000 mt CWE in 2014 (table 5.22).

Table 5.22: Cuba: Pork production, consumption, and trade (1,000 mt CWE)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Production	97	115	125	125	113	100	98	100	98	100
Imports	14	20	13	13	14	15	8	6	6	5
Consumption and residual	111	135	138	138	127	115	106	106	104	105
Per capita consumption (kg)	9.8	11.9	12.2	12.2	11.3	10.2	9.4	9.4	9.2	9.3

Source: USDA, FAS, PSD Online (accessed August 26, 2015); World Bank, “Population,” WDI database (accessed August 26, 2015).

⁷⁷⁹ China produces and consumes about half the world’s pork, but is a net importer of pork. The United States consumes about 8 percent of global pork, and the EU about 18 percent. USDA, PSD online (accessed May 7, 2015).

⁷⁸⁰ USDA, GIPSA, *2013 Annual Report: Packers and Stockyards Program*, March 2014, 27.

⁷⁸¹ AHDB, BPEX, *2012 Pig Cost of Production in Selected Countries*, October 2013, 6–7.

⁷⁸² ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, tables 9.20 and 9.21.

⁷⁸³ Dominguez, “New Research and Development Strategy” (accessed May 7, 2015), 1; Pérez, *Feeding Pigs in the Tropics*, 1997; Pérez, “Integration of Livestock in the Sugarcane Industry,” 1996.

Before 2014, the United States was the largest supplier of Cuban pork imports,⁷⁸⁴ mostly consisting of lower-value cuts, such as pork trim, butts, and hams, to be processed into sausage and lunch meats (table 5.23).⁷⁸⁵ However, in 2014, U.S. pork exports to Cuba declined by more than 80 percent, likely because of higher U.S. pork prices caused by short supplies,⁷⁸⁶ and the remaining exports consisted entirely of offal. In 2014, the EU was the largest supplier of Cuba's pork imports, supplying more than half its imports by value, while the U.S. share fell to 9 percent, behind the EU and Canada. There were no U.S. exports of pork to Cuba in 2015.⁷⁸⁷

Table 5.23: Cuba: Pork imports by major supplier and the United States, 2005–14^a

Country/region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Quantity (1,000 mt)										
Spain	0.2	0.1	0.3	0.3	0.1	0.3	1.1	0.5	0.7	2.3
Canada	4.6	4.8	3.3	2.7	4.0	3.0	1.3	1.3	1.0	1.5
United States	3.6	7.5	3.3	5.3	5.6	7.0	3.5	3.3	4.0	0.6
Poland	0.0	0.0	0.0	0.1	0.2	0.5	0.6	0.2	0.2	0.2
All other	3.7	4.4	4.1	3.0	1.2	0.3	0.2	0.2	0.2	0.2
Total	12.1	16.9	11.1	11.3	11.0	11.8	6.8	5.4	6.2	4.9
Value (million dollars)										
Spain	1.2	0.8	2.0	2.0	1.2	1.8	3.8	2.4	3.7	7.0
Canada	9.7	10.7	7.1	6.1	8.9	7.0	4.0	3.5	2.8	4.7
United States	7.5	14.1	6.0	12.7	10.7	15.3	9.2	9.2	8.8	1.3
Poland	0.0	0.0	0.0	0.2	0.4	1.1	1.2	0.4	0.6	0.5
All other	7.4	7.8	8.0	6.6	1.9	3.0	0.8	0.5	0.5	0.7
Total	25.7	33.4	23.0	27.5	23.1	28.2	19.0	16.1	16.3	14.3

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015).

^a Data are in product weight and include pork offal. Data in table 5.22 are in carcass weight equivalent and exclude offal, so trade values do not match.

Effects of the Removal of U.S. Restrictions

U.S. industry representatives point to several impediments to exporting pork to Cuba.⁷⁸⁸ Limiting factors include licensing requirements, requirement that transactions go through Alimport, the inability to use checkoff funds in Cuba, and limitations on travel.⁷⁸⁹ Relaxing trade and travel restrictions could result in near-term growth for U.S. exports of low-value pork muscle cuts and variety meats to Cuba.⁷⁹⁰ Although Cuba does not currently import a significant amount of pork,

⁷⁸⁴ Import data in table 5.23 include pork offal and are in product weight, so are not directly comparable to the data in carcass weight equivalent (CWE) in table 5.22.

⁷⁸⁵ Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 22.

⁷⁸⁶ *Ibid.*, 10.

⁷⁸⁷ USITC DataWeb/USDOC (accessed February 8, 2016).

⁷⁸⁸ U.S. Meat Export Federation, written submission to the USITC, June 18, 2015, 1–2.

⁷⁸⁹ Checkoff funds are collected from agricultural producers and used for marketing programs overseen by the USDA. In some cases, USDA contributes additional funding for the marketing programs' activities.

⁷⁹⁰ Commission modeling estimates an 11 percentage point increase in the market share of U.S. pork products, to reach nearly 90 percent of Cuban imports. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

stronger demand for higher-value pork cuts could occur over the long term as the hotel, restaurant, and institutional sectors develop.⁷⁹¹

U.S. State-level Effects

The states most likely to benefit are Iowa, North Carolina, and Minnesota, leading states for pork production.⁷⁹² These states would be competitive in the absence of restrictions, especially because their shorter distance to Cuba and other logistics-related advantages would allow them to ship fresh pork, whereas pork exports from the EU are mostly frozen meat.

Beef

Beef⁷⁹³ accounted for less than 1 percent of total Cuban agricultural imports by value in 2014 (table 5.1). However, the removal of U.S. restrictions would likely result in more trade opportunities for U.S. beef, particularly lower-priced cuts and frozen offal for consumption by residents and higher-end beef cuts for tourists. The United States has a logistical advantage vis-à-vis other major beef suppliers such as Canada and the EU. Removing restrictions would also allow the U.S. beef industry to conduct market promotion in Cuba, which industry representatives now identify as a major limitation on sales.

U.S. Industry

The United States is a major producer and exporter of beef, and the largest consumer of beef globally. Cattle production is widespread in the United States, with leading producer states Texas, Nebraska, and Kansas accounting for 15 percent, 12 percent, and 8 percent, respectively, of U.S. production by value.⁷⁹⁴

In 2014, the United States was the world's second-largest beef exporter by value behind Australia, and the fourth-largest beef exporter by volume, behind India, Australia, and Brazil. That year, U.S. beef exports of 816,000 mt (valued at \$6 billion) accounted for 12 percent of global trade by volume, and 18 percent of global trade by value.⁷⁹⁵ Beef trade includes many different types of products and cuts with different price points and end uses. The United States produces mostly high-quality, grain-fed beef, and is a major importer of lean beef, predominately for processing.⁷⁹⁶ Most U.S. beef is grain-fed, while the beef from Brazil and India has not been finished on grain. Grain-fed beef generally sells at higher prices than beef from cattle that have not been finished on grain. Many edible beef products are more highly valued in international markets than in the U.S.

⁷⁹¹ Zahniser et al., *U.S.-Cuba Agricultural Trade*, June 2015, 21–22; U.S. Meat Export Federation, written submission to the USITC, June 18, 2015, 2; USITC, hearing transcript, June 2, 2015, 112 (testimony of Devry Boughner Vorwerk, Cargill).

⁷⁹² See also table 5.5 on state impacts.

⁷⁹³ See appendix H for a complete list of the HS subheadings comprising this sector.

⁷⁹⁴ USDA, NASS, *Meat Animals Production, Disposition, and Income*, April 2015, 11.

⁷⁹⁵ Exports of fresh/chilled and frozen muscle cuts of beef under HS 0201 and 0202. GTIS, Global Trade Atlas database (accessed June 17, 2015).

⁷⁹⁶ USDA, ERS, "Cattle and Beef: Overview" (accessed June 17, 2015).

domestic market,⁷⁹⁷ making the United States the world's largest exporter of beef offal, with an estimated 19 percent of such exports by value in 2014.⁷⁹⁸

Cuban Industry and Market

After declining for decades, Cuba's cattle herd expanded slowly by 1 percent a year between 2005 and 2013.⁷⁹⁹ Although below previous levels, Cuba's national herd averaged about 4.1 million head during 2011–13, the latest period for which data are available.⁸⁰⁰ The volume of beef produced in Cuba has also increased slightly in recent years—by about 12 percent since 2005.⁸⁰¹ Between 2007 and 2013, the number of cattle slaughtered in Cuba increased by about 20 percent to 402,800 in 2013. The live weight per animal also increased, with a 2014 average live weight per animal of 336 kg (741 pounds, compared to a U.S. live weight of 1,314 pounds).⁸⁰²

Cuba's imports of beef from all sources fluctuated significantly over the 2005–14 period. They were at their highest level (\$42.3 million) in 2006 and their lowest level (\$9.8 million) in 2012, coming to \$14.1 million in 2014 (table 5.24). Import sources have also changed: Brazil held half of Cuba's import market share in 2006, by value, whereas the EU held one-half in 2014.⁸⁰³ Most Cuban imports of U.S. beef over the 2005–13 period were offal, primarily frozen beef liver, and 2013 was the last year of U.S. exports.⁸⁰⁴ In most years, Canada, Chile, and the EU were Cuba's largest import sources of beef during the period. Canada exported predominately frozen muscle cuts of beef (mostly boneless), while the EU exports were almost all processed beef products.

⁷⁹⁷ U.S. Meat Export Federation, "Market Access Triggers Swings," 1 (accessed June 17, 2015).

⁷⁹⁸ Exports of fresh/chilled and frozen edible beef offal under HS 0206.10, 0206.21, 0206.22, and 0206.29. GTIS, Global Trade Atlas database (accessed July 17, 2015).

⁷⁹⁹ FAOSTAT Production database, "Cattle Stocks" (accessed November 17, 2015).

⁸⁰⁰ Ibid.

⁸⁰¹ FAOSTAT Production database, "Meat, Cattle" (accessed June 17, 2015).

⁸⁰² ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, tables 9.17 and 9.19; USDA, NASS, *Livestock Slaughter: 2013 Summary*, April 2014, <http://usda.mannlib.cornell.edu/usda/nass/LiveSlauSu//2010s/2014/LiveSlauSu-04-21-2014.pdf>.

⁸⁰³ GTIS, Global Trade Atlas database (accessed June 1, 2015).

⁸⁰⁴ There were no U.S. exports of beef to Cuba in 2015. USITC DataWeb/USDOC (accessed February 8, 2016).

Table 5.24: Cuba: Beef imports by major supplier and the United States, 2005–14^a

Country/region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Quantity (1,000 mt)										
Italy	^(b)	0.0	0.0	3.3	1.6	2.2	0.6	0.9	1.7	3.4
Spain	0.0	0.0	^(b)	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Canada	1.7	1.3	0.6	1.2	0.4	1.4	0.7	0.4	0.8	0.5
Chile	3.0	2.3	2.0	0.7	0.4	0.6	0.6	0.1	1.1	0.6
Brazil	1.4	9.9	1.3	4.3	0.1	2.0	0.4	0.8	0.4	0.6
United States	0.0	0.1	1.2	0.7	0.7	0.7	0.6	0.3	0.1	0.0
All other	4.9	4.6	3.5	1.5	2.2	1.2	0.5	0.4	0.2	0.2
Total	11.3	18.3	8.7	11.7	5.4	8.1	3.4	3.0	4.3	5.5
Value (million dollars)										
Italy	^(c)	0.0	0.0	6.1	2.8	4.1	1.2	1.7	3.4	7.0
Spain	^(c)	^(c)	0.1	0.0	0.0	0.0	^(c)	^(c)	0.4	0.6
Canada	1.0	1.9	0.7	6.6	1.8	8.7	5.3	3.5	4.4	2.5
Chile	5.4	4.7	4.0	2.0	1.3	1.7	2.1	0.5	3.4	1.8
Brazil	2.0	22.6	2.9	8.3	0.2	4.9	0.8	2.5	1.2	1.2
United States	0.0	0.1	0.7	0.5	0.4	0.6	0.9	0.2	0.2	0.0
All other	10.4	13.1	12.3	6.5	7.2	4.8	1.6	1.4	0.7	1.0
Total	19.2	42.3	20.6	30.0	13.8	24.7	12.0	9.8	13.8	14.1

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015).

^a Data are in product weight and includes beef offal. Table 5.23 is in carcass weight equivalent and excludes offal, so trade values do not match.

^b Less than 50 mt.

^c Less than \$50,000.

Effects of the Removal of U.S. Restrictions

While Cuban beef imports were relatively small in 2014, accounting for less than 1 percent of total Cuban agricultural imports by value (table 5.1), they would likely expand with growth in tourism.⁸⁰⁵ U.S. beef industry representatives view licensing rules, the requirement that transactions go through Alimport, the inability to use checkoff funds in Cuba, and limitations on travel to establish business relationships as factors limiting U.S. beef sales to Cuba.⁸⁰⁶ In the absence of restrictions and with competitive pricing vis-à-vis other exporting countries, industry expects additional trade for lower-priced opportunities (such as beef offal) for consumption by Cuban residents and higher-end beef cuts for the tourism sector.⁸⁰⁷

U.S. State-level Effects

The states most likely to benefit from additional exports are Texas, Nebraska, and Kansas, the United States' top beef-producing states.⁸⁰⁸ One study estimates that Texas would likely account

⁸⁰⁵ Commission modeling estimates a significant increase in the market share of U.S. beef products in Cuban imports, albeit from a very low base. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁸⁰⁶ U.S. Meat Export Federation, written submission to the USITC, June 18, 2015, 1–2.

⁸⁰⁷ *Ibid.*, 2.

⁸⁰⁸ See also table 5.5 on state effects.

for about 14 percent of the larger volume of U.S. beef exports expected under more normal trade relations.⁸⁰⁹

Dairy

U.S. dairy exports⁸¹⁰ to Cuba would likely resume following the removal of U.S. restrictions. Milk powder was Cuba's second-largest agricultural import in 2014, while dairy products overall made up the leading category, accounting for 13 percent of total agricultural imports by value (table 5.1). However, the United States has not exported dairy products to Cuba since 2011. If U.S. restrictions are removed, U.S. dairy exports would likely be of both milk powder and fluid milk, with U.S. exporters benefiting from lower freight costs relative to other major suppliers. Over time, increased U.S. tourism to Cuba and rising Cuban incomes could result in demand for other U.S. dairy products, such as yogurt and cheese.

U.S. Industry

The U.S. dairy industry is estimated to have been the world's second-largest producer of cow's milk during 2014 (after the EU), representing nearly 20 percent of global output.⁸¹¹ U.S. milk production totaled 206 billion lbs in 2014, up from 177 billion lbs in 2005 and averaging almost 2 percent annual growth over the period.⁸¹² California, Wisconsin, Idaho, New York, and Pennsylvania are the top five milk-producing states, representing a little over one-half of U.S. milk production in 2014. Total output of U.S. manufactured dairy products totaled \$106 billion in 2013, the latest year for which data are available.⁸¹³

The United States remains a significant global exporter of dairy goods, particularly nonfat dry milk, whey proteins, cheese, and lactose.⁸¹⁴ In 2014, the United States exported \$6.9 billion in dairy products (roughly 15 percent of the U.S. milk supply), up from \$1.5 billion in 2005. U.S. dairy exports were roughly 12 percent of global dairy exports in 2014, behind the EU (35 percent) and New Zealand (24 percent). The United States exported dairy products to over 150 countries in 2014, but over half of exports (by value) were shipped to Canada and Mexico (partners in the North American Free Trade Agreement), China, Japan, and South Korea. U.S. competitiveness in dairy products is based on ready access to high-quality animal feed, high-yielding bovine genetics, and efficient transportation and handling services.

⁸⁰⁹ Adcock, Ribera, and Rosson, "The Potential for Texas Agricultural Exports to Cuba," November 2015, 5.

⁸¹⁰ See appendix H for a complete list of the HS subheadings comprising this sector.

⁸¹¹ USDA, FAS, "Cows Milk Production and Consumption: Summary," December 16, 2014.

⁸¹² USDA, ERS, "Milk Cows and Production by State and Region," May 1, 2015; USDA, NASS, *Milk Production*, October 20, 2015.

⁸¹³ DOC, Census, "Value of Shipments for Product Classes" (accessed December 1, 2015).

⁸¹⁴ GTIS, Global Trade Atlas database (accessed April 20, 2015).

Cuban Industry and Market

The local dairy herd in Cuba produces roughly 50 percent of the country's dairy needs, supplying fresh milk to the local populace.⁸¹⁵ However, nearly all manufactured dairy products, such as cheese and milk powders, are imported.⁸¹⁶ Liquid milk is expensive to ship and not imported by the Cuban government. Additional liquid milk demand not supplied by local cows is created by adding water to imported milk powder. The government controls the domestic market, buying all production and distributing it primarily to children and elderly persons with nutritional deficiencies.⁸¹⁷

Milk production has fluctuated in recent decades as the country has struggled to meet demand. In the mid-1980s, milk production topped out at approximately 250 million gallons,⁸¹⁸ but by 2005, it had fallen to 113 million gallons produced by 380,000 dairy cows.⁸¹⁹ At that point, the government introduced policy changes offering higher prices for producers and better distribution systems to improve their links to consumers. In response, from 2006 to 2011 Cuban milk production more than doubled.⁸²⁰ But Cuba's milk production has again gone down since 2013 because the dairy herd fell by 19,000 cows in 2014, and milk deliveries from cows, buffaloes, and goats all declined.⁸²¹

In recent years the dairy sector has been one of the main targets of the Cuban government's efforts at import substitution, and it enjoys some privileges not extended to other agricultural producers, such as the right to purchase inputs using hard currency.⁸²² But the high-cost Cuban dairy herd has a long way to go to fully meet the needs of local consumers and foreign tourists.⁸²³ Local herds face a shortage of cattle feed in the dry season, while processors have aging milking machines and refrigeration facilities that need to be replaced.⁸²⁴ Drought and theft of dairy cattle for butchering have also depleted the herd available for Cuban milk production.⁸²⁵

⁸¹⁵ JICA, "Milk Production in Cuba Struggles," July 31, 2014.

⁸¹⁶ Companies such as *Alimentos Rio Zaza*, a joint Cuban-Chilean venture, still produce goods such as evaporated milk in Cuba. But locally manufactured dairy products are a very small percentage of total dairy consumed on the island. *Cuba News*, "Coralsa Keeps Selling Rio Zaza Products," December 2012, 6.

⁸¹⁷ Cuba distributes one liter of milk per day to every child between the ages of 0 and 7, as well as to the sick and to malnourished elderly persons. Children up to 15 years old received fresh milk distributions in the past, but Cuba produces too little milk to meet the need. JICA, "Milk Production in Cuba Struggles," July 31, 2014.

⁸¹⁸ *Cuba News*, "When It Comes to Sheer Size," November 2006, 14–15.

⁸¹⁹ National Milk Producers' Federation, written submission to the USITC, May 10, 2007. Data converted from pounds to gallons at 1 gallon = 8.62 lbs.

⁸²⁰ Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 188; *Cuba News*, "Despite Reforms, Food Output Shows Disappointing Results," September 2012, 7.

⁸²¹ Benitez, "Cuba Milk and Egg Production Drops Again," June 15, 2015.

⁸²² García Álvarez and Nova González, "Food Production and Import Substitution," August 29, 2013, 98.

⁸²³ Official Cuban statistics list per capita output of milk at 51 liters in 2013, down from 96 liters in 1989. *Cuba News*, "Lagging Food Production Keeps Import Bill High," June 2014, 8.

⁸²⁴ Merlo, "USDEC Hopes to Help U.S. Dairy Industry," January 8, 2015.

⁸²⁵ Ravensberg, "Cuba's Prodigious Cow and Its Hungry Sisters," February 13, 2014; USITC, hearing transcript, June 2, 2015, 109–10 (testimony of William Messina, University of Florida).

Difficulties in matching dairy demand with domestic production has left Cuba vulnerable to upswings in world dairy prices. In April 2014, the Cuban government announced a price increase for Cubans purchasing milk powder, from \$5.75 to \$6.60 per kilogram, blaming the rising cost of imports. The price increase did not impact the government-subsidized price of powdered milk for children aged seven and under, currently about \$0.40 per kilogram.⁸²⁶

Over the years, the Cuban government has invested heavily in the sector because dairy products are a staple of the Cuban diet. Much of its investment involved importing dairy genetics from Canada.⁸²⁷ Very little foreign direct investment (FDI) exists in Cuba's dairy manufacturing sector, in no small measure because the milk supply used as an input is unreliable.⁸²⁸ No FDI in dairy herds occurs in Cuba.

In 2014, the Cuban government purchased no U.S. dairy products, although Cuba was once a sizable market for U.S. nonfat dry milk, which comprised most of the 13,400 mt imported from the United States in 2005 (table 5.25). Roughly 85–90 percent of Cuban imports of dairy products were milk powders during 2012–14 (table 5.1). Cuba imported over \$248 million in dairy products in 2014 from other sources—mostly milk powders, as well as cheese from the EU. Significant quantities of whole milk powder were imported from New Zealand, the EU, and Uruguay.⁸²⁹ All Cuban purchases of nonfat dry milk in 2014, totaling 9,500 mt, were imported from the EU and Canada.

Being situated so close to Cuba, the United States has a natural advantage over global competitors for dairy sales.⁸³⁰ Cuban sources have reportedly stated that they would prefer to obtain more of their milk powders from the United States over New Zealand because of the lower cost.⁸³¹ However, the U.S. industry faces significant trade impediments, including the inability to extend credit or conduct payment in a commercially viable way, as well as difficulty in traveling to Cuba to conduct business.⁸³² The recent appreciation in the dollar relative to other currencies may also have hurt U.S. dairy exports competing with other suppliers.⁸³³

⁸²⁶ Siegelbaum, "Cubans Getting Squeezed by Soaring Milk Prices," April 12, 2014.

⁸²⁷ Canadian Livestock Genetics Association, "Cuba-Canada Rebuilding Trade Partnership!" September 5, 2008, 1.

⁸²⁸ The U.S. Dairy Export Council recently estimated that only 10 of Cuba's 150 dairy processing plants are in operational shape; all are similar in size to U.S. factories from 50 to 60 years ago. Nicholson, "Is Cuba Ready for U.S. Dairy?" April 30, 2015.

⁸²⁹ GTIS, Global Trade Atlas database (accessed April 17, 2015). Whole milk powder is classified in HS 0402.21.

⁸³⁰ USITC, hearing transcript, June 2, 2015, 15 (testimony of Jay Waldvogel, Dairy Farmers of America).

⁸³¹ Industry representative, interview by USITC staff, Miami, June 13, 2015.

⁸³² USITC, hearing transcript, June 2, 2015, 18 (testimony of Jay Waldvogel, Dairy Farmers of America).

⁸³³ USITC, hearing transcript, June 2, 2015, 15 (testimony of Jay Waldvogel, Dairy Farmers of America).

Table 5.25: Cuba: Milk powder and evaporated and condensed milk imports by major supplier and the United States, 2005–14

Country/region	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Quantity (1,000 mt)										
EU	15.7	7.2	5.7	1.7	1.5	5.2	7.5	18.5	14.0	19.5
Belgium	5.0	2.6	1.6	a	0.0	2.6	3.5	3.1	2.8	5.9
Poland	3.8	0.7	2.9	1.1	1.2	(^a)	0.5	2.9	1.0	4.9
Netherlands	0.0	(^a)	(^a)	0.0	0.0	(^a)	0.7	4.3	0.8	2.9
France	6.0	0.0	(^a)	(^a)	(^a)	(^a)	0.8	3.4	3.6	0.9
New Zealand	18.2	19.1	24.7	16.2	1.1	12.6	15.2	4.6	11.8	12.4
Canada	10.1	10.1	11.8	15.6	8.3	12.2	12.2	8.2	4.0	5.1
Argentina	3.1	1.0	2.1	3.2	1.0	1.6	1.8	2.1	3.5	2.5
Brazil	4.0	5.8	2.2	5.8	1.0	0.8	1.3	0.0	0.0	2.0
Mexico	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	(^a)	1.3
Uruguay	4.5	8.8	4.9	1.0	0.6	3.3	4.5	4.5	11.1	1.1
United States	13.4	5.6	0.0	3.0	(^a)	(^a)	(^a)	0.0	0.0	0.0
All other	2.7	1.6	1.4	4.6	1.5	5.5	4.3	4.2	6.0	6.2
Total	71.7	59.2	52.6	51.1	14.9	41.7	46.9	42.1	50.4	50.2
Value (million dollars)										
EU	33.8	16.7	24.0	7.5	3.7	14.2	28.7	62.3	56.0	87.3
Belgium	10.3	5.9	6.6	0.8	0.0	8.0	14.4	10.8	12.2	27.6
Poland	8.5	1.6	14.2	4.9	3.0	0.9	1.9	10.8	4.7	22.9
Netherlands	0.0	0.5	(^b)	0.0	0.0	(^b)	1.7	12.8	3.2	10.9
France	12.9	0.0	0.9	1.7	0.7	1.0	2.8	12.4	13.1	4.6
New Zealand	39.5	43.1	82.4	85.2	2.2	37.1	55.5	15.7	49.2	56.6
Canada	7.3	2.3	8.3	12.4	1.8	3.8	6.2	7.2	13.2	11.3
Argentina	10.1	18.4	13.0	4.8	1.0	10.4	17.9	16.9	43.3	5.5
Brazil	8.1	11.7	6.1	23.8	1.4	1.3	2.6	0.0	0.0	9.8
Mexico	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	(^b)	6.0
Uruguay	22.4	21.8	31.0	51.8	18.1	34.2	52.3	31.3	17.4	23.6
United States	29.7	12.6	0.0	13.3	(^b)	(^b)	(^b)	0.0	0.0	0.0
All other	6.8	3.4	7.0	18.3	2.2	16.0	14.9	13.1	14.0	21.2
Total	157.7	130.0	171.8	217.1	30.5	117.6	178.3	146.6	193.2	221.3

Source: GTIS, Global Trade Atlas database (accessed December 9, 2015).

Note: Data are for HS 0402.

^a Less than 50 mt.

^b Less than \$50,000.

Effects of the Removal of U.S. Restrictions

Because the United States is a global leader in exports of nonfat dry milk, the U.S. dairy industry will likely begin to ship nonfat dry milk to Cuba again if the Cuban market is reopened on an equivalent basis to other dairy competitors.⁸³⁴ Cuban demand for dairy products appears likely to outpace production, which could bolster growth in total dairy imports. In addition to milk powders, the removal of broader restrictions could indirectly prompt Cuban imports of higher-value dairy

⁸³⁴ Ibid.

products over time.⁸³⁵ The U.S. Dairy Export Council (USDEC) expects hotel demand for cheese, yogurt, and milk to outpace Cuban production capacity after the market opens to U.S. tourists.⁸³⁶ In addition, as Cuban incomes grow, demand for higher-value dairy proteins would likely increase in tandem.⁸³⁷

USDEC estimates that over a 10-year period, assuming trade normalization and aggressive marketing, U.S. dairy exports to Cuba would increase roughly \$65 million annually above average export levels during 2010–14.⁸³⁸ In terms of market share, this would represent 30 percent of overall Cuban dairy imports. The projected breakdown would be 50 to 75 percent for lactose, nonfat dry milk, whey products, and fresh and soft manufactured dairy products; 40 to 60 percent for butter and cheese; and 10 to 20 percent for other dairy products such as whole milk powder.⁸³⁹

U.S. State-level Effects

The top dairy-producing states, California, Wisconsin, Idaho, New York, and Pennsylvania, would likely benefit the most from export growth.⁸⁴⁰ As noted above, although U.S. exports will likely consist mainly of nonfat dry milk, the Illinois Milk Producers Association expects both U.S. milk powder and fluid milk sales exports to Cuba to increase when the embargo is fully removed. The water content of fluid milk increases transportation costs, but the United States' proximity to Cuba offers it a freight advantage relative to other major suppliers. Moreover, ultra-high temperature technology extends the storage life of fluid milk after processing. While fluid milk most likely would ship to Cuba out of the Southeast because of its close proximity and Cuba's extreme price sensitivity, those shipments would open market share in the Southeast region for Midwest producers. The Southeast is already a milk deficit region in the United States, and Midwestern suppliers traditionally ship milk to the Southeast during the hot summer months, when Southern production declines.⁸⁴¹

⁸³⁵ USITC, hearing transcript, June 2, 2015, 18 (testimony of Jay Waldvogel, Dairy Farmers of America).

⁸³⁶ Nicholson, "Is Cuba Ready for U.S. Dairy?" April 30, 2015.

⁸³⁷ USITC, hearing transcript, June 2, 2015, 108 (testimony of Jay Waldvogel, Dairy Farmers of America).

⁸³⁸ USDEC estimates that U.S. dairy producers would capture at least a 50 percent market share of Cuban imports of lactose, nonfat dry milk, whey, butter, and cheese. U.S. Dairy Export Council, email message to USITC staff, May 20, 2015. For estimates from National Milk Producers Federation, see USITC, hearing transcript, June 2, 2015, 16–17 (testimony of Jay Waldvogel, Dairy Farmers of America).

⁸³⁹ USITC, hearing transcript, June 2, 2015, 16 (testimony of Jay Waldvogel, Dairy Farmers of America).

⁸⁴⁰ See also table 5.5 on state effects.

⁸⁴¹ Ross, "Producer Seeks to Explore Cuba's Untapped Potential," May 23, 2012.

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Chapter 6

Manufactured Products

Although Cuba once had a notable manufacturing base, the country has undergone significant deindustrialization, a process that began following the dissolution of the Soviet Union in 1991.⁸⁴² Without the subsidized bilateral trade that had characterized the Cuba-Soviet relationship, Cuba faced less favorable market prices for its exports, leading to a reduction in industrial output.⁸⁴³ Even before the post-Soviet era began, the nationalization of certain manufacturing industries and prohibition of private enterprises in revolutionary Cuba had led to a lack of innovation, which also harmed Cuba's manufacturing capabilities.⁸⁴⁴ Because of this decline, Cuba now relies heavily on imports for many of the manufactured goods it once produced. The domestic manufacturing sector currently consists primarily of oil-refining activity and the production of pharmaceuticals, consumer goods, construction materials, steel, and agricultural machinery.

Chapter 5 presented an overview of Cuban imports of agricultural products during 2005–14, identifying major supplying countries, products, and market segments. It also provided a description of how U.S. restrictions on trade affect Cuban agricultural imports, as well as a qualitative analysis of the potential for U.S. agricultural exports to Cuba in the event that restrictions are lifted. This chapter provides the same information for nonagricultural, or manufactured, goods.⁸⁴⁵ However, while the United States holds a significant share of the Cuban market for agricultural products, U.S. exports of manufactured goods to Cuba have largely been prohibited by U.S. legal restrictions. This meant that the study could not use U.S. export data as a basis for analyzing trends, tracking demand for U.S. manufactures, or gauging U.S. competitiveness in the Cuban market. Instead, this chapter uses data on global exports to Cuba, estimates of Cuban demand, and anecdotal information to identify sectors with potential for new or increased U.S. exports of manufactured goods.

⁸⁴² Ritter, "Does Cuba Have a Future in Manufacturing?" 2014, 345.

⁸⁴³ Pérez-López and Álvarez, *Reinventing the Cuban Sugar Agroindustry*, 2005, 299.

⁸⁴⁴ Ritter, "Does Cuba Have a Future in Manufacturing?" 2014, 348.

⁸⁴⁵ Chapter 8 provides the Commission's quantitative analysis of the potential for U.S. exports of manufactured goods to Cuba in the event that U.S. restrictions are removed.

Cuban Import Overview⁸⁴⁶

Cuban Imports from the World

The total value of Cuban imports of manufactured goods grew from \$4.5 billion in 2005 to a peak of \$8.7 billion in 2013 (an increase of 93 percent) before declining 16 percent to \$7.3 billion in 2014.⁸⁴⁷ “Manufactured goods” as a category encompasses multitudinous and varied products, and Cuba’s imports are spread across a large number of product groupings. Energy and energy-related products, however, are by far the largest category of manufactured goods being imported into Cuba (table 6.1), as Cuba is heavily dependent on imports for its energy needs.⁸⁴⁸ The value of Cuba’s imports of such products totaled \$3.4 billion in 2014, comprising 47 percent of its total imports of nonagricultural goods that year. Imports of these products, which consisted largely of crude petroleum from Venezuela, grew by 162 percent during 2005–14.

In 2009, Cuba’s global imports of manufactured goods fell sharply. Total imports dropped by 37 percent to \$5.9 billion during 2008–09, with declines in every product category. Cuban imports of fertilizers, organic chemicals, and inorganic chemicals shrank the most, falling by 74 percent, 66 percent, and 63 percent, respectively. This overall decline in Cuban manufactured goods imports is partially explained by the international financial crisis that occurred in 2008 coupled with a particularly large Cuban trade deficit in that year, which prompted Cuba to adjust imports to improve its current account balance.⁸⁴⁹ While Cuba’s manufactured product imports rebounded in subsequent years, there was another, albeit smaller, decline in 2014.

The share of imports accounted for by Cuba’s top five suppliers (Venezuela, the EU, China, Canada, and Mexico) rose from 82 percent in 2005 to 88 percent in 2014. Imports of manufactured goods from the United States made up less than 1 percent of total imports. Venezuela was Cuba’s largest single-country supplier of nonagricultural products during 2005–14, with energy and energy-related products representing 98 percent of imports from Venezuela during that period. In 2008, Venezuela surpassed the entire EU as the top supplier to Cuba of imports of manufactured products (table 6.2). Venezuela’s share of total Cuban imports rose from 27 percent in 2005 to 44 percent in 2014. Cuba’s increasing reliance on Venezuela resulted in a decline in import shares for all of Cuba’s other key suppliers except for China, which experienced a 1 percent gain in its share over the same period.

⁸⁴⁶ Cuban import data in this chapter are based on Cuba’s trading partners’ exports to Cuba, as reported by GTIS Global Trade Atlas, and USITC estimates. See chapter 1, box 1.1 for further explanation of data sources and other related information.

⁸⁴⁷ Manufactured goods comprise all products not covered by the definition of agricultural goods in chapter 5 (see chapter 5, “Cuban Import Overview”). In this chapter and throughout the report, the term “manufactured products” is used interchangeably with the term “nonagricultural products.”

⁸⁴⁸ See chapter 2 for a discussion of the relationship between Cuba and Venezuela in energy products.

⁸⁴⁹ Frank, “Cuba Slashes Projections for 2009 Imports, Exports,” July 21, 2009.

Table 6.1: Cuban imports of manufactured products from the world, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Energy and energy products	1,311.0	1,960.5	1,599.0	3,599.6	2,448.8	3,004.9	4,308.7	4,160.2	3,895.6	3,440.7
Certain machinery and mechanical appliances	591.5	1,027.5	1,238.1	1,377.5	697.1	756.0	931.7	889.2	1,130.5	864.3
Electrical and electronic devices	573.1	1,292.0	662.9	572.3	458.8	361.9	399.6	426.5	504.2	420.6
Plastics	178.3	188.2	211.7	274.4	185.2	226.6	264.8	271.2	274.6	237.1
Certain vehicles; parts	234.1	289.1	410.5	686.3	304.5	275.4	270.7	307.7	306.4	229.4
Optical, medical, and other instruments	334.5	325.1	351.4	232.0	160.2	125.0	141.4	145.2	174.4	181.9
Miscellaneous chemical products	74.4	91.9	112.6	147.4	108.0	143.9	154.7	164.9	170.4	167.8
Fertilizers	25.9	34.9	47.5	126.1	32.4	84.1	92.2	114.7	105.7	130.6
Iron and steel	104.8	80.7	104.1	181.6	138.6	155.1	232.4	169.1	181.9	129.8
Articles of iron or steel	111.9	166.2	189.0	210.4	135.2	166.8	176.5	198.4	214.9	129.4
Rubber and articles thereof	53.6	65.9	75.9	126.2	70.7	92.4	138.2	164.1	126.0	122.0
Pharmaceuticals	42.9	51.2	62.9	67.4	61.1	64.6	91.1	82.7	94.2	103.4
Detergents, lubricants, waxes, and polishes	36.5	51.1	46.0	70.8	56.1	76.4	63.8	63.3	60.9	88.0
Aluminum and articles thereof	103.9	166.3	80.3	108.4	69.9	74.2	73.8	95.4	90.9	82.9
Tanning extracts, tannins, and colorants	38.5	54.0	62.3	78.3	56.1	67.3	76.9	90.8	89.9	74.2
Inorganic chemicals	51.5	55.6	68.0	195.1	71.3	115.6	130.9	111.1	87.3	69.3
Footwear	54.1	56.4	77.8	136.0	89.2	87.0	83.6	97.2	87.4	66.9
Furnishings, certain fittings for lamps and lighting, prefabricated buildings	76.9	99.6	80.5	94.7	77.3	69.3	74.3	103.5	88.9	58.3
Aircraft and spacecraft	4.1	3.5	121.8	10.3	122.5	9.1	7.4	7.9	80.5	57.2
Organic chemicals	44.4	51.3	40.2	153.1	52.0	58.6	68.0	60.1	70.1	56.3
All other	454.6	590.1	630.3	862.5	508.5	688.0	742.3	749.6	859.6	608.5
Total	4,500.6	6,701.1	6,272.9	9,310.4	5,903.5	6,702.2	8,523.1	8,472.7	8,694.3	7,318.8

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

Note: The 20 categories are at the HS-2 level of the Harmonized System (HS) of tariff nomenclature, which is an internationally standardized system of numbers used to classify traded products. The 20 categories presented account for 90 percent of imports of manufactured goods from years 2005 to 2014. Values include USITC calculations of the value of Cuban crude petroleum imports from Venezuela.

Table 6.2: Cuban imports of manufactured products by country, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Venezuela	1,234.9	1,926.8	1,379.4	3,424.0	2,265.3	2,806.4	3,982.8	3,807.0	3,629.0	3,233.9
EU	1,391.8	1,941.2	1,828.9	2,203.7	1,294.8	1,440.6	1,740.6	1,832.0	2,008.1	1,672.0
Spain	549.5	741.7	846.1	1,066.5	598.8	710.0	828.0	866.0	966.9	817.6
Italy	208.3	300.5	273.2	405.8	241.3	223.1	302.0	301.5	337.8	279.4
Germany	302.1	498.7	271.6	289.8	183.8	176.2	193.9	215.1	226.9	186.3
China	578.5	1,211.8	1,082.1	1,281.8	898.0	1,039.9	998.9	1,119.8	1,312.8	1,016.0
Mexico	183.0	170.1	145.2	226.2	208.1	245.8	309.3	323.0	299.9	281.1
Canada	291.6	386.2	429.8	544.6	194.3	272.3	350.4	292.3	284.2	236.2
Algeria	149.1	168.6	259.3	225.0	182.2	195.0	303.6	327.6	233.9	184.8
Brazil	135.2	193.8	139.3	180.2	105.1	116.4	153.5	175.2	180.9	158.5
Russia	66.3	68.5	215.8	174.8	384.3	182.2	160.8	153.1	151.5	88.5
United States	16.8	10.4	7.6	10.5	8.3	14.3	10.7	8.3	11.9	14.1
All other	453.4	623.7	785.3	1,039.7	363.1	389.4	512.5	434.4	582.0	433.7
Total	4,500.6	6,701.1	6,272.9	9,310.4	5,903.5	6,702.2	8,523.1	8,472.7	8,694.3	7,318.8

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

Note: Values include USITC calculations of the value of Cuban crude petroleum imports from Venezuela.

Cuban Imports from the United States

Trade in manufactured goods between the United States and Cuba has generally been suppressed by U.S. restrictions on trade with Cuba. Whereas U.S. exports of agricultural products to Cuba have been permitted since the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA), U.S. exports of most nonagricultural goods have been restricted. Adjustments to U.S. restrictions have allowed exports of certain manufactured products, such as medical supplies⁸⁵⁰ and telecommunications equipment, but have not had the same effect on trade in manufactured goods as have the liberalizations on trade in the agricultural sector.⁸⁵¹ In 2014, U.S. exports to Cuba of manufactured goods represented less than 5 percent of the total value of U.S. exports to Cuba of agricultural goods.

During 2005–14, overall Cuban imports of manufactured goods from the United States fluctuated and ultimately declined from \$16.8 million in 2005 to \$14.1 million in 2014 (table 6.3). The vast majority of U.S. shipments to Cuba consisted of donations, rather than commercial sales.⁸⁵² Cuba reportedly solicits such donations, asking for “samples” of goods, and will not pay for goods if they can be obtained as gifts.⁸⁵³ One source noted that the United States tends to be a country that prides itself on philanthropy and speculated that it will use

⁸⁵⁰ Medical supplies includes pharmaceuticals, medical devices, instruments, equipment, and equipped ambulances. U.S. Treasury, “Trade Sanctions Reform and Export Enhancement Act” (accessed September 28, 2015).

⁸⁵¹ Agricultural goods and trade under TSRA are discussed in chapter 5. Although TSRA includes fiber, wood and wood products, fertilizers, organic cosmetics, and other related items under the category of “agricultural goods,” some of these products are discussed in this chapter.

⁸⁵² Articles donated for relief or charity are covered under HS chapter 98 and include both agricultural and nonagricultural goods. U.S. donations to Cuba in recent years have been equally split, with half consisting of food and the other half consisting of medical goods, pharmaceuticals, apparel, and other miscellaneous products.

⁸⁵³ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

that trait to build business relationships in Cuba, potentially reducing U.S. sales to Cuba in the short term in the event the restrictions are removed.⁸⁵⁴ Excluding donations, commercial exports to Cuba of U.S. manufactured products have been limited and sporadic. In 2014, the largest U.S. export was miscellaneous chemical products, largely insecticides, herbicides, and similar products. Although export levels are low, chemicals and medical goods have been the most consistent products shipped from the United States to Cuba.

Table 6.3: Cuban imports of manufactured products from the United States, 2005–15 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Insecticides and similar products	0.1	(^a)	(^a)	0.0	0.0	0.0	0.0	0.0	0.0	6.4	12.6
Phosphates and similar products	3.2	1.1	(^a)	0.0	3.1	10.2	5.9	0.0	0.0	0.0	9.2
Medical instruments	0.4	0.7	0.4	0.2	(^a)	0.0	(a)	0.0	0.9	0.1	4.4
Donated articles	6.0	3.4	4.5	5.4	4.7	3.4	3.5	7.1	5.9	6.6	4.2
Printed matter	0.1	0.1	0.2	(^a)	(^a)	(^a)	(^a)	(^a)	0.1	0.1	0.4
Blood products and vaccines	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4
Heavy, self-propelled construction equipment	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Certain medicaments	0.0	0.0	0.0	0.0	0.0	(^a)	0.1	0.2	0.2	(^a)	0.1
Orthopedic appliances	0.0	0.1	0.1	0.2	(^a)	0.0	0.0	0.0	0.5	0.5	0.1
Certain diagnostic or laboratory reagents	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	(^a)	0.1	(^a)
Instruments/apparatus for physical or chemical analysis; parts	0.0	0.0	0.0	0.0	0.0	(^a)	0.0	0.0	(^a)	0.0	(^a)
Computers and related hardware	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(^a)	0.0	0.0	(^a)
Instruments/apparatus for measuring liquids or gases; parts	0.0	(^a)	0.0	0.0	(^a)	(^a)	0.0	0.0	0.0	0.0	(^a)
Motor vehicle parts	0.0	0.0	0.0	0.0	0.0	(^a)	(^a)	(^a)	0.0	0.0	(^a)
Certain liquid crystal devices, lasers and optical appliances/instruments; parts	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	(^a)
All other	7.1	4.8	2.4	4.8	0.6	0.6	1.3	1.0	4.4	0.3	(^a)
Total	16.8	10.4	7.6	10.5	8.3	14.3	10.7	8.3	11.9	14.1	31.8

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC DataWeb/USDOC (accessed February 8, 2016).

Note: The categories listed are at the HS-4 level.

^a Less than \$50,000.

⁸⁵⁴ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

In 2015, however, the composition of U.S. exports of manufactured goods changed considerably. For the first time, donations were not the top category of U.S. exports. Further, total U.S. exports of manufactured products to Cuba jumped 127 percent over 2014, spurred by a 97 percent increase in exports of insecticides and similar products, combined with strong exports of certain chemicals and medical goods.

Summary of Effects of the Removal of U.S. Restrictions

Overall Effects

Cuban imports of manufactured products are lower in value but more varied than imports in the agricultural sector. Although Cuban purchases of nonagricultural goods from the United States have been insignificant, there are likely a number of opportunities for U.S. exporters in the event that U.S. restrictions on trade with and travel to Cuba are lifted.⁸⁵⁵ Moreover, the United States enjoys certain competitive advantages in its ability to export manufactured goods to Cuba. The distance from Miami to Havana is about 231 miles, which is roughly the same as the distance from Miami to Orlando, Florida. With southern U.S. ports in such close proximity to Cuba, trade is more cost effective, both for smaller just-in-time shipments and for large and bulky commodities. Moreover, as a large, advanced economy with a broad manufacturing base and a diversified distribution network, the United States can produce many of the products that Cuba needs and can also ship most goods at a lower delivered cost than many other countries.

In the short to medium term, Cuban imports will likely be limited to the types of products currently imported that the Cuban government deems necessary for domestic consumption and economic growth. In addition, U.S. exports may be hindered by U.S. firms' unwillingness to provide the long-term financing or barter arrangements Cuba currently enjoys from some of its main trading partners.⁸⁵⁶ Cuba's need to spend significant resources importing food and crude petroleum will also limit the funds it has available for purchasing U.S. capital goods, equipment, machinery, and the like.⁸⁵⁷ In the longer term, as Cuban purchasing power increases and Cuban GDP grows, opportunities will likely expand for increased U.S. exports in a wide variety of sectors.

Cuban infrastructure, buildings, tourist facilities, and housing have pressing needs for upgrading, modernization, and expansion and could provide immediate and potentially high-growth opportunities for U.S. exporters of building materials and construction equipment if U.S. restrictions are lifted. Cuba's growing agroindustry and the government's import substitution

⁸⁵⁵ In chapter 8, the Commission estimates that U.S. exports of manufactured goods to Cuba (for the purposes of the quantitative analysis, manufactured goods includes processed food and beverages) would grow to \$1.2 billion annually with the removal of U.S. restrictions. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁸⁵⁶ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

⁸⁵⁷ USITC, hearing transcript, June 2, 2015, 181–82 (testimony of Ricardo Torres Pérez, University of Havana).

goals for foods would likely stimulate demand for U.S.-produced intermediary goods, such as agricultural machinery, and inputs, such as fertilizers and other crop protection chemicals. The United States is a close and current supplier of chemicals to Cuba, and U.S. machinery has a favorable reputation there.⁸⁵⁸

Export potential in other areas, including medical goods and telecommunications equipment, appears promising in the longer term, but in the short term is more uncertain. For example, there is a great demand within Cuba for telecommunications infrastructure improvements; however, non-economic issues related to product integrity and the government's slow and deliberate processes involved in opening its market in sensitive areas may limit expansion in that sector. While the Cuban government has stated goals to increase pharmaceutical innovation and to create a strong medical tourism market, limited government purchasing power in the short term may prevent immediate growth in exports in the medical devices sector. Purchases in certain sectors may also be driven by foreign investment. Growth of U.S. exports to Cuba may thus depend to some extent on U.S. investment in Cuba in the longer term.⁸⁵⁹

U.S. Exports of Manufactured Goods to the Dominican Republic

As discussed in chapters 2 and 5, patterns in trade between the United States and the Dominican Republic, a country similar in many respects to Cuba in population, climate, and proximity to the United States, may offer clues as to the potential level of U.S. exports of certain manufactured goods to Cuba if U.S. restrictions are lifted. Because of important differences between the Dominican Republic and Cuba—in particular, the fact that the free trade agreement between the United States and the Dominican Republic has largely eliminated tariff and nontariff barriers between the two countries—this analysis should be considered indicative only.

The United States supplies a relatively large share of Dominican imports of manufactured goods in a number of the sectors profiled in this chapter (table 6.4). For many of these sectors, the U.S. share of Dominican imports exceeds its share of total Caribbean sector imports, in sharp contrast to the relatively small U.S. shares of Cuban imports. With the benefit of lower shipping costs and the ability to fill orders for smaller quantities with greater frequency, the United States is clearly able to offer the region competitive goods.

⁸⁵⁸ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015; industry representative, interview by USITC staff, Miami, November 16, 2015.

⁸⁵⁹ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

Table 6.4: Dominican Republic (DR), Cuban, and Caribbean manufactured product imports: 2012–14 average value and U.S. share

	Imports from the United States		U.S. share of Imports		
	Million dollars		Percent		
	DR	Cuba	DR	Caribbean	Cuba
Refined petroleum products	1,069.2	0.0	42.3	54.0	0.0
Building materials	317.7	^(a)	32.3	29.7	^(b)
Telecommunications equipment	26.5	0.2	8.4	49.2	0.4
Fertilizers and pesticides	80.0	2.1	32.7	17.4	0.9
Medical devices	102.3	0.9	57.4	51.0	1.2
Agricultural machinery	9.9	0.0	34.5	28.1	0.0
Construction equipment	32.5	0.0	65.2	41.7	0.0
Motor vehicle parts	17.3	^(a)	28.4	24.2	^(b)
All manufactured products	5,528.3	11.4	37.4	30.4	0.1

Source: GTIS, Global Trade Atlas database (accessed January 7, 2016).

^a Less than \$50,000.

^b Less than 0.05 percent.

U.S. State-level Effects

A good deal of anecdotal information exists on the U.S. states that would potentially benefit from expanded U.S.-Cuba agricultural trade; this is not true, however, for exports to Cuba of nonagricultural goods. As with U.S. agricultural products, some states that are closest to Cuba, and the major ports in the southern United States, may see the greatest initial benefit due to low shipping costs. However, the variety of goods discussed in this section, and the breadth of regions within the United States that produce these goods, suggest that a number of other states that serve as manufacturing hubs would also benefit from the removal of U.S. restrictions.

Sector Profiles

Refined Petroleum Products

Although Cuba relies heavily on imports for its energy needs, it is unlikely that lifting U.S. restrictions on trade with Cuba would lead to a significant increase in overall U.S. exports of refined petroleum products⁸⁶⁰ or that Cuba will become a major market for these products in the near term. Cuba faces issues associated with poor or nonexistent infrastructure and demand for refined petroleum products that impact energy trade. Moreover, many U.S. refinery products, such as motor fuels, are too high in octane or have other chemical characteristics that make them unsuitable for use in Cuban automobiles or electric power plants, or for other industrial purposes. U.S. production of refined petroleum products consists primarily of higher-value products such as gasolines, naphtha, and fuel oils, and it is increasingly being run from light and super-light crude petroleum feedstocks. By contrast, Cuban

⁸⁶⁰ See appendix H for a complete list of the HS subheadings comprising this sector.

consumption is primarily based on heavy Venezuelan Mesa crudes. These are provided as part of a barter agreement whereby Cuba pays for crude petroleum and refined petroleum products with medical and sports personnel sent to Venezuela.

It is possible that Cuba, which is import-dependent for feedstock crude petroleum and certain refined products (which are produced in the United States), could become a secondary export market for U.S. refiners. The United States recently lifted the ban on U.S. exports of crude petroleum,⁸⁶¹ and some large multinational and U.S.-based petroleum companies have expressed interest in developing Cuba's potential reserve base of crude petroleum and possibly exporting crude to Cuba. However, it is unlikely that this will occur within the near term.

U.S. Industry

In 2014, the United States accounted for an average of 15 percent of global production of refined petroleum products, 3 percent of global imports, and about 12 percent of global exports. About 44 percent of total U.S. refining capacity—or nearly 7.9 million barrels per day (bbl/d)—is located along the U.S. Gulf Coast. Many of these refineries are located close to crude petroleum production centers, near ports where crude imports are concentrated, or near major population centers where much of the refineries' output will be needed (e.g., California and the areas near Philadelphia, New York City, and Chicago).⁸⁶²

Companies in this industry refine crude petroleum to produce consumer products such as gasolines, jet fuels, heating fuels, lubricants and greases, petrochemical feedstocks, and many other refinery products. Major international petroleum companies, including Chevron, ExxonMobil, and Valero (all headquartered in the United States); BP (UK); and Royal Dutch Shell (the Netherlands), dominate U.S. refinery output. In 2014, the countries with the largest refining capacity were the United States, China, Russia, India, Japan, and South Korea. Over the next several years, China, India, and certain Middle Eastern countries are expected to account for most expansions of refinery capacity worldwide.

⁸⁶¹ From 1973 through 2015, all U.S. exports of crude petroleum were prohibited, except as approved by the U.S. government. Canada had been the only consistent market for these exports, which were part of a commercial exchange agreement between U.S. and Canadian refiners that was approved by the secretary of the U.S. Department of Energy. In May 1996, the President determined that allowing exports of Alaskan North Slope (ANS) crude was in the national interest, thus ending the ban on ANS crude exports. The President can impose new export restrictions if severe crude petroleum supply shortages occur.

Beginning on December 31, 2015, the 40-year ban on U.S. exports of all types of domestically-produced crude petroleum was lifted. While exports are no longer prohibited, export licenses will continue to be required. Export licenses for crude petroleum will continue to be administered by the U.S. Department of Energy (USDOE); no announcements have yet been made by USDOE about the specifics of the export licensing program. Under the new law, the President will still retain the authority to impose new export restrictions for a period not to exceed one year under certain circumstances. Such restrictions can be imposed at times of severe crude shortages in the United States or if it is determined that sustained prices are significantly above world market levels and are directly attributable to the export of U.S. crude. Also, restrictions can be imposed if supply shortages or price increases occur and are likely to cause sustained adverse effects on U.S. employment.

⁸⁶² USDOE, EIA, official statistics (accessed August 19, 2015 and September 14, 2015).

Petroleum products are traded globally, and the United States has a long history of exporting certain petroleum products and importing others to balance its refinery outputs while satisfying global demand. For example, U.S. refiners have tended to export diesel to Europe (where diesel demand is stronger), while European refiners have tended to export gasoline to the U.S. market (where gasoline demand is stronger). Distillate and residual fuel oils, used to produce diesel fuel or fuel used for space heating and other industrial purposes, have been the major U.S. export products. Global demand for distillate fuel oils rose faster than for other primary petroleum products, prompting U.S. refiners to increase their yield of these fuel oils.⁸⁶³ Moreover, exports of fuel oils tended to have higher profit margins for U.S. refiners than gasoline. U.S. exports of refined petroleum products have increased significantly in recent years, rising from 1.2 million bbl/d in 2005 to 3.9 million bbl/d in 2014, and saw substantial growth during 2011–14.⁸⁶⁴ In fact, in 2011, for the first time in over 60 years, the United States became a net exporter of petroleum products.⁸⁶⁵ The majority of exports are from the U.S. Gulf Coast, where some of the world's most sophisticated refining capacity is concentrated.

U.S. export growth has been strongest to Latin America (not including Mexico) and the EU. Latin America's share of U.S. exports rose from 21 percent in 2009 to 28 percent in 2014, while the EU's share rose from 17 percent to 20 percent.⁸⁶⁶ There currently are no U.S. exports of refined petroleum products to Cuba, but there are some to neighboring Caribbean countries, albeit the quantities are very small. U.S. exports to the Dominican Republic, Jamaica, and Haiti together account for less than 2 percent of total U.S. exports. These exports are primarily distillate and residual fuel oils.⁸⁶⁷

Cuban Industry and Market

Cuba currently operates four refineries, all owned by Cuba-Petróleo (Cupet), the state-owned petroleum company.⁸⁶⁸ Together, these refineries have a total crude distillation capacity of about 300,000 barrels per day.⁸⁶⁹ The largest of the four refineries, Níco López, accounts for

⁸⁶³ USDOE, EIA, official statistics (accessed August 19, 2015 and September 14, 2015). A barrel of crude in U.S. refineries currently yields an average of 31 percent distillate fuel.

⁸⁶⁴ Ibid.

⁸⁶⁵ Most of the increase in the quantity of U.S. exports of petroleum products is attributable to (1) stagnant domestic demand for motor fuels, due in part to more fuel-efficient cars and high gasoline prices; (2) significantly increased U.S. production of crude petroleum (the feedstock for petroleum products), particularly from shale sources in North Dakota's Bakken formation and Eagle Ford in Texas; (3) refineries operating at record levels; and (4) high demand for fuel oils on the world market.

⁸⁶⁶ USDOE, EIA, official statistics (accessed August 19, 2015 and September 14, 2015).

⁸⁶⁷ Ibid.

⁸⁶⁸ In the 1950s, U.S. petroleum companies operated several refineries in Cuba. However, after the Cuban revolution, the Cuban government reversed its policies toward foreign-owned investments and passed legislation to nationalize its petroleum industry. The government established trade agreements with the former Soviet Union, prompting U.S. companies to halt operations at their Cuban petroleum refineries owing to Cold War tensions between the United States and Soviet Union. Subsequently, Cuba nationalized its petroleum refineries, expropriated U.S. property held within its territory, and began to develop the industry independently.

⁸⁶⁹ *Oil and Gas Journal*, "Worldwide Refining Report," March 2007, March, 2010, March 2012, March 2014, and March 2015.

about 40 percent of the total capacity. The previously shuttered Cienfuegos refinery was reopened in 2007 as a result of an agreement between Cupet, which oversees refinery operations, and *Petróleos de Venezuela S.A.* (PDVSA), Venezuela’s state-run petroleum company. Cienfuegos processes only Venezuelan crude and has a capacity of 76,000 bbl/d.⁸⁷⁰ More than 90 percent of the refinery’s output, including gasoline, diesel fuel, and fuel oils, goes to the domestic market in Cuba. Recently, the Cienfuegos refinery has been processing and blending crude and petroleum products for sale to neighboring countries.⁸⁷¹ Venezuela has faced mounting economic challenges since mid-2014 because of the rapid decline in crude petroleum prices. As a result, Venezuela has been unable to complete refinery expansion plans in Cuba that were promised in 2007. Other Latin American countries have also left expansion plans unfinished.⁸⁷²

Cuba primarily produces distillate and residual fuel oils and kerosene-type jet fuels. Fuel oils are primarily used to power electrical generating plants for both commercial and residential use in Cuba. Cuba also produces low-cetane⁸⁷³ diesel fuels for use in its automobiles, along with some gasolines (table 6.5). Cuba consumes only about 5,000 barrels of gasoline per day,⁸⁷⁴ and the gasoline it uses is a lead-based, low-octane motor fuel no longer produced in the United States.⁸⁷⁵ Cuban refineries are able to meet current domestic demand for gasoline and diesel fuels, but the country needs to import other products; such imports account for 25–30 percent of total domestic demand for refined petroleum products.

Cuba was typically a net importer of refined petroleum products during 2005–14, importing certain products while exporting others. Its imports totaled an estimated \$265.6 million in 2014, an increase of about 82 percent over 2005 (table 6.6). Some of the fluctuations in value can be attributed to variable crude petroleum prices during the period and the product mix of Cuba’s imports.

Cuban imports of refined petroleum products consist primarily of kerosene jet fuels and fuel oils. Cuba imports refined petroleum products primarily from Algeria (which accounts for about 80–85 percent of total imports of these products), Venezuela (about 8–10 percent), the EU (6 percent), Mexico (2 percent), and Russia (2 percent). Cuba exports small quantities to the United Kingdom (40 percent) and other EU nations (49 percent), with the remainder going to neighboring Caribbean countries such as the Dominican Republic.⁸⁷⁶

⁸⁷⁰ *Oil and Gas Journal*, “Worldwide Refining Report,” March 2007, March, 2010, March 2012, March 2014, and March 2015; Wacaster et al., *Recent Trends in Cuba’s Mining and Petroleum Industries*, March 2015.

⁸⁷¹ Piñon, “How Venezuela’s PDVSA Exports Crude Oil to Cuba,” June 15, 2015.

⁸⁷² USITC, hearing transcript, June 2, 2015, 221 (testimony of Jorge Piñon, University of Texas at Austin).

⁸⁷³ Just as gasoline is rated by its octane, diesel fuel is rated by its cetane, which indicates how easy it is to ignite and how fast it burns.

⁸⁷⁴ USITC, hearing transcript, June 2, 2015, 158 (testimony of Jorge Piñon, University of Texas at Austin).

⁸⁷⁵ Industry representative, interviews by USITC staff, Washington, DC, June 2 and 4, 2015.

⁸⁷⁶ Industry representative, interviews by USITC staff, Washington, DC, June 2 and 4, 2015.

Table 6.5: Cuban production, exports, and imports of refined petroleum products, 2010–13 (1,000 barrels)

Product	2010	2011	2012	2013
Production:				
Naphtha	330	601	586	513
LPG	220	183	176	147
Gasoline	4,163	3,313	3,225	2,932
Diesel fuel	8,972	8,943	8,349	8,063
Jet kerosene	2,412	2,272	2,214	2,199
Fuel oils	17,856	17,020	16,720	14,660
Total	33,953	32,333	21,270	28,514
Exports:				
Gasoline	5,336	0	0	0
Diesel fuel	528	528	506	0
Jet kerosene	5,622	5,417	5,087	5,116
Total	11,486	5,923	5,087	5,116
Imports:				
LPG	396	462	469	367
Gasoline	2,829	0	0	0
Diesel fuel	498	506	147	132
Jet kerosene	4,193	4,200	4,537	4,552
Fuel oils	4,325	3,255	2,404	2,456
Total	12,857	9,031	8,188	8,114

Source: USDOE, EIA, Country Analysis Reports and International Energy Statistics, Algeria, Venezuela, and the European Union (accessed October 22, 2015); OPEC, Annual Statistical Bulletin, 2010–15 (accessed October 27, 2015); BP, Statistical Review of World Energy, 2010–15 (accessed October 22, 2015); industry representative, interview by USITC staff, Washington, DC, June 10, 2015.

Table 6.6: Cuba: Refined petroleum products, imports by major supplier and the United States, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Algeria	141.5	168.6	224.7	225	182.2	195	303.6	327.6	343.1	247.8
Venezuela	2.2	2.7	1.4	0.8	0.6	2.6	3	4.2	3.7	4.2
EU	2.3	4.5	2.9	2.3	2.5	4.9	3.3	7.1	8.6	5
Latin America	0	0	0	0	1.1	1.8	3.2	6	5.2	5.6
Mexico	0	0	0.1	0.1	0	0.3	1	1.8	2	2.9
United States	0	0	0	0	0	0	0	0	0	0
All others	0.1	0.1	0	0	0	0.2	0.2	0.1	0.1	0.1
Total	146.1	175.9	229.1	228.2	186.4	204.8	314.3	346.8	362.7	265.6

Source: USDOE, EIA, Country Analysis Reports and International Energy Statistics, Algeria, Venezuela, and the European Union (accessed October 22, 2015); OPEC, Annual Statistical Bulletin, 2010–15 (accessed October 27, 2015); BP, Statistical Review of World Energy, 2010–15 (accessed October 22, 2015); industry representative, interview by USITC staff, Washington, DC, June 10, 2015; USITC estimates.

Crude petroleum is the feedstock for refined petroleum products, and Cuba is currently highly dependent on Venezuela for crude petroleum to feed its refineries and to provide for its refining needs. Cuba has therefore announced intentions of developing its own crude resources, which would allow it to depend less on imports from Venezuela. About 95 percent of Cuba's reserves of crude petroleum remain unextracted, however, because drilling requires the use of advanced recovery technology that Cuba does not possess. Most of these techniques were developed by U.S. companies. Foreign investment and technological ability will be needed to extract the crude from offshore areas that are environmentally delicate. Moreover, the Cuban energy industry is also faced with infrastructure difficulties such as inadequate port depths, lack of pipeline capacity, and inadequate refining capacity. Modernization will be needed to develop its resources.

Cuba produces only about 50,000 bbl/d, or 0.05 percent, of the world's total production of crude petroleum. About one-third of Cuba's domestic crude petroleum production is extra-heavy crude from near-offshore and onshore production. Cuba's domestic market consumes an estimated 140,000 bbl/d of crude petroleum; any remainder is sold on the spot market, as Cuba's refineries have little storage capacity. Since at least 2007, most of Cuba's crude petroleum demand has been met by imports from Venezuela and occasional small shipments from Algeria.

Cuba's development of its offshore deepwater reserves faced a setback in 2012, when the drilling of three exploratory crude petroleum wells was unsuccessful. This setback in Cuba's offshore development, combined with political and economic difficulties in Venezuela, have exacerbated concerns among Cuban officials about Cuba's heavy dependence on Venezuela for petroleum. As a result, Cuba is increasingly focusing on the need to diversify its trading partners and to seek alternative energy sources in the case of a reduction or cutoff of Venezuelan crude.⁸⁷⁷ Nonetheless, in the near term, Cuba's dependence on Venezuela for crude petroleum imported under the barter agreement to feed its refineries is likely to continue.

Dating back to 2000 under President Hugo Chávez, Venezuela began providing Cuba with subsidized crude and refined petroleum products as well as investment in both Cuban crude development and refinery upgrades. Approximately 95,000–100,000 bbl/d of the extra heavy Mesa 28 or 30 crude come from Venezuela, as well as about 6,000 bbl/d of refined petroleum products.⁸⁷⁸ These exports to Cuba from PDVSA are part of a barter agreement. Cuba pays for Venezuelan crude and refined petroleum products with care provided by medical and sports personnel sent to the country.⁸⁷⁹

Venezuela also maintains an export program, Petrocaribe, which provides discounted crude to countries across the Caribbean, including Cuba. While the terms of the agreements are not public, Venezuela's exports of crude to Cuba under this program are at risk. As noted earlier, declining crude prices, which hovered around \$50 per barrel internationally in 2014 and

⁸⁷⁷ Sullivan, *Cuba: U.S. Policy and Issues*, July 31, 2014.

⁸⁷⁸ USITC, hearing transcript, June 2, 2015, 237 (testimony of Jorge Piñon, University of Texas at Austin).

⁸⁷⁹ *Ibid.*; industry representative, telephone interview by USITC staff, June 10, 2015.

dropped even lower during much of 2015, have resulted in decreased Venezuelan production and exports, and there is word of new power outages in Cuba.⁸⁸⁰ While PDVSA reportedly has reduced the volume of Mesa crude it exports to Cuba, Cuba has replaced it with similar volumes of crude and petroleum products from the Caribbean transshipment terminals of Bonaire, St. Eustatius, Aruba, and Bullen Bay and Willemstad, Curaçao.⁸⁸¹

Cuba's electricity is generated principally using low-grade fuel oils produced from domestic crude petroleum and crude petroleum imported from Venezuela. However, Cuba has great potential for renewables, including biofuels and biomass from the island's sugarcane production as well as hydroelectric, wind, and solar. Currently, renewables account for only 2–4 percent of Cuba's energy production.

Effects of the Removal of U.S. Restrictions

U.S. refineries are currently operating at high capacity utilization rates and exporting more petroleum products (particularly fuel oils) than in previous years; nevertheless, most of these exports are slated for the EU and Latin American countries such as Brazil and Chile, and they are produced to meet certain specifications. While U.S. refineries may be able to market excess production of refined petroleum products in Cuba if the U.S. restrictions are lifted, it is unlikely that Cuba will become a major market for these U.S. refineries in the near term.⁸⁸² If U.S. restrictions are lifted, Cuba would probably account for no more than about 0.5 percent of total U.S. exports, which would likely be primarily distillate and residual fuel oils used for power generation. The other products produced in U.S. refineries, such as motor fuels, are too high in octane or have other characteristics (such as carbon content, oxygenates, and antiknock inhibitors) that make them unsuitable for use in Cuba.

To wean itself off fossil fuels, the Cuban government has announced plans to invest \$3.5 billion to increase its renewable energy capacity to 24 percent of its total energy-generating capacity by 2030 in an effort to promote energy efficiency.⁸⁸³ These renewables can compete with certain distillate and residual fuel oils, and renewables could eventually become the primary feedstock for electric power generation in the future. If this occurs, Cuba could lower its dependence on fuel oils.

⁸⁸⁰ Derived from Wacaster et al., *Recent Trends in Cuba's Mining and Petroleum Industries*, March 2015; industry representative, telephone interview by USITC staff, June 10, 2015.

⁸⁸¹ Ibid.

⁸⁸² Commission modeling estimates that removing U.S. restrictions on trade with Cuba would result in approximately \$50 million in exports of U.S. petroleum products, accounting for 18 percent of the Cuban import market. However, the model does not take into account the differences between U.S. supply and Cuban demand in terms of product characteristics such as octane level and lead content. Hence the model estimate is more likely indicative of U.S. export potential in the long term. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁸⁸³ Hilderbrand, "The Stage Is Set in Cuba," July 21, 2015.

U.S. State-level Effects

The United States has an intricate and sophisticated system of pipelines that easily move refined petroleum products around the nation for consumption or export. The states that could benefit the most from the lifting of the U.S. restrictions on trade with Cuba would be those with refinery operations, particularly those located in two Petroleum Administration for Defense Districts (PADDs): PADD 3 (Gulf Coast) and PADD 5 (West Coast). The primary export locations are also in PADD 3. These are primarily in Louisiana and Texas, which originate about 80 percent of total U.S. exports of refined petroleum products (including product from PADD 5). These ports and refining centers are in close proximity to Cuba, with tankers available to move these products coming off the pipeline.⁸⁸⁴

Fertilizers and Pesticides

Cuban farmers' access to fertilizers and pesticides⁸⁸⁵ is limited; the Cuban government has a monopoly on importing these products, while the Cuban industry that produces fertilizers and pesticides is small and cannot adequately supply the domestic market. Limited access to these products has decreased domestic yields of certain crops.⁸⁸⁶ However, the Cuban government has a goal of lowering dependence on imported agricultural products, and importing more fertilizer and pesticide formulations, as well as the components that make up these formulations, would increase domestic yields. The U.S. industry could export these products to Cuba cheaply and efficiently, given the competitiveness of the U.S. industries that make fertilizers and pesticides and their proximity to the Cuban market.

U.S. Industry

The U.S. fertilizer industry consists of almost 500 companies employing approximately 19,000 workers.⁸⁸⁷ The United States is the world's second-largest producer of phosphate fertilizers, after China, and the third-largest producer of nitrogen fertilizers.⁸⁸⁸ U.S. production of potassium fertilizers is minor, owing to the limited availability of potash ores.⁸⁸⁹ Production of fertilizers, particularly nitrogen fertilizers, is energy intensive, and price competitiveness is typically related to access to low-cost natural gas, currently an advantage for U.S. producers. In 2013, the value of U.S. fertilizer production totaled \$28.0 billion,⁸⁹⁰ and exports were \$4.7 billion.⁸⁹¹ The U.S. states with the largest number of firms in this industry are California,

⁸⁸⁴ Industry representative, interview by USITC staff, Washington, DC, June 10, 2015.

⁸⁸⁵ See appendix H for a complete list of the HS subheadings comprising this sector.

⁸⁸⁶ U.S. academic, telephone interview by USITC staff, October 19, 2015; Cuban government official, interview by USITC staff, Havana, June 15, 2015.

⁸⁸⁷ U.S. Census, "2012 Economic Census," 2012.

⁸⁸⁸ Fertilizer Institute, "Statistics FAQs" (accessed November 12, 2015).

⁸⁸⁹ Ibid.

⁸⁹⁰ U.S. Census, "2013 Annual Survey of Manufacturers," 2013.

⁸⁹¹ USITC DataWeb/USDOC (accessed August 3, 2015).

Florida, and Texas.⁸⁹² Fertilizer manufacturers in Florida accounted for 26 percent of U.S. shipments in 2007, the most recent year for which data are available.⁸⁹³

The United States is also a global leader in the production of pesticides and is cost competitive with other countries. The U.S. industry making pesticides⁸⁹⁴ encompasses 177 companies employing over 11,000 workers.⁸⁹⁵ The value of U.S. pesticide production was \$17.1 billion,⁸⁹⁶ and U.S. pesticide exports totaled \$3.9 billion in 2013.⁸⁹⁷ Pesticides include both commodity products that are produced in large volumes by multiple firms and compete primarily on price, and specialty products produced in smaller volumes that target certain crops or pests. U.S. firms are highly innovative, researching new active ingredients and formulations to improve performance and safety. New products are often protected by patents and other intellectual property rights. In terms of regulatory environment and R&D spending, the crop protection industry is more similar to the pharmaceutical industry and specialty chemicals industry than the commodity chemicals industry. Pesticides production is most prevalent in states in the Midwest and Gulf Coast.⁸⁹⁸ Producers located along the Gulf Coast have the advantage of lower transportation costs to Cuba than their competitors in Asia and the EU. Savings from lower transportation costs and shorter lead times could be an important advantage for U.S. firms if U.S. restrictions are lifted.

The United States is a net importer of nitrogen and potassium fertilizers and a net exporter of phosphate fertilizers. U.S. exports of fertilizers are largely destined for Canada, Brazil, India, Mexico, and Australia, which together accounted for 73 percent of U.S. exports in 2014.⁸⁹⁹ In addition, the United States is a net exporter of pesticides.

The United States ranked 13th among countries that exported fertilizers and pesticides to Cuba during 2005–14. Cuban imports of these goods from the United States in 2014 were valued at \$6.4 million, down from a high of \$10.2 million in 2010. These U.S. exports to Cuba were predominantly phosphates of calcium, which are used as fertilizers,⁹⁰⁰ and herbicides.⁹⁰¹ For purposes of comparison, as previously explained, it is useful to note that U.S. exports of fertilizers and pesticides to the Dominican Republic totaled \$46 million in 2014. Products

⁸⁹² U.S. Census, “2012 Economic Census,” 2012.

⁸⁹³ U.S. Census, “2007 Economic Census,” 2007. In the 2012 Census, data for most states were withheld to protect confidential information.

⁸⁹⁴ “Pesticides” includes fungicides, herbicides, insecticides, and other products, and pesticides that are mixed with solvents and ready for use, as well as the organic chemicals that are active ingredients of pesticides.

⁸⁹⁵ U.S. Census, “2012 Economic Census,” 2012.

⁸⁹⁶ U.S. Census, “2013 Annual Survey of Manufacturers,” 2013.

⁸⁹⁷ USITC DataWeb/USDOC (accessed August 3, 2015).

⁸⁹⁸ U.S. Census, “2012 Economic Census,” 2012.

⁸⁹⁹ USITC DataWeb/USDOC (accessed August 3, 2015).

⁹⁰⁰ Calcium phosphate of HTS 2835.26 can be used as a fertilizer or as a feed supplement for chickens. Cuban academic, interview by USITC staff, Havana, June 15, 2015.

⁹⁰¹ USITC DataWeb/USDOC (accessed August 3, 2015).

exported to the Dominican Republic include ammonium sulfate, diammonium phosphate, herbicide preparations, and insecticide preparations.⁹⁰²

The U.S. fertilizer and pesticides sector was one of the few to experience significant export growth to Cuba following the announcement of renewed U.S.-Cuba relations. In 2015, U.S. exports of fertilizers and pesticides increased more than threefold over 2014, reaching their highest level since 2010. U.S. exports in 2015 totaled \$21.8 million and consisted of calcium phosphates and herbicides.⁹⁰³ One Cuban source speculated that the large increase in fertilizer and pesticide purchases from the United States was likely because supply from the United States is less expensive.⁹⁰⁴

Cuban Industry and Market

Cuba has a small industry producing fertilizers and pesticides. In 2014, it produced 57,000 metric tons of ammonium nitrate fertilizer, 32,000 metric tons of mixed fertilizers, 1,200 metric tons of insecticides, and 350 metric tons of herbicides.⁹⁰⁵ In previous decades, Cuba relied on imports of fertilizers and pesticides from the former Soviet Union.⁹⁰⁶ After the collapse of the Soviet Union eliminated this source of subsidized imports, the use of fertilizers and pesticides declined in Cuba. For example, fertilizer use in 2014 was estimated to be 15 percent of the amount used in 1989, just before the loss of support from the Soviet Union. Some plots of land are said to have gone without fertilizer use for over 25 years.⁹⁰⁷

The fertilizers and pesticides that are currently produced locally or imported are controlled and distributed by the Cuban government.⁹⁰⁸ Farmers who want fertilizers must get them from the government, and the government uses the distribution of fertilizers as leverage to ensure that farms turn over their production to meet their government quotas.⁹⁰⁹ Many farmers want to buy fertilizers and pesticides to increase their yields, but with limited quantities available from the government and little to no black market in these products, farmers have very little access to them.⁹¹⁰ Imports of pesticides are problematic because distribution delays do not always allow the pesticides to arrive at the right time for application.⁹¹¹ The problems with distributing imports are due, in part, to the need to order larger quantities and pay higher shipping costs to buy from distant countries.

⁹⁰² Ibid. HS classifications for these products are as follows: ammonium sulfate (HS 3102.21), diammonium phosphate (HS 3105.30), herbicide preparations (HS 3808.93), and insecticide preparations (HS 3808.91).

⁹⁰³ USITC DataWeb/USDOC (accessed February 8, 2016).

⁹⁰⁴ Cuban academic, interview by USITC staff, Havana, June 15, 2015.

⁹⁰⁵ ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, table 11.4.

⁹⁰⁶ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

⁹⁰⁷ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

⁹⁰⁸ U.S. academic, telephone interview by USITC staff, October 19, 2015.

⁹⁰⁹ Ibid.

⁹¹⁰ Ibid.

⁹¹¹ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

Cuba imports up to 80 percent of its domestic food requirements each year (see chapter 5). The Cuban government has stated that it would like to increase domestic production of certain crops through higher yields, which would require more use of imported fertilizers and pesticides.⁹¹² According to one source, nearly any crop produced in Cuba today would benefit from the application of fertilizers.⁹¹³ While many Cuban farmers in rural areas reportedly would use more synthetic fertilizers and pesticides for crops if they were available, Cuba has an estimated 10,000 urban organic farms that might be reluctant to use synthetic fertilizers and pesticides because they are exploring the possibility of exporting higher-value organic crops.⁹¹⁴ Other sources counter that Cuba's organic farms are "organic by necessity" in that they have no access to fertilizers and pesticides, and that Cuba cannot rely too heavily on organics if it wants to better meet its domestic food requirements.⁹¹⁵

Cuba imported fertilizers and pesticides valued at \$260.2 million in 2014, up 126 percent from 2005. Countries that rank highest in the value of their exports of fertilizers and pesticides to Cuba include China, Canada, and Mexico (table 6.7), together supplying 60 percent of these imports in 2014. China was by far the largest single-country supplier, with a 27 percent share in 2014; reportedly, China has been granting Cuba favorable credit terms for fertilizer purchases.⁹¹⁶ China's exports to Cuba include herbicide preparations, superphosphate fertilizers, and urea.⁹¹⁷ Canada's exports to Cuba include sulfur and potassium chloride fertilizer,⁹¹⁸ while Mexico's include urea and mixed fertilizers.⁹¹⁹ The United States currently exports these products primarily to China, Spain, and Canada,⁹²⁰ and could presumably supply more of them to Cuba if U.S. restrictions on trade with Cuba were removed. In addition to importing prepared fertilizer and pesticides, the Cuban government is also interested in importing active ingredients and other components to combine into final products.⁹²¹

⁹¹² Cuban government official, interview by USITC staff, Havana, June 15, 2015; U.S. academic, telephone interview by USITC staff, October 19, 2015.

⁹¹³ U.S. academic, telephone interview by USITC staff, October 19, 2015.

⁹¹⁴ PBS Newshour, "What Cuba Can Teach America," June 19, 2015; Cuban government official, interview by USITC staff, Havana, June 15, 2015; U.S. academic, telephone interview by USITC staff, October 19, 2015.

⁹¹⁵ Presenter, CCAA 39th Annual Conference, Miami, November 16, 2015.

⁹¹⁶ Cuban government official, interview by USITC staff, Havana, June 18, 2015.

⁹¹⁷ GTIS, Global Trade Atlas database (accessed August 6, 2015). HS classification for these products are as follows: herbicide preparations (HS 3808.93), superphosphate fertilizers (HS 3103.10), and urea (HS 3102.10).

⁹¹⁸ Ibid. HS classification for these products are as follows: sulfur (HS 2802.00) and potassium chloride fertilizer (HS 3104.20).

⁹¹⁹ Ibid. Urea is classified in HS 3102.10.

⁹²⁰ USITC DataWeb/USDOC (accessed August 3, 2015).

⁹²¹ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

Table 6.7: Cuba: Fertilizers and pesticides, imports by major supplier and the United States, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
China	12.4	6.3	8.5	22.7	21.4	35.1	39.5	36.6	38.6	69.1
Canada	22.6	28.1	15.2	110.0	18.7	49.9	45.7	53.6	33.9	48.1
Mexico	3.8	2.8	6.3	8.3	11.0	24.0	31.5	46.2	38.8	38.9
Germany	4.0	24.7	12.9	19.5	22.6	21.1	28.1	27.6	29.9	28.2
Russia	1.4	0.0	8.1	0.0	1.0	7.2	0.0	6.5	6.3	10.1
Netherlands	2.6	1.6	8.1	29.7	8.2	18.2	24.0	15.6	25.6	9.7
Italy	9.4	1.7	8.4	9.0	7.9	8.8	9.2	10.2	8.1	7.7
Ukraine	0.7	5.3	2.7	2.4	0.0	0.0	7.3	5.7	19.4	7.6
Spain	3.8	3.8	5.6	10.4	8.6	2.7	2.4	6.1	6.9	7.6
United States	3.3	1.1	0.1	4.1	3.1	10.2	5.9	0.0	0.0	6.4
Belarus	0.0	1.1	0.0	4.8	0.0	0.0	23.0	17.0	6.6	5.6
All other	51.0	51.0	62.6	183.5	39.1	72.4	61.9	58.1	41.2	21.3
Total	115.0	127.5	138.6	404.4	141.5	249.4	278.5	283.2	255.1	260.2

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015).

Effects of the Removal of U.S. Restrictions

The Cuban government has conflicting goals for the agricultural sector; it wants to increase domestic agricultural production to reduce its dependence on imported foods, but it also touts organically grown products as a potential high-value export sector. In order to increase domestic yields and reduce dependence on imports of food, increased use of fertilizers and pesticides will likely be necessary, particularly for certain vegetables such as cabbage and potatoes.⁹²² The Cuban government controls distribution of fertilizers and pesticides to farmers and is currently not importing enough to satisfy domestic demand. If the U.S. restrictions are removed, there is potential for U.S. suppliers to fill this gap, and the United States' proximity to Cuba would be a competitive advantage given the timeliness issues that Cuba has experienced with other suppliers.

Estimates of the potential increases in U.S. exports of fertilizers, pesticides, and similar products to post-embargo Cuba vary widely. One industry analyst estimates that U.S. exports of agricultural chemicals, fertilizers, and other petrochemicals could reach more than \$200 million annually.⁹²³ Another source foresees U.S. exports of fertilizers and pesticides to the Cuban agricultural sector in excess of \$2.5 billion per year.⁹²⁴

⁹²² Cuban government official, interview by USITC staff, Havana, June 15, 2015.

⁹²³ Jorge Piñon, written testimony to the USITC, June 2, 2015, 4.

⁹²⁴ BG Consultants, "Emerging Markets" (accessed November 12, 2015). Commission modeling estimates that U.S. exports in the chemicals and chemical products sector, which contain fertilizers and pesticides, could reach over 20 percent of the Cuban import market, rising to about \$200 million if U.S. restrictions on trade with Cuba are lifted. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

U.S. State-level Effects

An increase in U.S. exports of fertilizers and pesticides to Cuba would most likely benefit Florida, Louisiana, and Texas, among other states. Florida is one of the top producers of fertilizers, including the calcium phosphates that are currently being exported to Cuba. Louisiana and Texas produce both fertilizers and pesticides. Low transportation costs to Cuba from the Gulf Coast make these states logical sources for fertilizers and commodity pesticide products.⁹²⁵

Construction and Agricultural Machinery

In the event that U.S. restrictions on trade with Cuba are lifted, Cuban demand for construction and agricultural machinery⁹²⁶ is likely to provide U.S. producers of such machinery with significant export opportunities in the near term. Cuba is currently upgrading its infrastructure in most areas and is working to increase the country's agricultural productivity. Cuban demand for construction machinery is expected to be strong because of Cuba's plans to expand its tourism industry and revitalize urban core areas, which will require significant construction of buildings and underlying infrastructure, as well as conservation of historic structures and neighborhoods. Further, aged roads and airports will require upgrading. Cuban demand for agricultural machinery will be driven by Cuba's desire to reduce its dependence on imported food and to boost export crops as a source of foreign exchange. Moreover, Cuba is in need of modern equipment to replace its antiquated fleet.

Construction Machinery

U.S. Industry

The U.S. construction machinery industry employed about 60,200 persons at production facilities; the value of U.S. shipments was almost \$34.3 billion in 2013, the most recent year for which data are available.⁹²⁷ The U.S. construction machinery industry includes several globally known and established brands. These include two leading U.S.-based companies: Caterpillar Corp., the world's largest construction equipment manufacturer in 2015 with revenues of \$28.3 billion for construction and mining equipment in 2014, and seventh-ranked John Deere, with revenues of \$6.6 billion in 2014.⁹²⁸ Several global foreign-owned competitors also operate U.S. manufacturing facilities; these include Komatsu (Japan), Volvo Construction Equipment (Sweden), and CNH Industrial N.V. (Netherlands/Italy). Most large firms also have construction machinery manufacturing operations in other countries, where they compete against other global and regional construction machinery producers. In addition, the U.S. industry has a number of smaller companies that specialize in certain types of machinery.

⁹²⁵ USITC, hearing transcript, June 2, 2015, 162 (testimony of Jorge Piñon, University of Texas at Austin).

⁹²⁶ See appendix H for a complete list of the HS subheadings comprising this sector.

⁹²⁷ This industry is classified under North American Industry Classification System (NAICS) 333120, Construction Machinery Manufacturing. U.S. industry data from U.S. Census, "AmericanFactFinder," 2013.

⁹²⁸ Sleight, "Equipment Top 50," April 2015, 13–14.

In 2014, the United States was the world's second-largest exporter of construction machinery, with exports valued at \$13.5 billion (17 percent of global exports), behind the EU, with exports totaling \$21.2 billion (27 percent). U.S. exports of construction machinery rose from a value of \$10.0 billion in 2005 to a peak of \$21.9 billion in 2012, before falling to \$13.5 billion in 2014.⁹²⁹ Canada, Mexico, and Australia have been leading destinations for U.S. exports of these goods. In 2014, U.S. exports of construction machinery to Canada totaled \$5.1 billion (38 percent of the U.S. total); to Mexico, \$1.1 billion (8 percent); and to Australia, \$684.0 million (5 percent).⁹³⁰ In 2014, U.S. exports of construction machinery to the Dominican Republic totaled \$28.9 million, down from a peak of \$84.5 million in 2008.⁹³¹ There were no U.S. exports of construction machinery to Cuba during 2005–14.⁹³² In 2015, U.S. exports to Cuba totaled \$222,250 and consisted of one bulldozer and one front-end shovel loader.⁹³³

Cuban Industry and Market

Cuba has no commercial production of construction machinery,⁹³⁴ and the current fleet of construction machines in Cuba is reportedly obsolete.⁹³⁵ However, there may be limited production of components and parts for such machinery.⁹³⁶ During 2005–14, Cuba exported construction machinery valued at \$9.6 million, of which \$5.3 million was exported to Mexico in 2006 and \$2.3 million to Venezuela during 2010–11. These were likely exports of used construction equipment.

With no domestic industry, Cuba relies on imports for its construction machinery needs. Cuban demand stems from the country's need to upgrade as well as construct new infrastructure. This ranges from improving Cuba's airports and seaports to constructing tourist facilities, as well as renovating its city cores and improving its road system. In addition, certain construction equipment may be used for mining—for example, for use in Cuba's nickel industry. Cuban construction activity has increased in recent years (table 6.8), and housing shortages, decades of underinvestment in infrastructure, the government's push for foreign direct investment (FDI), and the priority placed on developing tourism suggest that such activity will continue to grow.

⁹²⁹ USITC DataWeb/USDOC (accessed October 30, 2015).

⁹³⁰ Ibid.

⁹³¹ Ibid.

⁹³² Ibid.

⁹³³ USITC DataWeb/USDOC (accessed February 8, 2016).

⁹³⁴ No production of construction machinery is listed in Cuban statistics. ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, table 11.4.

⁹³⁵ Industry representative, interview by USITC staff, Miami, November 16, 2015.

⁹³⁶ There appears to be at least one producer of components and parts for construction machinery, *Empresa Oleohidráulica José Gregorio Martínez*. This company likely fabricates mechanical parts in small batches under contract, including hydraulic cylinders that are used in both construction and agricultural machinery. The company is a subsidiary of *Grupo Industrial Maquinaria Agrícola y Construcción* (GIMAC), which also has subsidiaries involved in importing machinery and producing agricultural machinery, parts and components, and trailers. Martínez Molina, "Oleohidráulica de Cienfuegos Expande Presencia," [Cienfuegos' Oleohidráulica expands its presence], October 9, 2014; Cuba, "GIMAC," http://www.cubagob.cu/des_eco/sime/grupos/gimac.htm (accessed October 30, 2015).

Table 6.8: Cuba: Value of construction by economic activity, 2012–14 (million dollars)

	2012	2013	2014
Agriculture, livestock, and forestry	3.1	6.9	6.6
Mining and quarrying	1.5	1.9	2.1
Sugar industry	2.3	3.1	3.2
Manufacturing	4.1	5.8	5.3
Electricity, gas, and water	10.4	12.0	17.8
Construction	37.7	34.3	31.3
Commerce; repair of personal effects	2.8	4.4	5.2
Hotels and restaurants	2.4	3.9	4.3
Transport, storage, and communications	3.3	21.3	4.4
Business services, real estate and rental	25.4	15.3	33.9
Public administration, defense, and security	31.9	30.1	31.4
Education	2.3	4.1	4.7
Public health and social services	2.2	3.5	5.5
Other	6.1	7.9	7.2
Total	135.6	154.5	162.7

Source: ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], table 12.5; ONEI, *Anuario Estadístico de Cuba 2013* [Statistical Yearbook of Cuba 2013], table 12.5.

Note: For the purposes of comparison to other values presented in the report, data were converted from millions of Cuban pesos to convertible Cuban pesos (CUCs) at the *Cadeca* exchange rate of 25:1, and then converted from CUCs to U.S. dollars at an exchange rate of 1:1.

Cuban imports of construction machinery rose from \$37.3 million in 2005 to a high of \$118.7 million in 2008, before falling to \$53.8 million in 2014 (table 6.9). Over one-half of total imports during the period were comprised of parts for construction machinery (18 percent), machines with a 360-degree revolving superstructure (13 percent), bulldozers (12 percent), and front-end shovels (11 percent). Off-highway dumpers, mobile cranes and drilling derricks, backhoes and trenchers, and miscellaneous other machinery made up the remainder of Cuban imports during 2005–14.⁹³⁷

During 2005–13, the EU was the principal source of Cuba’s imports of construction machinery, being surpassed in 2014 by China. In 2014, Cuba’s imports of these goods from China totaled \$27.9 million (52 percent), compared with imports from the EU, valued at \$22.8 million (42 percent). Spain has generally been the leading supplier of EU machinery to Cuba; in 2014, Spain accounted for 19 percent (\$10.4 million) of Cuba’s imports of construction machinery and 46 percent of all construction equipment supplied to Cuba by the EU. However, in certain years during the 2005–14 period, Italy, the Netherlands, or Germany surpassed Spain as the top-ranked EU supplier.

⁹³⁷ The composition of imports of construction machinery varies from year to year. For example, in 2012, Cuban imports of bulldozers accounted for 27 percent of its total imports of construction machinery, while in 2013, machinery with a 360-degree revolving superstructure accounted for 25 percent of imports.

Table 6.9: Cuba: Construction machinery, imports by major supplier and the United States, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
China	3.4	4.8	23.3	43.4	12.1	15.3	6.5	7.3	24.5	27.9
Spain	3.2	5.6	7.4	11.7	4.2	6.6	5.9	4.3	15.4	10.4
Italy	2.6	3.6	3.3	6.2	6.7	1.9	4.3	7.3	8.5	3.8
Netherlands	2.7	7.9	7.6	6.0	2.8	1.6	2.8	10.5	5.1	3.3
France	1.2	3.5	3.6	2.3	3.2	0.8	3.0	2.3	1.4	2.5
Canada	5.5	7.7	11.2	15.6	5.4	3.8	4.4	2.4	2.1	1.3
Austria	0.9	2.0	0.1	2.0	0.2	0.1	0.1	0.8	1.4	0.7
United Kingdom	0.7	6.9	3.2	1.9	0.1	0.3	^(a)	0.1	^(a)	0.7
Japan	2.1	0.5	0.4	4.2	4.5	0.3	0.7	0.1	0.9	0.5
Brazil	0.3	0.9	^(a)	3.1	0.1	8.9	6.2	0.8	3.5	0.5
United States	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All other	14.6	9.7	14.5	22.2	11.9	14.6	20.3	40.4	14.1	2.1
Total	37.3	52.9	74.4	118.7	51.1	54.3	54.3	76.1	77.1	53.8

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015).

^a Less than \$50,000.

The variability of Cuban imports of construction equipment during the period reflects both the specific construction projects undertaken in Cuba at any particular time and government-to-government agreements that often involve financing for Cuba's purchases of such machinery. For example, in 2013 and 2014, some Cuban imports of construction machinery were the result of a contract with a Chinese equipment producer that was partially financed by the Export-Import Bank of China.⁹³⁸ Cuba's imports from Brazil in 2010 and 2011 correspond to Brazil's involvement in constructing the Mariel Special Economic Development Zone (ZED Mariel), a project into which Brazil injected significant funding. Cuba's imports from Russia totaled \$61.6 million during 2009–13, with Russia and Cuba signing agreements for Russia to provide \$150 million in grants for Cuba to purchase construction and agricultural machinery.⁹³⁹ Such agreements complicate the landscape for U.S. suppliers, as Cuba reportedly prefers to deal with government-owned companies and do business under government-to-government relationships.⁹⁴⁰

Agricultural Machinery

U.S. Industry

In 2013, the U.S. agricultural machinery industry employed about 81,400 persons at production facilities with shipments of almost \$47.2 billion.⁹⁴¹ The U.S. agricultural machinery industry

⁹³⁸ Shantui Construction Machinery Co., "Shantui Completes Order to Cuba," February 3, 2015.

⁹³⁹ Yang, "What's Behind Moscow's Frequent Hosting?" February 25, 2009.

⁹⁴⁰ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

⁹⁴¹ This industry is classified under North American Industry Classification System (NAICS) 333111, Farm Machinery and Equipment Manufacturing. U.S. industry data from U.S. Census Bureau, "AmericanFactFinder," 2013.

includes three large multinational firms: John Deere, CNH Industrial N.V., and AGCO Corp.⁹⁴² The United States is also home to specialized producers of tillage, sowing, and haying equipment, as well as of small tractors, lawn and garden machinery, and irrigation equipment.

In 2014, the United States was the world's second-largest exporter of agricultural machinery, with exports valued at \$9.4 billion (26 percent). The United States trailed the EU (with global exports totaling \$10.4 billion, or 29 percent), but surpassed China (with exports of \$4.7 billion, or 13 percent).⁹⁴³ In 2014, U.S. exports of agricultural machinery were primarily to Canada (\$3.4 billion, or 36 percent of total U.S. exports). Other key markets were Australia (\$737 million or 8 percent) and Mexico (\$712.0 million or 8 percent).⁹⁴⁴ U.S. exports of agricultural machinery to the Dominican Republic totaled \$15 million in 2014.⁹⁴⁵ The only reported U.S. export of agricultural machinery to Cuba occurred in 2007 and consisted of one tractor valued at \$19,000.⁹⁴⁶

Cuban Industry and Market

Cuba has a small agricultural machinery industry focused on equipment and tools for cultivation, agricultural trailers, tillage tools, and plows.⁹⁴⁷ Cuba's *Grupo Industrial Maquinaria Agrícola y Construcción* (GIMAC) is likely responsible for most production of agricultural machinery.⁹⁴⁸ Cuba's exports of agricultural machinery totaled \$2.6 million in 2014, down from

⁹⁴² Deere & Co., for its agricultural and turf equipment segment, had sales of \$26.4 billion for its fiscal year ending October 31, 2014. The firm manufactures this segment in Brazil, China, France, Germany, India, Israel, Mexico, the Netherlands, Russia, Spain, and the United States. Deere & Co., "Form 10-K," December 19, 2014, 6, 62. CNH Industrial, NV, is registered in the Netherlands and is headquartered in London. CNH Industrial's agricultural equipment segment and sales were \$15.2 billion in 2014. This company manufactures agricultural equipment in Argentina, Austria, Belgium, Brazil, Canada, China, France, India, Italy, Mexico, Poland, Russia, the United Kingdom, and the United States. CNH Industrial, "2014 Annual Report," March 30, 2015, 25, 67–68. AGCO Corp. solely produces agricultural machinery and had sales of \$9.7 billion for 2014. The company manufactures in Brazil, China, Finland, France, Germany, Italy, and the United States. AGCO, "Form 10-K," February 27, 2015, 14, 18.

⁹⁴³ GTIS, World Trade Atlas (accessed August 20, 2015).

⁹⁴⁴ USITC DataWeb/USDOC (accessed October 30, 2015).

⁹⁴⁵ Ibid.

⁹⁴⁶ USITC DataWeb/USDOC (accessed October 30, 2015 and February 8, 2016).

⁹⁴⁷ Cuba's production of agricultural machinery is reported in units. In 2014, Cuba produced equipment and implements for cultivation (688 units), agricultural trailers (62 units), plows (412 units), and tillage tools (164 units). ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, table 11.4.

⁹⁴⁸ GIMAC operates about 20 subsidiaries, of which about 13 companies are related to agricultural machinery and are involved in the manufacture of finished machinery and components, product certification, research, logistics, and international trade. One of the principal manufacturing subsidiaries is *Empresa de Equipos Agrícolas "Héroes del 26 de Julio,"* which produces agricultural implements, particularly for sugarcane farming. Another is *Empresa de Combinadas Cañeras "LX Aniversario de la Revolución de Octubre,"* which produces parts for sugarcane harvesters. This company is developing a low-cost sugarcane harvester for the Cuban market that is Cuban-designed and Chinese-made. Cuba, "GIMAC," http://www.cubagob.cu/des_eco/sime/grupos/gimac.htm (accessed October 30, 2015); Veloz Placencia, "Novedosos Implementos para la Producción Cañera" [New tools for sugarcane production], January 5, 2015; García Fombellida, "Combinadas Cañeras Fabricadas en Holguín" [Sugarcane harvesters manufactured in Holguín], November 20, 2014.

a peak of \$3.6 million in 2011, but up significantly from \$423,885 in 2005.⁹⁴⁹ During 2005–14, 93 percent of Cuba’s exports of these goods went to Venezuela.

As with construction equipment, Cuba imports most of its agricultural machinery and is in need of high-quality, consistent machinery and spare parts.⁹⁵⁰ Cuban imports of agricultural machinery rose from \$11.4 million in 2005 to a peak of \$92.8 million in 2013 before falling to \$57.5 million in 2014 (table 6.10). In 2014, Brazil was the leading supplier of agricultural machinery to Cuba, followed by the EU (largely Spain and Italy). The Cuban drivers for increased imports of agricultural machinery have been the need to improve agricultural performance and reduce reliance on imported agricultural products. Nonetheless, any attempts by Cuba’s agricultural sector to replace its old and obsolete agricultural machinery are making slow progress. In 2013, approximately 1 percent of Cuba’s 66,128 tractors were less than 5 years old, nearly 12 percent were between 6 and 30 years old, and 87 percent were more than three decades old.⁹⁵¹

Table 6.10: Cuba: Agricultural machinery, imports by major supplier and the United States, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Brazil	1.4	1.9	12.2	32.9	2.7	14.9	8.1	17.1	16.6	29.5
Spain	5.3	6.4	14.4	20.4	17.5	14.5	31.7	16.3	26.4	17.4
Italy	1.7	7.9	6.4	7.6	2.9	2.2	6.1	3.1	9.9	5.3
China	(^a)	0.1	0.3	1.0	1.0	1.5	1.5	0.5	0.5	2.1
Germany	0.4	0.9	0.8	0.9	0.2	0.6	0.3	7.0	11.8	0.9
Netherlands	(^a)	0.3	(^a)	0.1	(^a)	0.0	0.8	(^a)	(^a)	0.5
Belarus	0.8	1.5	4.0	5.1	2.0	0.8	3.2	5.8	6.0	0.4
France	0.1	0.0	(a)	0.3	0.1	0.5	0.2	0.2	0.2	0.4
Mexico	(^a)	0.5	(^a)	0.1	0.3	0.3	0.4	0.6	0.5	0.3
Canada	0.8	0.6	0.8	0.6	0.4	0.1	0.2	(^a)	(^a)	0.1
United States	0.0	0.0	(^a)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
All other	0.9	1.1	1.5	2.9	3.6	1.9	3.4	7.0	21.0	0.5
Total	11.4	21.0	40.6	71.8	30.8	37.3	56.0	57.6	92.8	57.5

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015).

^a Less than \$50,000.

Like imports of construction equipment, import trends for these goods tend to be driven by the specific needs of Cuba’s agricultural sector for machinery suited to particular crops, irrigation, or pesticide and fertilizer application, as well as by favorable financing terms and government-to-government agreements. One example is Cuban imports of irrigation machinery. Imports of sprayers, dusters, and irrigation machinery accounted for 34 percent of total imports of agricultural machinery during 2005–14. These imports followed implementation in mid-2003 of the government’s 10-year plan to electrify the Cuban irrigation system, a project co-funded

⁹⁴⁹ GTIS, World Trade Atlas database (accessed August 20, 2015).

⁹⁵⁰ Cuban government officials, interview by USITC staff, Havana, June 15, 2015.

⁹⁵¹ Victoria Friends of Cuba, “Cuba Modernizes Its Agricultural Mechanization System,” August 5, 2013.

with a \$10 million loan from the OPEC Fund for International Development.⁹⁵² Another example is the recent growth in Cuban imports from Brazil. These reflect both Brazilian investment in

Cuba's sugar industry and Brazil's position as one of the few global suppliers of sugarcane harvesting machinery, which Cuba needed in order to modernize the sugar sector.⁹⁵³ Cuba also received credits from Brazil to purchase its agricultural equipment and other inputs.⁹⁵⁴ Cuba has also completed a number of deals in this sector with other countries, involving either attractive financing or quid pro quo transactions.⁹⁵⁵

Effects of the Removal of U.S. Restrictions

U.S. manufacturers view Cuba as a potential market for U.S.-made construction and agricultural equipment,⁹⁵⁶ and Cuban government officials report that U.S. machinery is likely to be well received in Cuba if U.S. export restrictions are lifted.⁹⁵⁷ Industry representatives indicate that the desire for U.S.-branded equipment, the size of the Cuban market, and the robustness of the sector suggest that there could be immediate business and excellent export potential for U.S. machinery producers.⁹⁵⁸

⁹⁵² Water World, "Electrification Plan for Cuban Irrigation," December 6, 2006; OPEC Fund for International Development, "OPEC Fund Extends US\$10 Million Loan to Cuba," June 25, 2003.

⁹⁵³ During 2005–14, about 59 percent of Cuban imports of agricultural machinery from Brazil were harvesting machines and related parts, most likely for sugarcane harvesting. The three major Brazilian producers of sugarcane harvesters are now foreign-owned. In Brazil, CaseIH is owned by CNH; Santal was purchased in 2014 by AGCO (United States), and Deere & Co. has minority ownership in CAMECO, along with Deere's Brazilian affiliate, SLC-Deere. GTIS, World Trade Atlas (accessed August 20, 2015).

⁹⁵⁴ In August 2012, Brazil agreed to extend credits of \$200 million to Cuba for the purchase of agricultural machinery and related inputs from Brazil under its export program "Mais Alimentos Internacional" [More food worldwide]. In late 2015, sources reported that Brazil will export approximately 400 tractors to Cuba under this same program. The tractors will be the CaseIH brand, a U.S. brand now owned by CNH that is made in the United States, Brazil, and other countries.

⁹⁵⁵ Imports of tractors and other agricultural machinery from Russia during 2012–13 were the result of government-to-government agreements that gave Cuba preferential financing for the purchase. Shantui of China began shipping heavy equipment to Cuba in 2013 to support Cuban rice production under a deal that was partially financed by the Export-Import Bank of China. Cuba and Belarus recently negotiated an agreement under which Belarus will export up to 400 tractors to Cuba in exchange for Cuban pharmaceuticals. In August 2015, Cuba imported 587 tractors from YTO Group Corp. in China, a sale made possible because of the favorable credit terms offered by YTO Group Corp. to Cuba. Yang, "What's Behind Moscow's Frequent Hosting," February 25, 2009; Shantui Construction Machinery, "Shantui Completes Order to Cuba," February 3, 2015; BelTA, "MTZ Eager to Sell Large Batch," October 28, 2014; BelTA, "Belarus to Export Equipment to Cuba," March 25, 2015; *Granma*, "Chinese Tractors Support Cuban Agriculture," October 14, 2015.

⁹⁵⁶ Creswell, "U.S. Companies Clamor to Do Business," December 18, 2014.

⁹⁵⁷ Cuban government official, interview by USITC staff, Havana, June 15, 2015; industry representative, interview by USITC staff, Miami, November 16, 2015. Due to data limitations, Commission modeling in manufactured goods is conducted at a more aggregated sector level than the sectors discussed here. Estimates for ISIC sector 29, which includes construction and agricultural machinery (as well as machinery used in other sectors, such as mining and textile production), reach over 20 percent of the Cuban import market, with U.S. exports calculated to be approximately \$160 million. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

⁹⁵⁸ The potential size of the Cuban construction machinery market is estimated by one U.S. company to be larger than markets in either the Dominican Republic or Puerto Rico because of the massive infrastructure investment

Credit, however, may be an important factor in realizing this potential. Cuban government officials indicate that access to credit will be necessary for them to be able to purchase U.S. machinery.⁹⁵⁹ Therefore, growth of U.S. exports could be affected by U.S. exporters' willingness to offer favorable financing and credit terms to Cuban purchasers.⁹⁶⁰ This is because suppliers such as Brazil and China typically provide government financial support and easy credit terms. Further, producers from Brazil, China, and the EU have developed business relationships with Cuban purchasers, and competing against suppliers with entrenched relationships may prove challenging. At the same time, many U.S. manufacturers, particularly larger firms that have their own financial arms, are reportedly in a position to provide good financing terms for equipment and machinery sales to Cuba.⁹⁶¹

If U.S. restrictions are lifted, Cuban government officials have indicated that they would likely import agricultural machinery, including rice harvesting machinery and irrigation equipment, noting the quality of U.S. machinery.⁹⁶² One U.S. source familiar with Cuban agriculture states that Cuba's large sugar farms could use large U.S.-built tractors and sugar harvesting machinery.⁹⁶³ Likewise, Cuba's citrus groves, in spite of the decline in numbers resulting from citrus greening disease, are large enough that they would benefit from using U.S.-built agricultural machinery.⁹⁶⁴ Regarding prospects for U.S. exports of construction machinery, a representative of Caterpillar, Inc., stated that Cuba needs and would like to buy many of the types of products that the company produces.⁹⁶⁵ The company will likely begin by marketing diesel generator sets, which provide continuous or backup electrical power, and will follow that up with marketing mining machinery and then construction machinery.⁹⁶⁶

Recent developments between the United States and Cuba in this sector could lay the groundwork for U.S. exports of construction equipment parts in the very near term. In anticipation of the lifting of U.S. restrictions on Cuba, an Alabama startup company, Cleber LLC, is working to establish an agricultural tractor assembly operation in ZED Mariel.⁹⁶⁷ This facility would initially use U.S.-made parts (fabricated in Alabama and shipped to Cuba), with the eventual goal of transferring production to the proposed Mariel facility (box 6.1).

Cuba needs. Industry representative, interview by USITC staff, Miami, November 16, 2015; legal representative, interview by USITC staff, Miami, June 22, 2015.

⁹⁵⁹ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

⁹⁶⁰ On January 27, 2016, the United States removed limitations on payments and financing of U.S. Department of Commerce-authorized exports from the United States of 100 percent U.S.-origin goods or re-export of 100 percent U.S.-origin goods from a third country, other than exports of agricultural products. 81 Fed. Reg. 4583 (January 27, 2016). See chapter 3 for additional information.

⁹⁶¹ Industry representative, interview by USITC staff, Miami, November 16, 2015.

⁹⁶² Cuban government officials, interview by USITC staff, Havana, June 17, 2015.

⁹⁶³ U.S. academic, telephone interview by USITC staff, October 19, 2015.

⁹⁶⁴ Ibid.

⁹⁶⁵ Lane, remarks at "Cuba, the United States, and the Road Back to MFN," September 10, 2015.

⁹⁶⁶ Ibid. Mr. Lane noted that Cuba plans to expand its nickel mining industry by 30 percent, but that currently much of the nickel mining machinery is from the EU.

⁹⁶⁷ Miroff, "An Alabama Tractor Company," June 25, 2015.

Box 6.1: Effects of U.S. Restrictions on Proposed U.S. Investment in Cuba

Alabama-based Cleber is one of the first U.S. companies to apply to the Cuban and U.S. governments to operate in the Mariel Special Economic Development Zone. Cleber proposes building a facility in ZED Mariel to assemble tractors from parts produced in Alabama and shipped to Cuba. Eventually, the company would shift production to Cuba.

Cleber noted that in applying to Cuba to assemble tractors in Mariel, the company had to promote a business model that would replace imports into Cuba, assist export markets, be a new source of employment, and help develop Cuba's supply chain, among other goals. Cleber pointed out the effects that U.S. restrictions on trade with Cuba have had on its proposed venture. While its application was approved by the Cuban authorities in one month (Cleber applied on April 15, 2015, and received Cuba's approval on May 15, 2015), U.S. restrictions delayed Cleber's obtaining the license it needed to proceed. Cleber applied to OFAC for a license to produce in Cuba on June 26, 2015. On September 10, 2015, the U.S. Department of Commerce granted Cleber an export license to ship a sample tractor to a November 2015 trade show in Cuba. Finally, in February 2016, the company received approval from OFAC to proceed with its production plans.

Cleber notes that U.S. restrictions constrain the company's ability to provide competitive financing to the Cuban private sector and generally cause a "lack of clarity of what can or cannot be done in trading with Cuba." Another issue for Cleber is how to determine if their customers are indeed private citizens or other private entities in Cuba in order to comply with U.S. restrictions. Additionally, the company would like to work with Cuban suppliers, but the company may not do so under current regulations, because such suppliers are typically government-owned entities.

Source: Cleber, LLC, written submission to the USITC, October 23, 2015; industry representative, telephone interview by USITC staff, October 22, 2015; Cleber, LLC, www.cleberllc.com (accessed February 17, 2016).

U.S. State-level Effects

Several states are likely to benefit from U.S. exports of construction and agricultural machinery to Cuba. These include Georgia, Illinois, Iowa, Louisiana, Nebraska, North Dakota, Pennsylvania, Tennessee, and Wisconsin, where U.S. construction and agricultural machinery production facilities are located. If U.S. exports of used machinery develop, Georgia and Florida are likely to benefit because some large used-equipment dealers are located there.

Building Materials

The removal of U.S. restrictions on trade with Cuba could provide significant opportunities for U.S. producers and exporters of building materials.⁹⁶⁸ Both U.S. and Cuban sources see this sector as an area of great need in the short term, given the country's infrastructure needs, expansion plans for tourism and industry, and housing requirements.⁹⁶⁹ In addition, U.S. FDI,

⁹⁶⁸ See appendix H for a complete list of the HS subheadings comprising this sector. Because there is no universally accepted product scope for "building materials," this analysis covers materials that are directly consumed by the construction sector, but excludes downstream manufactured products.

⁹⁶⁹ Cuban economist, interview by USITC staff, Havana, June 17, 2015; industry representative, interview by USITC staff, Miami, November 16, 2015; Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015; USITC, hearing transcript, 212 (testimony of Ricardo Torres Pérez, University of Havana).

particularly by major U.S. resort hotel chains investing in the tourism sector, would likely generate downstream demand for high-quality building materials sourced from the United States. Due to decades of underinvestment in the domestic industry, Cuba is highly dependent upon imports of most building materials to meet the downstream needs of its construction sector. Cement, limestone and marble, and steel concrete reinforcing bars are the only building materials for which Cuba is a net exporter, suggesting that Cuba could source a wide variety of products from the United States quickly and efficiently.

U.S. Industry

The United States is a major global producer and trader of building materials. Given the sheer diversity of inputs consumed by the downstream construction sector, information is provided below only for some of the larger U.S. building-materials industries.

Finished steel mill products: The U.S. steel industry operated 11 iron ore-smelting integrated mills and 113 ferrous scrap-based electric-arc furnace mills,⁹⁷⁰ directly employed over 150,000 workers,⁹⁷¹ and recorded shipments of 97.0 million short tons (88.0 metric tons) of finished steel mill products in 2014.⁹⁷² However, the United States accounted for less than 6 percent of global crude steel output in that year.⁹⁷³

Sawn lumber: The United States has extensive forestry resources supplying the U.S. forest products industry. In 2014 this industry operated 3,124 sawmills, with about 81,000 employees⁹⁷⁴ producing an estimated 51.2 million cubic meters of softwood lumber and 17.4 million cubic meters of hardwood lumber.⁹⁷⁵

Finished copper mill products: In the United States, 336 mills that roll, draw, extrude, and alloy copper employed nearly 29,000 workers⁹⁷⁶ and produced 2.3 million metric tons of refined copper and copper alloy finished mill products in 2014.⁹⁷⁷ In that year, the United States' production of finished copper mill products ranked second only to China, the world's largest producer.⁹⁷⁸

Cement: Although the United States is the world's third-largest cement producer (83,000 metric tons), its output accounted for only 2 percent of global cement production (4.2 million metric tons) in 2014. Cement is manufactured at 99 plants across 34 states and

⁹⁷⁰ Fenton, "Iron and Steel," January 30, 2015, 78.

⁹⁷¹ AISI, "2015 Steel Industry Profile," 2015.

⁹⁷² AISI, "Net Shipments of Steel Mill Products," February 2015.

⁹⁷³ The United States produced 88.3 million metric tons of crude steel compared to the 1.6 billion metric tons produced worldwide in 2014. WSA, "Monthly Crude Steel Production 2014," January 22, 2015.

⁹⁷⁴ BLS, *Quarterly Employment and Wages Survey* (accessed November 16, 2015).

⁹⁷⁵ Howard and McKeever, *U.S. Forest Products: Annual Market Review*, June 2015, 4.

⁹⁷⁶ BLS, *Quarterly Census of Employment and Wages—Industry* (accessed December 11 and 12, 2015).

⁹⁷⁷ WBMS, "Copper," April 2015, 79.

⁹⁷⁸ *Ibid.*, 50.

Puerto Rico that employ 10,000 workers in quarries producing crushed limestone and in mills producing cement.⁹⁷⁹

Dimension stone: The United States produced 2.2 million metric tons of stone in 2014 from 274 quarries located in 33 states. Some 5,000 workers were employed in quarries and mills producing rough-cut and dressed (cut and polished) limestone, granite, sandstone, miscellaneous stone, marble, and slate;⁹⁸⁰ such stone is used for paving slabs, building facades, countertops, roofing shingles, monuments, and other materials.

Although the United States was the world's largest importer of building materials during 2005–14, it was also the world's third-largest exporter, accounting for 9 percent of the world's exports of building materials in 2014.⁹⁸¹ U.S. worldwide exports of these goods nearly doubled in value in 2005–14, increasing from \$34.8 billion in 2005 to \$67.0 billion in 2014.⁹⁸² Finished steel mill products were the leading export over this 10-year period, followed by finished aluminum mill products and articles thereof; insulated conductors, optical fibers, and electrical insulators; base-metal builders' wares; wood and composite wood products; articles of iron or steel; and paint, caulking, and adhesives. Together, these seven leading product groupings made up nearly 77 percent of all U.S. exports of building materials during 2005–14.

Export destinations for U.S. building materials are highly concentrated among the United States' North American Free Trade Agreement (NAFTA) partners, with Canada being the leading destination, followed by Mexico. These two countries accounted for 61 percent of all such U.S. exports over this period.⁹⁸³

The Dominican Republic was also a significant customer for these goods during this time. The United States continued to be the country's leading supplier, providing approximately 27 percent of the building materials imported by the Dominican Republic on an average basis over this 10-year period. U.S. exports of building materials to the Dominican Republic more than doubled after 2005 to reach \$235.7 million by 2014.⁹⁸⁴

Cuba accounts for a negligible share of U.S. exports of building materials.⁹⁸⁵ Annual U.S. exports to Cuba ranged between \$1 million and \$10 million during 2005–11, while during 2012–14, U.S.

⁹⁷⁹ Van Oss, "Cement," January 2015, 38–39.

⁹⁸⁰ Dolley, "Dimension Stone," January 2015, 152.

⁹⁸¹ GTIS, Global Trade Atlas database (accessed October 19 and November 12, 2015).

⁹⁸² USITC DataWeb/USDOC (accessed July 20 and August 3, 2015).

⁹⁸³ Ibid. By contrast, the next seven leading U.S. destinations (China, the United Kingdom, Japan, South Korea, Germany, Brazil, and Hong Kong) accounted for another 15 percent of this export total.

⁹⁸⁴ The leading building materials exported by the United States to the Dominican Republic were predominantly wood and composite wood products, followed by finished steel mill products; paint, caulking, and adhesives; insulated conductors, optical fibers, and electrical insulators; and articles of iron or steel. These five leading product categories accounted for about 68 percent of all building materials annually exported by the United States to the Dominican Republic during this period.

⁹⁸⁵ For further information about non-economic and policy considerations shaping Cuban government decisions about whether or not to source from the United States over the 2005–14 period, see the "Political Considerations Affecting Cuban Trade and Investment Decisions" section in chapter 4.

exports were sporadic and totaled less than \$100,000. U.S. exports to Cuba in 2015 totaled just \$5,500.⁹⁸⁶ U.S. exports to Cuba in 2005 consisted of a wide variety of products, led by prefabricated buildings and followed by softwood lumber and treated rough-wood products.⁹⁸⁷ Since 2008, however, U.S. exports have consisted of just a handful of goods. Treated rough-wood utility poles were the most prominent building material continually shipped from the United States to Cuba during 2005–11,⁹⁸⁸ as wood and wood products are among the “License Exception Agricultural Commodities” for which the 2000 Trade Sanctions Reform and Export Enhancement Act (TSRA) eased licensing restrictions on U.S. exportation to Cuba.⁹⁸⁹ U.S.-origin poles of southern pine reportedly provide greater resistance to decay from long-term exposure to the Caribbean climate than do those of Canadian origin.⁹⁹⁰

Following the Obama administration’s December 2014 announcement on restoring diplomatic ties with Cuba,⁹⁹¹ trade restrictions were eased for U.S. firms. The new rules allow the export of certain building materials to the Cuban private sector for the construction and renovation of privately owned residences, businesses, and other buildings for private and recreational use.

Cuban Industry and Market

Building materials known to be produced by Cuba’s manufacturing sector include cement, wood and plastic doors and window frames, cut marble, concrete building blocks, bricks, ceramic tiles, annealed glass, and steel concrete reinforcing bars.⁹⁹² Cuba’s mining and quarrying sector includes sand, crushed stone, and clay; limestone and marble; and gypsum.⁹⁹³ However, Cuba’s quarrying and manufacturing sectors are currently inadequate to meet the country’s needs for most building materials, due to decades of government underinvestment in expanding, upgrading, or even maintaining existing quarrying and manufacturing enterprises. Hence, the Cuban construction sector is highly dependent on foreign sources of building materials. Nevertheless, there are a few notable instances of building materials that Cuban producers supply for both domestic and export markets: cement, dimension stone, and certain finished steel mill products.

⁹⁸⁶ USITC DataWeb/USDOC (accessed February 8, 2016).

⁹⁸⁷ U.S. exports in this year were varied, consisting of glass fibers; rubber tubes; rubber and plastic floor coverings; softwood and hardwood products; prefabricated buildings; paints and varnishes; adhesives and glues; putties and caulking; lime, gypsum, and plaster; cement; and others.

⁹⁸⁸ The Alabama Agriculture and Industries Commission announced in November 2005 that Alimport contracted with a Mobile-based trading company to supply utility poles sourced from several manufacturers operating in the southwestern part of the state. Rhodes, “Alabama Announces Cuban Trade Deals,” November 11, 2005.

⁹⁸⁹ U.S. Treasury, OFAC, “Trade Sanctions Reform and Export Enhancement Act,” n.d. (accessed January 25, 2015).

⁹⁹⁰ Industry officials, interviews by USITC staff, June 21, 2007; cited in USITC, *U.S. Agricultural Sales to Cuba*, July 1997, 4-32.

⁹⁹¹ For more information about the easing of U.S. travel and trade restrictions on Cuba after the President’s December 2014 announcement, see chapter 3 and appendix F.

⁹⁹² BG Consultants, “Opportunities in the New Cuba,” (accessed November 9, 2015); Gonzáles, “Cyclone-resistant Construction Materials, Cuban Style,” July 5, 2013; Headley, “Adelante a Cuba? Glass Suppliers,” June 2015; *ACEC Newsletter*, “Building Products and Construction Sector Profile—Cuba,” February 2014.

⁹⁹³ BG Consultants, “Cuba’s Mineral Resources, Mining, and Petroleum Industries,” May 11, 2015; Soto-Viruet, “The Mineral Industry of Cuba (Advance Release),” April 2015, 9.2.

Cement: Concrete predominates as a construction material in residential, commercial, and infrastructure projects on the island. Six integrated (kiln and grinding) facilities currently produce cement in Cuba. Four are operated by the state-owned *Corporación Cementos Cubanos* (Cuban Cement Corporation), with the other two being joint ventures with Mexican- and Swiss-based producers.⁹⁹⁴ Three facilities were constructed after 1959, and the other three have been repeatedly enlarged and upgraded over the years.⁹⁹⁵ Joint-venture *Cementos Cienfuegos S.A.* is the newest (opened in 1980) and largest facility, and is considered a relatively modern operation.⁹⁹⁶

Industry-wide production capacity exceeds 5.5 metric tons per year,⁹⁹⁷ but these facilities have operated considerably below capacity over the past two decades. The low production numbers are due to high energy costs,⁹⁹⁸ a lack of reinvestment to improve efficiency, and a buildup of inventories in cement facilities' silos due to transportation and domestic distribution constraints.⁹⁹⁹

The Cuban cement industry has been exporting cement since the early 1990s throughout the Caribbean Basin.¹⁰⁰⁰ Since 2011, most Cuban cement has been destined for Venezuela to meet domestic shortfalls, as many Venezuelan cement plants are operating under capacity or are shut down for repairs.¹⁰⁰¹ The Cuban cement industry also exported some clinker during 2004–11 rather than processing it into cement.¹⁰⁰²

Dimension stone: Based on abundant high-grade limestone and marble deposits¹⁰⁰³ located throughout the island, Cuba has five currently active quarries that produce marble and limestone¹⁰⁰⁴ for both domestic consumption and export.¹⁰⁰⁵ However, output is small, amounting to 4,300 metric tons in 2010—less than 3 percent of the peak output of 168,000 metric tons back in 1987. Many quarries were shut down or abandoned after the late 1980s due to loss of foreign buyers, energy shortages, and lack of adequate reinvestment. Nevertheless, the industry has since acquired more modern equipment (including large-block diamond-blade saws) to replace obsolete versions dating back to the Soviet era.¹⁰⁰⁶ In most

⁹⁹⁴ BG Consultants, "Cuba's Mineral Resources, Mining, and Petroleum Industries," May 11, 2015, 4; Wacaster et al., *Recent Trends in Cuba's Mining and Petroleum Industries*, March 2015, 3.

⁹⁹⁵ Free Library, "Cuba Attempts to Revive Its Cement Manufacturing Sector," March 1, 2012.

⁹⁹⁶ Ibid.

⁹⁹⁷ Edwards, "Central America and the Caribbean—Regional Cement Focus," August 22, 2012.

⁹⁹⁸ Free Library, "Cuba Attempts to Revive Its Cement Manufacturing Sector," March 1, 2012.

⁹⁹⁹ Valero, "Cuba: From Surpluses to Shortages," July 28, 2015.

¹⁰⁰⁰ Free Library, "Cuba Attempts to Revive Its Cement Manufacturing Sector," March 1, 2012.

¹⁰⁰¹ Armas, "Venezuela to Import Cement from Cuba," December 21, 2010.

¹⁰⁰² GTIS, Global Trade Atlas database (accessed October 28, 2015).

¹⁰⁰³ BG Consultants, "Cuba's Mineral Resources, Mining, and Petroleum Industries," May 11, 2015, 2; Wacaster et al., *Recent Trends in Cuba's Mining and Petroleum Industries*, March 2015, 2.

¹⁰⁰⁴ Free Library, "Cuba's Traditional Marble Industry Poised for a Comeback," December 1, 2011.

¹⁰⁰⁵ For samples of dimension stone commercially available from Cuba, see, e.g., StoneContact.com, "All Natural Stone, Cuba," <http://www.stonecontact.com/stone/cuba> (accessed November 10, 2015).

¹⁰⁰⁶ Free Library, "Cuba's Traditional Marble Industry Poised for a Comeback," December 1, 2011.

years during 2005–14, Cuba was a net exporter of dimension stone, primarily to Caribbean Basin countries but also to EU members (Germany, Italy, and Spain) and China.¹⁰⁰⁷

Finished steel mill products: Cuba’s steel industry consists of two small, state-owned¹⁰⁰⁸ mills. Concrete reinforcing bar (“rebar”) is the predominant finished product from both mills, representing 92–100 percent of all hot-worked products annually during 2005–13.¹⁰⁰⁹ Cuba exports rebar throughout the Caribbean Basin, but its exports increasingly concentrated on the Venezuelan market starting in 2011.¹⁰¹⁰ Like other industries in this sector, the Cuban steel industry must struggle to stay competitive. There are reports of mill upgrades with installation of new equipment to enhance both operating reliability (and correct past outages) and production volumes.¹⁰¹¹ On the other hand, the industry confronts high transportation costs and delays as it seeks raw materials, new equipment, and spare parts from Europe or Asia; it must also face the currency exchange risk of purchasing in European or Asian currencies.¹⁰¹²

As with most manufactured products, limited domestic production means that Cuba must rely on imports for its building material needs; such imports totaled \$467.8 million in 2014, an increase of 20 percent over 2005 (table 6.11). Spain is the leading foreign source of building materials for Cuba, benefiting from its common linguistic and cultural ties, along with compatible business approaches; Spain provided about one-third (30–36 percent) of Cuba’s annual imports of building materials during 2005–14. For similar reasons, Mexico is Cuba’s third-largest source of building materials over this period. However, despite close political ties, Cuba became less dependent on Venezuela for building materials over this period. Venezuela’s share of Cuban imports in this sector fell from 14 percent in 2005 to 0.4 percent in 2014. On the other hand, China’s share of Cuba’s global imports of building materials nearly trebled, climbing from 8 percent in 2005 to 24 percent in 2014. Moreover, Cuba became increasingly more reliant on its top five sources (Spain, China, Mexico, Italy, and Canada) over this 10-year period; these countries’ share of Cuba’s global imports of building materials rose from 60 percent to 79 percent. By contrast, the United States accounted for less than 2 percent of Cuba’s annual global imports of building materials over this 10-year period. Moreover, as both Cuban government officials and U.S.-based observers noted, the top five sources of building materials, plus Venezuela, were also major foreign investors in nearly 250 joint ventures on the island.¹⁰¹³

¹⁰⁰⁷ GTIS, Global Trade Atlas database (accessed October 19, 2015).

¹⁰⁰⁸ BG Consultants, “Cuba’s Mineral Resources, Mining, and Petroleum Industries,” May 11, 2015, 4; Wacaster et al., *Recent Trends in Cuba’s Mining and Petroleum Industries*, March 2015, 3.

¹⁰⁰⁹ WSA, *Steel Statistical Yearbook 2014*, November 6, 2014, 31, 33, and 39.

¹⁰¹⁰ GTIS, Global Trade Atlas database (accessed October 19, 2015).

¹⁰¹¹ Radio Rebelde, “Cuba’s Biggest Iron and Steel Industry,” March 12, 2012.

¹⁰¹² Radio Cadena Agramonte, “US Blockade on Cuba Hinders,” September 23, 2010.

¹⁰¹³ Cuban government officials and Cuban academics, interviews by USITC staff, Havana, June 15–19, 2015; Kotschwar and Cimino, written testimony to the USITC, June 2, 2015, 2. For further information, see the “Investment” section in chapter 4.

Table 6.11: Cuba: Building materials, imports by major suppliers and the United States, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Spain	104.2	137.6	200.7	245.6	138.5	167.4	187.4	213.3	219.9	165.0
China	31.8	59.7	65.9	116.6	138.2	163.1	191.3	159.7	147.7	112.5
Mexico	37.6	28.4	18.1	37.3	32.7	34.2	37.0	48.9	45.0	33.7
Italy	25.5	31.2	28.4	57.4	21.8	27.3	44.2	44.4	49.6	29.8
Canada	35.3	69.8	73.8	69.3	18.9	27.7	46.4	58.7	42.3	28.3
Honduras	0.6	0.2	0.2	3.2	0.5	0.6	^(a)	5.1	12.6	15.1
Netherlands	10.9	12.2	16.1	19.4	11.8	8.4	9.3	11.4	12.3	10.3
Brazil	12.8	12.2	13.8	22.9	15.9	13.9	41.3	31.1	36.8	9.2
Colombia	3.4	3.6	5.2	7.6	11.1	7.7	7.7	7.4	8.7	8.5
Morocco	1.1	0.2	0.8	1.3	1.3	0.0	1.6	2.6	7.7	6.1
United States	5.3	2.9	9.9	9.7	1.7	1.0	1.5	^(a)	0.1	^(a)
All other	122.9	119.6	125.3	138.9	73.5	100.4	104.2	87.6	110.9	49.3
Total	391.3	477.5	558.2	729.2	465.8	551.8	671.8	670.3	693.5	467.8

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015).

^a Less than \$50,000.

The leading building materials imported by Cuba from all global sources during 2005–14 were predominantly finished steel mill products, followed by paint, caulking, and adhesives; articles of iron or steel; insulated conductors, optical fibers, and electrical insulators; and base-metal builders' wares. Cuba's imports of building materials are highly concentrated among these five leading product categories, which together accounted for about 68 percent of all building materials annually imported by Cuba during the 10-year period.

Although the government established independent shops to sell building materials in 2011, and allowed private citizens to buy from them, most building materials continue to be distributed through a multistep process from producers to central trading entities, to local trading entities, and finally to point-of-sale outlets. The volume of building materials being passed along the distribution chain can be constrained by inadequate transportation capacity¹⁰¹⁴ or even bureaucratic oversight in not providing the next link in the distribution chain.¹⁰¹⁵ Moreover, suitable materials may be lacking; for example, annealed glass is readily available from domestic producers, but not the shatterproof glass that is more suitable for tropical storm-resistant windowpanes.¹⁰¹⁶ Other materials do not appear to be publicly available at all; for example, retail stores do not sell lumber in Cuba.¹⁰¹⁷

Private construction is a growing sector and one that could provide additional potential for growth of U.S. exports of building materials to Cuba.¹⁰¹⁸ The government began granting

¹⁰¹⁴ Valero, "Cuba: From Surpluses to Shortages," July 28, 2015.

¹⁰¹⁵ For example, continued production of concrete blocks was interrupted at a facility that had to store nearly 1 million such blocks, because there were no entities in place for distribution. Ravensberg, "Cuba's Elusive Building Materials," November 3, 2011.

¹⁰¹⁶ Headley, "Adelante a Cuba? Glass Suppliers," June 2015.

¹⁰¹⁷ Ravensberg, "The Crime of Carpentry in Cuba," August 4, 2015.

¹⁰¹⁸ Private sector workers in construction could provide demand for imports of a wide variety of materials and tools. USITC, hearing transcript, 251 (testimony of Richard Feinberg, Brookings Institution).

licenses to private building tradesmen back in the early 1990s¹⁰¹⁹ and has allowed them to form independent cooperatives for building maintenance and renovations since 2013.¹⁰²⁰ Both the cooperatives and private industry are growing areas of the economy, with construction contractors comprising the largest share of private sector licenses granted.¹⁰²¹ Residential construction activity has further expanded since November 2011, when the government allowed private citizens not only to buy and sell residential property but also to build and renovate residences, with the support of new home-renovation financing.¹⁰²² In fact, of the 26,634 new residential units built in 2013, nearly one-half (12,217 units) were built by individuals without state efforts.¹⁰²³ Others have reported the overall share of self-built housing to be as high as two-thirds of total housing.¹⁰²⁴

Effect of the Removal of U.S. Restrictions

Estimates suggest that Cuba is in dire need of at least \$25 billion in transportation infrastructure; the construction or repair of 4 million additional housing units;¹⁰²⁵ and, within the next five years, the construction of an additional 2,500–3,000 new hotel rooms.¹⁰²⁶ Cuban demand for building materials is expected to increase as a result of the anticipated increased construction, and the United States, as a large, competitive producer and exporter, will be ideally situated to provide Cuba with much of the needed building materials in the event that U.S. restrictions are lifted.¹⁰²⁷ Unlike their more distant European rivals, U.S. suppliers can provide prompt, smaller, and more frequent shipments that could ease existing capacity constraints of Cuba's centralized distribution system. Within the commercial construction sector, U.S. FDI in tourism, manufacturing, and infrastructure, among other sectors, would directly generate downstream demand for high-quality building materials that could be supplied by the United States.¹⁰²⁸ U.S. building materials suppliers could also enter into joint ventures with Cuban construction companies seeking outside expertise and operating scale,¹⁰²⁹ or joint ventures with Cuban firms to distribute building materials.¹⁰³⁰ However, it is also

¹⁰¹⁹ Burke, "Construction in Cuba," May 3, 2012; Frank, "Cuban Government to Decentralize Construction Projects," July 13, 2008.

¹⁰²⁰ Ritter, "Construction Trades People to Be Allowed," March 27, 2013.

¹⁰²¹ Presenter, 39th Annual CCAA conference, Miami, November 16, 2015.

¹⁰²² Frank, "Cuban Government to Decentralize Construction Projects," July 13, 2008; Franks, "Cubans on the Move as New Real Estate Market Grows," March 20, 2013; Peters, *Cuba's New Real Estate Market*, February 2014; ACEC *Newsletter*, "Building Products and Construction Sector Profile—Cuba," February 2014.

¹⁰²³ Café Fuerte, "Cuba Relaxes Some Housing Regulations," September 9, 2014.

¹⁰²⁴ Amuchastegui, "Poverty in Cuba," November 2015.

¹⁰²⁵ Brookings, "Rethinking Cuba" event transcript, Washington, DC, June 2, 2015, 37 (Germán Ríos, CAF Development Bank).

¹⁰²⁶ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

¹⁰²⁷ Commission modeling in manufactured goods occurred at a more aggregated sector level than the sectors discussed here. Estimates are not available for building materials.

¹⁰²⁸ For further information, see the "Travel Services" section in chapter 7.

¹⁰²⁹ USITC, hearing transcript, June 2, 2015, 243–244 (testimony of Ricardo Torres Pérez, University of Havana).

¹⁰³⁰ For example, among the new projects announced by Cuba's Foreign Trade and Investment Ministry as part of the *Portfolio of Opportunities for Foreign Investment 2015* is a joint venture with the Cuban state-owned company

possible that third-country foreign investors may rely on purchases of materials from their own country rather than the United States.

U.S. State-level Effects

Manufacturers of building materials operate throughout the United States. Nevertheless, those located in the southeastern states, with significant regional production capacity, stand to benefit the most from any liberalization of U.S. restrictions on trade with Cuba due to Cuba's proximity to ports on the U.S. southern Atlantic seaboard and the Gulf Coast.

Telecommunications Equipment

Cuba's telecommunications infrastructure is outdated and inadequate, and modernization will require significant investment in equipment to improve Internet access, voice and data transmission, banking, credit card transactions, and the like. In the event that U.S. restrictions are lifted, the potential for U.S. exports of telecommunications equipment¹⁰³¹ to Cuba is mixed. It is limited by several factors, including the monopoly position of Cuba's telecommunications service company, *Empresa de Telecomunicaciones de Cuba S.A.* (ETECSA); the hesitancy of the Cuban government to purchase U.S. goods in this sensitive sector; and the presence of certain foreign producers that have an entrenched position in the Cuban market and close relationships with the Cuban government. At the same time, opportunities for increased U.S. exports of telecommunications equipment may follow U.S. and other foreign investment in Cuba to the enterprise (business) segment¹⁰³² of the Cuban telecommunications market, and then to the wireless segment. Export potential may depend on the inclination and ability of U.S. telecommunications service providers to operate in Cuba, as well as pressure from both Cuban and international businesses for better telecommunications in Cuba to support increased tourism and provide the infrastructure necessary to attract foreign investment.

U.S. Industry

The U.S. communications equipment industry, producing telephone apparatus, radio and television broadcasting equipment, and wireless equipment, employed about 107,100 workers and had shipments of \$44.3 billion in 2013, the most recent year for which data are available.¹⁰³³ The U.S. industry includes many U.S.-based global producers of telecommunications equipment, such as Cisco Systems, Avaya, Brocade Communications Systems, and Juniper Networks, which supply the market segments for landlines, mobile

Gran Comercial to establish and operate a three-store wholesale chain to distribute hardware and construction supplies.

¹⁰³¹ See appendix H for a complete list of the HS subheadings comprising this sector.

¹⁰³² The enterprise market segment refers to telecommunications and Internet networking equipment for businesses; national and local governments; financial services; and research and education institutions.

¹⁰³³ Telecommunications equipment production is classified under North American Industry Classification System (NAICS) 3342, Communications Equipment Manufacturing. U.S. industry data from U.S. Census Bureau, "AmericanFactFinder" (accessed August 7, 2015).

wireless, enterprises, and consumers. U.S. firms typically perform R&D within the United States, but have products made by contract manufacturers located largely in Asia, Mexico, and the United States.

In 2014, the United States was the world’s third-largest exporter of telecommunications equipment behind China and Hong Kong. U.S. exports of telecommunications equipment to the world rose from \$22.6 billion in 2005 to \$42.2 billion in 2014. Mexico was the leading destination for U.S. exports and accounted for \$6.70 billion, or 16 percent, of the total. U.S. exports of telecommunications equipment to the Dominican Republic—which, as noted, is similar in size and population to Cuba—totaled \$78.8 million in 2014, down from a peak of \$127.7 million in 2008.¹⁰³⁴

Most U.S. exports of telecommunications equipment to Cuba occurred after the United States liberalized certain trade restrictions in September 2009. These liberalizations allowed U.S.-licensed exports of telecommunications equipment to Cuba to provide for better telecommunications links between the United States and Cuba, either directly or through third countries. For example, during 2005–08, U.S. exports of telecommunications equipment to Cuba, consisting exclusively of optical fiber cable, totaled only \$10,930. During 2009–14, the period following the liberalization, U.S. exports posted small increases in a variety of telecommunications products; the exports included base stations, routers, and miscellaneous transmission equipment, for a total value of \$810,885 during 2009–14.¹⁰³⁵ In January 2015, U.S. restrictions on U.S. exports to Cuba were further liberalized for some types of low-technology telecommunications equipment and consumer communications devices. However, in 2015, there were no U.S. exports of telecommunications equipment to Cuba.¹⁰³⁶ Travelers to Cuba are allowed to bring in many types of consumer communications devices, such as personal computers, cellphones, tablets, and printers, and reportedly many travelers take advantage of this option, which prompted the Cuban government to enact quantity limitations in 2014.¹⁰³⁷

Despite the liberalizations, U.S. exporters of telecommunications equipment find that several issues severely limit their sales to Cuba. First, several U.S. companies note that commercial risk exists because of the ambiguity of U.S. regulations on telecommunications and the language of the Cuba Democracy Act, which inhibits U.S. exports to Cuba (box 6.2).¹⁰³⁸ Further, financing is an issue, and even Cuban government officials acknowledge that it is difficult to conduct financial transactions without the use of the U.S. dollar.¹⁰³⁹ U.S. industry sources indicate that for some U.S. exporters, many of these challenges may make the Cuban market appear not worth the effort, given the market’s small size.¹⁰⁴⁰

¹⁰³⁴ GTIS, World Trade Atlas database (accessed November 17, 2015).

¹⁰³⁵ USITC DataWeb/USDOC (accessed August 15, 2015).

¹⁰³⁶ USITC DataWeb/USDOC (accessed February 8, 2016).

¹⁰³⁷ Aduana General de la República de Cuba [Cuba General Customs Bureau], “What Can I Import within My Baggage?” (accessed August 25, 2015). Weissenstein, “Cuba Cracks Down on Goods,” September 2, 2014.

¹⁰³⁸ Industry representatives, interview by USITC staff, Washington, DC, October 22, 2015.

¹⁰³⁹ Cuban government official, interview by USITC staff, Havana, June 17, 2015.

¹⁰⁴⁰ Industry representatives, interview by USITC staff, Washington, DC, October 22, 2015.

Box 6.2: Telecommunications Equipment: Key U.S. Restrictions

U.S. exports and re-exports of telecommunications equipment to Cuba are regulated by the U.S. Export Administration Regulations (EAR). The Cuban Democracy Act may also limit U.S. exports of telecommunications equipment to Cuba.

In September 2009, the U.S. government modified the EAR to allow U.S. exports of consumer communications devices and telecommunications equipment to Cuba.^a These changes were the result of presidential initiatives in April 2009 (see appendix F) to enhance the free flow of information to and from Cuba to ultimately support democracy-building efforts in Cuba. The September 2009 EAR changes allowed donated consumer communications devices to be exported to Cuba without a license. (Examples of these devices include equipment and software that are widely available for retail purchase and commonly used for interpersonal communications, such as personal computers, mobile phones, modems, network access controllers, televisions, radios, and digital cameras.) The regulations stated that the devices could only be exported to individuals, not including certain Cuban government and Communist Party officials, and to independent nongovernmental organizations.

The EAR also allowed for granting licenses on a case-by-case basis for exports of telecommunications equipment to Cuba that were necessary to provide efficient and adequate telecommunications links between the United States and Cuba. This included links routed through third countries. Licenses would also be granted for telecommunications equipment needed to provide satellite radio and satellite television services to Cuba.

In January 2015, the EAR were modified again to allow consumer communications devices to be exported and sold to Cuba, rather than solely donated.^b The list of consumer communications devices was also updated to reflect the technical capabilities of consumer products found in the marketplace. Further, U.S. exports of telecommunications equipment designated as EAR99 (low-technology goods) or otherwise restricted because of possible terrorist use were allowed for infrastructure creation and upgrades aimed at furthering access or use of the Internet. This exception to the requirement for obtaining a license was intended to help Cuban individuals and independent U.S. journalists and news bureaus in Cuba.

In July 2015, the EAR were changed once more to remove references to Cuba as a state sponsor of terrorism,^c which opened the way for U.S. exports of telecommunications equipment that were previously restricted because of this designation. In addition, when Cuba was placed on the list of state sponsors of terrorism, foreign exports of telecommunications equipment to Cuba with 10 percent or more U.S.-origin content were required to have a U.S. export license. With Cuba's removal from the list, the level of allowable U.S.-origin content of these foreign exports was raised to 25 percent. These changes potentially allow increased exports to Cuba of foreign telecommunications equipment with less than 25 percent U.S. origin without a U.S. export license.

In September 2015, the EAR were modified further. For consumer communication devices, the requirement for devices to be donated or sold had excluded the activities of leasing or loaning, so the phrase "either sold or donated" was removed. The EAR were modified to explicitly allow telecommunication services providers to establish, maintain, or operate facilities in Cuba to provide telecommunication services directly or through third countries to the United States, and thus allow U.S. approval of licenses of U.S. exports of telecommunications equipment to support these services. Included under these provisions are equipment exports for facilities for roaming service agreements, fiber-optic cable and satellite facilities, and establishing and maintaining a business presence in Cuba.^e

Although the September 2015 changes to the EAR allow telecommunications equipment in support of certain activities, some U.S. industry representatives speculate that the regulations might be challenged under provisions in the Cuban Democracy Act, as amended by the Cuban Liberty and Democratic Solidarity (Libertad) Act of 1996 (Helms–Burton Act, Pub.L. 104–114).^f The 1996 amendment added the following language to section 1705(e) of the Cuban Democracy Act of 1992 (22 U.S.C. 6004(e):

(5) Prohibition on investment in domestic telecommunications services
Nothing in this subsection shall be construed to authorize the investment by any United States person in the domestic telecommunications network within Cuba. For purposes of this paragraph, an ‘investment’ in the domestic telecommunications network within Cuba includes the contribution (including by donation) of funds or anything of value to or for, and the making of loans to or for, such network.

In spite of assurances from the U.S. government that telecommunications transactions with Cuba are in fact allowed, this language has reportedly prevented some telecommunications equipment and service providers from even considering the Cuban market.^g

^a 74 Fed. Reg. 45985 (September 8, 2009).

^b 80 Fed. Reg. 2286 (January 16, 2015).

^c 80 Fed. Reg. 43314 (July 22, 2015).

^d 80 Fed. Reg. 56898 (September 21, 2015).

^e Telecommunications services include data, telephone, telegraph, Internet connectivity, radio, television, newswire feeds, and similar services, regardless of the medium of transmission, including by satellite.

^f Industry representatives, interview by USITC staff, Washington, DC, October 22, 2015.

^g Ibid.

Cuban Industry and Market

The Cuban telecommunications industry and market are tightly controlled by the government. The Cuban Ministry of Communications is in charge of Cuba’s telecommunications services and imports of telecommunication equipment. The principal consumer of telecommunications equipment imports is ETECSA, a state-owned joint venture and monopoly. The Cuban telecommunications equipment industry is negligible, with little if any production.¹⁰⁴¹ Furthermore, Cuba does not have the supply chain to commercially produce such equipment, nor the R&D infrastructure to develop telecommunications products.

Although Cuba does not produce telecommunications equipment, Cuba recorded small exports of such products, which were most likely of used telecommunications equipment. During 2005–10, Cuban export of telecommunications equipment averaged almost \$1.5 million annually. In 2011, these exports reached a high of \$7.6 million, but declined afterwards, falling to \$3 million

¹⁰⁴¹ In the information and communications technology sector, there appears to be no Cuban production of telecommunications equipment. Cuban production of radio receivers appears to have ceased in 2012, and production of color televisions was 35,000 units in 2014. ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, table 11.4.

in 2014. Cuban exports of telecommunications equipment went mostly to France, Italy, Spain, Sweden, and Venezuela, with smaller amounts going to Mexico and China.

The Cuban market for telecommunications equipment is presently small, and supplied largely by foreign producers. In 2014, Cuban imports of telecommunications equipment totaled \$60.8 million, down from a peak of \$98.4 million in 2008 (table 6.12). During 2005–14, the rise in Cuban imports of telecommunications equipment corresponded to the building up of the landline and mobile telephone infrastructure in Cuba.¹⁰⁴² China is the leading supplier of telecommunications equipment to Cuba, accounting for 57 percent (\$34.7 million) of these imports in 2014. The EU supplied another 29 percent (\$17.8 million), with France, Spain, Sweden, and Italy as the principal sources.¹⁰⁴³ The firms supplying goods to the Cuban market are principally leading global telecommunications companies, including Huawei and ZTE (China), Alcatel-Lucent (France), and Ericsson (Sweden) (box 6.3).

Table 6.12: Cuba: Telecommunications equipment, imports by major supplier and the United States, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
China	13.4	23.6	38.1	51.3	21.6	45.1	26.2	22.3	46.3	34.7
France	5.1	6.8	5.0	6.7	7.6	7.8	2.9	3.0	7.6	6.4
Spain	5.3	5.8	3.1	11.9	3.2	7.2	2.0	4.8	5.2	4.1
Sweden	0.1	0.4	1.7	5.0	4.7	1.4	4.5	4.1	4.8	4.0
Canada	2.8	2.6	3.0	3.8	2.5	1.4	1.8	3.2	1.2	2.5
Malaysia	0.0	0.0	0.4	0.0	(^a)	0.0	0.0	0.0	1.3	1.8
Italy	5.6	5.1	4.7	5.2	2.9	2.7	1.1	1.5	1.6	1.4
Croatia	0.5	0.5	1.4	3.2	2.4	1.2	1.9	1.6	1.4	1.0
Mexico	1.3	0.4	0.2	0.8	0.4	0.3	0.8	1.5	0.7	0.9
Ukraine	0.0	(^a)	(^a)	0.1	(^a)	(^a)	0.1	(^a)	0.1	0.9
United States	(^a)	0.0	0.0	0.0	(^a)	(^a)	(^a)	0.7	(^a)	(^a)
All other	9.1	22.6	12.7	10.4	8.4	6.5	7.6	7.9	9.8	3.1
Total	43.1	67.9	70.1	98.4	53.6	73.7	49.1	50.7	80.1	60.8

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015).

^a Less than \$50,000.

Box 6.3: Foreign Suppliers of Telecommunications Equipment to Cuba

China’s Role

China has a prominent role in Cuba’s telecommunications market, highlighted by numerous government-to-government agreements made during official visits. China’s involvement in this sector extends back to at least May 2000, when China announced a bilateral accord with Cuba that included \$200 million in financing for modernizing Cuba’s telecommunications network.^a In March 2007, China pledged to continue financing Chinese exports of telecommunications equipment to Cuba.^b In

¹⁰⁴² See chapter 4 for a discussion of Cuba’s telecommunications infrastructure.

¹⁰⁴³ Cuban imports from Italy declined from \$5.6 million in 2005 to \$1.1 million in 2011, corresponding with Telecom Italia’s sale of its 27 percent interest in ETECSA to Rafin S.A., a Cuban financial company. Telecom Italia, correspondence to the Securities and Exchange Commission, October 16, 2014.

September 2009, China committed to a \$300 million loan to improve Cuba's telecommunications network.^c

In June 2011, China and Cuba signed agreements to cooperate in digital television and telecommunications.^d In July 2014, China agreed to continue to assist Cuba in digitalizing the country's television system and upgrading communications and cybersecurity.^e Of several Chinese investments in the country that have been announced in recent years, the Chinese commitment to Cuba's telecommunications systems is one of the few that have come to pass.^f

There is limited information about the activities of the two Chinese companies, Huawei Technologies and ZTE Corp., that are providing telecommunications equipment to Cuba. However, Huawei's involvement in Cuba's telecommunications network apparently goes back almost 15 years.^g In May 2015, a press report indicated that Cuba was in advanced talks with Huawei about building some of Cuba's Internet infrastructure.^h And in November 2015, ETECSA and Huawei signed an agreement under which ETECSA would sell and service Huawei smartphones.ⁱ Because Cuba's telecommunications network provides only limited capability to support smartphones, the ETECSA and Huawei agreement looks to improve ETECSA's voice and data services, as well as provide future support to ETECSA.^j Also, Huawei's equipment reportedly is being used in ZED Mariel.^k

Ericsson, Alcatel-Lucent, and Others

Ericsson, a major global telecommunications equipment supplier based in Sweden, has supplied Cuba with telecommunications switching equipment and services since the 1990s. In 2010, Ericsson opened a local branch office in Cuba.^l Alcatel-Lucent, formerly Alcatel, has been supplying switching equipment, data equipment (ADSL, DSLAM, and telecommunications backbone equipment), fiber optic and microwave transmission equipment, and access equipment to Cuba since at least 2005. Its operations have been conducted under consortiums that include Cuban members.^m Alcatel-Lucent was also involved in supplying much of the equipment used in the construction of the undersea cable from Cuba to Venezuela (see chapter 4 for a discussion of Cuba's telecommunications infrastructure).ⁿ

New competitors are likely to emerge in the telecommunications sector, which may influence telecommunications equipment choices. For example, a January 2015 press report indicated that in July 2014, Orange Horizons Digital, a subsidiary of Orange (France), signed a confidential agreement with ETECSA to offer Orange's services, products, and rates (telephones and equipment) to ETECSA.^o

^a *People's Daily*, "China to Modernize Cuban Telecommunications," May 30, 2000.

^b *China Daily*, "Cuba, China Pledge to Build on Growing Trade," March 28, 2007.

^c AFP, "China Grants 600 Mil to Cuba," September 3, 2009.

^d Chen, Wu, and Cheng, "China, Cuba Sign Host of Cooperation Deals," June 7, 2011.

^e Frank, "Chinese President Ends Regional Tour," July 23, 2014.

^f Frank, "Cuba Hopes for More Investment," July 21, 2014.

^g Radio Habana Cuba, "Firmaron ETECSA y HUAWEI Acuerdo de Comercialización" [ETECSA and Huawei sign marketing agreement], November 6, 2015.

^h Murray, "Cuba Says in Advanced Talks with China's Huawei over Telecoms," May 8, 2015.

ⁱ Radio Habana Cuba, "Firmaron ETECSA y HUAWEI Acuerdo de Comercialización" [ETECSA and Huawei sign marketing agreement], November 6, 2015.

^j *Ibid.*

^k Cuban government officials, interview by USITC staff, Mariel, Cuba, June 16, 2015.

^l LM Ericsson Telephone Co., letter to the SEC, "Amendment No. 1 to Form 20-F for Fiscal Year Ended December 31, 2012," January 29, 2014.

^m Alcatel, letter to the SEC, May 30, 2006.

ⁿ Alcatel-Lucent, letter to the SEC, July 16, 2012.

^o Paquette, "Orange Veut Développer Internet à Cuba" [Orange wants to develop the Internet in Cuba], January 21, 2015.

Cuban imports of telecommunications equipment have been dominated by equipment for the reception, conversion, and transmission of voice and data, including modems, routing, and switching equipment and parts. In 2014, such equipment accounted for \$42.8 million (70 percent) of Cuba's imports of telecommunication equipment. Optical fiber cables accounted for \$3.0 million (5 percent), and cellphones for less than \$1.3 million (2 percent). The remaining \$13.7 million (22 percent) consisted of other telephones, television reception equipment, certain antennas, and other miscellaneous equipment.¹⁰⁴⁴

Future growth in Cuban imports in this sector will likely be driven by Cuba's need for telecommunications equipment to support its drive to increase tourism and to develop the infrastructure needed to make Cuba an attractive location for FDI.¹⁰⁴⁵ In addition, the Cuban government intends to meet the goals of the International Telecommunications Union's Connect 2020 program. These goals, which include greater use of telecommunications (or information and communications technology) as well as increasing Internet access, will require investment in both telecommunications infrastructure and related equipment.¹⁰⁴⁶

Effects of the Removal of U.S. Restrictions

If U.S. restrictions on trade with and travel to Cuba are removed, many factors could encourage increased U.S. exports of telecommunications equipment to Cuba, while many others could inhibit them. Such exports could increase in response to market growth in Cuba, probably following U.S. investment in Cuba. U.S. exports would likely grow first in the enterprise or business segment of the telecommunications market, followed by the wireless equipment segment.¹⁰⁴⁷ Another segment with the potential for growth in the future may be satellite dishes and related equipment that would be used if Cuba allowed access to U.S. satellite entertainment services.¹⁰⁴⁸

At the same time, even if U.S. restrictions are removed, U.S. equipment exports, particularly for the country's telecommunications network, may be constrained by other government and market realities. For example, the Cuban government has concerns with censorship and sensitivities regarding national security. It may therefore be hesitant to buy U.S.-produced equipment out of concern that such equipment may be compromised.¹⁰⁴⁹ Further, Chinese and European telecommunications equipment firms already have significant experience in supplying

¹⁰⁴⁴ Cuba's imports of cellphones (HS 8517.12) peaked at \$10.5 million in 2010. GTIS, Global Trade Atlas database (accessed August 3, 2015).

¹⁰⁴⁵ Industry representatives, interview by USITC staff, Washington, DC, October 22, 2015.

¹⁰⁴⁶ Cuban government officials, interview by USITC staff, Havana, June 17, 2015; International Telecommunications Union, "Connect 2020 Agenda" (accessed November 18, 2015).

¹⁰⁴⁷ Industry representatives, interview by USITC staff, Washington, DC, October 22, 2015. Commission modeling in manufactured goods occurred at a more aggregated sector level than the sector discussed here. See chapter 8 for ISIC sector 32 estimates, which include telecommunications equipment as well as televisions and radios.

¹⁰⁴⁸ Industry representatives, interview by USITC staff, Washington, DC, October 22, 2015.

¹⁰⁴⁹ USITC, hearing transcript, June 2, 2015, 147 (testimony of Eduardo R. Guzman, Drinker Biddle & Reath LLP); USITC, hearing transcript, June 2, 2015, 149 (testimony of Kent Bressie, Harris, Wiltshire & Grannis LLP); USITC hearing transcript, June 2, 2015, 168 (testimony of Barbara Kotchwar, Peterson Institute); Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

Cuba's telecommunications network, which would likely affect the ability of U.S. firms to enter the market.

In addition, if U.S. restrictions are lifted, regulatory issues would remain that concern U.S. suppliers. Many U.S. telecommunications equipment exporters would continue to be subject to U.S. export controls because their products are high-technology oriented. Such issues may work against U.S. exporters of telecommunications equipment in competing in Cuba.¹⁰⁵⁰ For example, the length of time required to be granted a U.S. export license for some telecommunications products may range up to 45 days, and the license may be needed for only one product in a larger system of lower-technology products that could otherwise be exported more quickly.¹⁰⁵¹ In addition, U.S. telecommunications equipment exporters reportedly face several other challenges in doing business in Cuba. There are said to be too few Cuban workers with the skills needed to install, operate, and provide service for U.S. telecommunications equipment.¹⁰⁵² Moreover, issues regarding rights of way, attachment of devices to the network lines, zoning, and the location of base stations may pose difficulties.¹⁰⁵³

U.S. State-level Effects

The states most likely to benefit from U.S. exports of telecommunications equipment to Cuba are California, Florida, Maryland, North Carolina, and Texas.¹⁰⁵⁴ Many U.S. telecommunications equipment producers have headquarters and research facilities in California and production and research facilities are in Maryland, North Carolina, and Texas. Both Texas and Florida have significant distributors of telecommunications equipment and value-added resellers that would likely supply and provide related services to Cuba.

Medical Devices

Despite the global success of the U.S. industry and the passage of the Cuban Democracy Act (CDA), which has permitted U.S. medical goods sales¹⁰⁵⁵ to Cuba since 1992, the level of medical device exports to Cuba has remained low. The challenges associated with complying with the CDA, the limited opportunities to commercialize and sell devices in the Cuban public healthcare system, and Cuba's relatively small market have all likely discouraged U.S. companies from greater participation in the Cuban market. Recent trade data, however, show an increase in U.S. exports of medical devices to Cuba, indicating both current demand for U.S. products and the potential for expanded exports to Cuba in the event that U.S. restrictions on trade are removed.

Nonetheless, medical device export growth from the United States to Cuba in the near term may be restricted by Cuba's centralized health care system, which limits the acquisition of

¹⁰⁵⁰ Industry representatives, interview by USITC staff, Washington, DC, October 22, 2015.

¹⁰⁵¹ Ibid.

¹⁰⁵² Ibid.

¹⁰⁵³ Ibid.

¹⁰⁵⁴ Ibid.

¹⁰⁵⁵ See appendix H for a complete list of the HS subheadings comprising this sector.

costly, high-value-added devices. The country’s limited foreign exchange and the need for favorable financing also limit the Cuban market’s power to purchase new devices. However, as Cuba has expressed a need for state-of-the-art medical equipment and has identified medical tourism as an area of potential growth,¹⁰⁵⁶ an increase in demand for U.S. exports in the longer term appears feasible.

U.S. Industry

The United States is the world’s largest medical device manufacturer, accounting for nearly 20 percent of the \$350 billion global industry as of 2014.¹⁰⁵⁷ Further, 8 of the world’s 10 largest medical device original equipment manufacturers (OEMs), by revenue, are headquartered in the United States (table 6.13). Although large firms command the greatest domestic market share,¹⁰⁵⁸ more than 80 percent of the industry’s 1,500 firms are small and medium-sized enterprises (SMEs) that employ less than 50 people.¹⁰⁵⁹ Despite the relative prevalence of SMEs, the larger OEMs typically commercialize most medical devices due, in large part, to their financial resources, which better allow them to navigate the regulatory process in domestic and foreign markets. While U.S. production of devices spans across 90 distinct categories of products, U.S. firms tend to specialize in high-value-added technologies requiring a highly skilled workforce of engineers and technicians. The U.S. medical device industry employs more than 400,000 people throughout the country and pays wages that exceed the national average.¹⁰⁶⁰

Table 6.13: U.S. medical device OEMs are the world’s largest

Rank	Company	Country Headquarters	Revenue billion dollars
1	Johnson & Johnson	United States	27.5
2	GE Healthcare	United States	18.3
3	Medtronic	United States	17.0
4	Baxter Healthcare	United States	16.7
5	Siemens Healthcare	United States	15.8
6	Philips Healthcare	Netherlands	11.2
7	Cardinal Health	Ireland	11.0
8	Covidien	United States	10.7
9	Abbot Labs	United States	10.1
10	Stryker	United States	9.7

Source: MPO, “Top Global Medical Device Companies,” July 29, 2015.

¹⁰⁵⁶ Cuban economist, interview by USITC staff, Havana, June 17, 2015.

¹⁰⁵⁷ Estimates of the size of the global and domestic medical device industry vary based on the products included; the industry size as defined in this context likely includes intravenous diagnostic goods, as well as implantable and non-implantable devices. Zhong, “Primer,” June 2012; S&P, *Healthcare: Products and Supplies*, February 2014, 19.

¹⁰⁵⁸ In 2012, GE, Medtronic, and St. Jude Medical accounted for nearly 32 percent of domestic market share. Zhong, “Primer,” June 2012. These three companies are the world’s 2nd-, 3rd-, and 18th-largest medical device manufacturers, respectively. MPO, “Top Medical Device Companies,” July 29, 2015.

¹⁰⁵⁹ MDMA, “Medical Technology and Venture Capital,” June 1, 2009; USITC, *Small and Medium-Sized Enterprises*, November 2010.

¹⁰⁶⁰ In recent years, the average medical device industry salary was about \$16,000 above the national earnings average. Lewin Group, “State Economic Impact of the Medical Technology Industry,” June 7, 2010.

The U.S. industry's leadership in the medical device sector is reflected in the global export market. The United States is the world's largest exporter, accounting for 29 percent of global exports of \$143.2 billion in 2014.¹⁰⁶¹ Due in large part to the significant costs associated with overcoming regulatory barriers to market entry overseas, large OEMs typically dominate the U.S. export industry.¹⁰⁶² U.S. medical device OEMs earn between 40 and 50 percent of their revenues outside the United States, with the EU generating an estimated 30 percent of these sales.¹⁰⁶³ These sales generally reflect a combination of exports and activities by foreign-based subsidiaries.¹⁰⁶⁴

Emerging markets represent a fraction of medical device sales outside the United States. For instance, Medtronic, one of the world's leading medical device manufacturers, conducts less than 10 percent of its business in these markets.¹⁰⁶⁵ Cuba's medical device market is the smallest in the Western Hemisphere, in part, due to the country's small population but also because of its centralized national health system. According to the Business Monitor International, Cuba ranked the lowest among other countries in the Americas in terms of marketing and selling devices.¹⁰⁶⁶ This has discouraged greater participation from U.S. firms.

U.S. exports to Cuba during 2005–14 in this sector were relatively low, particularly during 2009–12, when they all but vanished. Even in 2014 U.S. exports of medical devices to Cuba totaled just \$583,000, an increase of 44 percent over 2005 but a decline of 74 percent from 2013 values. U.S. medical device exports to regional countries with per capita GDPs similar to Cuba's, including the Dominican Republic and Colombia, were more than 200 times greater than those of U.S. exports to Cuba for all but two years during 2005–07.¹⁰⁶⁷ Although the CDA permits U.S. companies to export medical devices to Cuba, few firms have availed themselves of this option. This reluctance is due, in part, to various requirements in the law that result in delays and difficulties in obtaining a U.S. license to export.¹⁰⁶⁸ It has been suggested that the U.S. Treasury Department's Office of Foreign Assets Control (OFAC) previously imposed policies that made it

¹⁰⁶¹ According to the GTIS Global Trade Atlas database (accessed August 3, 2015), Germany accounted for 13 percent of world exports, followed by the Netherlands (9 percent), Belgium (6 percent), China (6 percent), and Switzerland (5 percent).

¹⁰⁶² The speed of regulatory approval in foreign markets is an important concern for device manufacturers, enabling them to sell their products quicker. Although the average approval time for low-value-added devices in the EU and the United States is similar, high-value-added devices in the United States can take nearly three times longer to gain approval. Emergo, "The Medical Device," 2013; S&P, *Healthcare: Products and Supplies*, February 2014, 43.

¹⁰⁶³ S&P, *Healthcare: Products and Supplies*, February 2014, 19.

¹⁰⁶³ *Ibid.*, 43.

¹⁰⁶⁴ *Ibid.*, 19.

¹⁰⁶⁵ *Economist*, "Left to Their Own Devices," September 10, 2011.

¹⁰⁶⁶ According to the BMI Medical Device Risk Reward Ratings (RRRs), Cuba's score of 44.8 out of 100 during the first quarter of 2015 was the lowest in the Americas region, which averaged 60.3. BMI, "BMI Industry View," December 15, 2014.

¹⁰⁶⁷ GTIS, Global Trade Atlas database (accessed June 30, 2015).

¹⁰⁶⁸ Cuban economist, interview by USITC staff, Havana, June 17, 2015.

difficult for U.S. firms to obtain these licenses, but has recently relaxed some of these barriers.¹⁰⁶⁹ Unfamiliarity with U.S. restrictions has also been an issue in the past, as some U.S. firms incorrectly assumed that the U.S. restrictions on trade with Cuba prohibited exports to the country completely.¹⁰⁷⁰

Recent trade data suggest that U.S. exports of medical devices to Cuba have begun to expand; the 2015 U.S. data show an increase in exports to Cuba of 662 percent to more than \$4.4 million over 2014.¹⁰⁷¹ This increase was almost wholly driven by U.S. exports of ultrasonic scanning equipment, which totaled \$3.9 million in 2015 compared with no exports of such equipment in 2014.

Cuban Industry and Market

Cuba's national healthcare expenditures were estimated at 9.8 percent of GDP in 2014, a higher share than in both Japan and China, the world's second- and third-largest medical device markets, respectively.¹⁰⁷² However, despite Cuba's high relative expenditures on healthcare and its reputation for providing quality medical services, medical device production in Cuba is limited: it largely consists of low-value-added goods, such as optical lenses, surgical dressings, and dental supplies.¹⁰⁷³ There are five major Cuban manufacturing companies that specialize in the production of orthopedic prostheses, electromedical equipment, consumables, and electrodiagnostic equipment. Two of these firms have established relationships with German, Chinese, Spanish, and Mexican companies to supply Cuban exports to these countries, receive FDI from these countries, or operate subsidiaries in these countries. An example of the latter is Neuronic, a Cuban company with locations in Spain and Mexico.¹⁰⁷⁴

Owing to its limited domestic production, Cuba is highly dependent on medical device imports, more than 40 percent of which come from Europe, primarily Germany; nearly 30 percent come from China and Japan collectively (table 6.14).¹⁰⁷⁵ The devices most commonly imported into Cuba include both low-value-added goods, such as syringes, needles, and catheters, and higher-value-added goods, such as diagnostic imaging equipment, dental products, orthopedic devices, and hearing aids. Most of the aforementioned goods are otherwise known as "consumables" and, together with diagnostic equipment, they account for over 50 percent of Cuba's medical device imports by value.¹⁰⁷⁶ Cuba's medical device imports rose to a relatively high level during 2005–07, averaging \$270 million over this period, compared to the \$80 million average for 2008–14.¹⁰⁷⁷ This was likely the result of Cuba acquiring medical technologies at discounted

¹⁰⁶⁹ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

¹⁰⁷⁰ AAWH, *Denial of Food and Medicine*, March 1997, 48–49.

¹⁰⁷¹ USITC DataWeb/USDOC (accessed February 8, 2016).

¹⁰⁷² BMI, "Industry Forecast," June 11, 2015.

¹⁰⁷³ Espicom, "Cuba: Medical Devices Report," June 22, 2015; BMI, "Industry Forecast," June 16, 2015.

¹⁰⁷⁴ BMI, "Competitive Landscape," June 16, 2015.

¹⁰⁷⁵ BMI, "Industry Forecast," June 16, 2015.

¹⁰⁷⁶ Consumables alone account for 30 percent of Cuba's medical device imports. Espicom, "Cuba: Medical Devices Report," June 22, 2015.

¹⁰⁷⁷ BMI, "Industry Forecast," June 16, 2015.

prices from Japan and Europe, in particular, which it then re-exported to Venezuela in exchange for oil;¹⁰⁷⁸ it is suggested that the United States could have supplied much of that equipment if U.S. restrictions had not been in place.¹⁰⁷⁹ In fact, most Cuban medical device exports are re-exports through Cuba to other countries, with Venezuela typically receiving more than 95 percent of such exports.¹⁰⁸⁰

Table 6.14: Cuba: Medical devices, imports by major supplier and the United States, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Germany	68.9	76.7	45.3	46.0	13.4	10.1	7.8	11.5	12.8	21.5
China	18.3	14.9	17.6	17.3	19.2	13.1	16.4	15.4	16.9	13.3
Japan	86.7	63.2	122.8	17.7	18.6	7.9	6.1	5.1	5.9	12.6
Spain	6.4	17.7	12.5	10.9	7.6	9.7	6.9	10.2	8.2	11.7
Italy	12.9	26.4	12.8	11.3	13.8	6.8	4.4	7.3	12.6	11.5
Netherlands	28.4	2.7	1.0	4.8	1.1	1.1	2.8	2.7	4.6	2.3
France	5.4	7.5	8.7	4.1	1.2	1.2	1.5	1.0	2.5	2.3
South Korea	0.8	1.1	1.6	1.2	0.3	1.0	0.5	0.2	0.1	1.7
Sweden	0.1	^a	0.1	0.0	0.1	0.9	0.1	0.3	1.6	1.5
Mexico	0.5	2.8	0.2	0.1	0.1	0.2	0.2	0.7	0.6	1.4
United States	0.4	0.8	0.4	0.3	^a	0.0	^a	0.0	2.2	0.6
All other	15.4	13.5	11.2	16.6	6.2	7.0	9.3	8.3	13.6	8.3
Total	244.1	227.4	234.1	130.1	81.5	58.8	56.1	62.5	81.7	88.7

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015).

Note: Cuban imports are derived from other countries' exports to Cuba, since Cuba does not readily publish detailed trade data.

^a Less than \$50,000.

Effects of the Removal of U.S. Restrictions

While prediction is difficult, the removal of U.S. restrictions on trade with and travel to Cuba will likely have only a limited effect on U.S. exports of medical devices in the short term. On the one hand, Cuba's highly centralized healthcare structure—94 percent of healthcare expenditures in 2014 were from the public sector¹⁰⁸¹—may suggest a continued preference for lower-cost technologies that have been historically supplied by China. Industry sources also indicate that Cuba encourages charitable donations (as well as samples) and that U.S. sources

¹⁰⁷⁸ BMI, "Industry Forecast," June 16, 2015. Cuba's chronic undersupply of medical equipment has led to various countries either donating or issuing medical equipment to Cuba on favorable terms, which may have accounted for the discounted prices that Cuba received on diagnostic equipment during 2005–07.

¹⁰⁷⁹ USITC, hearing transcript, June 2, 2015, 211 (testimony of Ricardo Torres Pérez, University of Havana).

¹⁰⁸⁰ Espicom, "Cuba: Medical Devices Report," June 22, 2015.

¹⁰⁸¹ BMI, "Industry Forecast," June 11, 2015.

tend to be generous with such donations,¹⁰⁸² which could hinder future U.S. commercial exports of these goods.¹⁰⁸³

At the same time, Cuba's previously discussed high relative spending on healthcare has contributed to a burgeoning medical tourism industry.¹⁰⁸⁴ The industry generated annual revenues of \$40 million despite the U.S. restrictions on trade and travel, a figure that is likely to increase as Cuba builds this sector, particularly if U.S. restrictions are removed.¹⁰⁸⁵ In the longer term, this could translate into increased demand for various high-end medical devices and technologies, for which Cuban government officials have expressed a need.¹⁰⁸⁶ Further, the removal of U.S. trade restrictions may increase Cuban confidence in importing medical devices from the United States. Industry representatives have suggested that one of the chief impediments to Cuba's importing medical devices from the United States has been Cuba's concern about the United States as a reliable source, given that the U.S. restrictions on exports to Cuba have been altered a number of times; a tightening of regulations on U.S. medical device exports would be detrimental to Cuba if it were too dependent on the United States for such products.¹⁰⁸⁷

U.S State-level Effects

U.S. medical device production occurs across the country, but the largest exporting states in 2015 were California, Massachusetts, and Texas.¹⁰⁸⁸ Collectively, these three states accounted for nearly 50 percent of total U.S. medical device exports during 2015 and could benefit from increased medical device exports to Cuba.

Motor Vehicle Parts

Motor vehicle parts¹⁰⁸⁹ are a key Cuban import sector, and the market for both vehicles and parts is underdeveloped. Nevertheless, the Cuban government's current regulations affecting motor vehicle ownership and retail distribution, and the limited purchasing power of Cuban citizens, would likely affect the ability of the U.S. industry to make significant export gains in the Cuban motor vehicle parts market if U.S. restrictions were removed. However, some U.S. aftermarket parts manufacturers, such as those producing parts for classic cars, would likely benefit from the opening of the Cuban market in the short term. Longer-range benefits for both

¹⁰⁸² Articles donated for relief of charity are covered under chapter 98 of the Harmonized System. U.S. donations to Cuba of medical goods and pharmaceuticals combined were valued at \$1.9 million in 2015, accounting for nearly half of all U.S. donations to Cuba in 2015.

¹⁰⁸³ Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015. Commission modeling estimates U.S. exports of medical and precision instruments (ISIC 33) to reach nearly 30 percent of the Cuban import market, although at a relatively low value (\$45 million). See chapter 8 and appendix I for modeling methodology, assumptions, and results.

¹⁰⁸⁴ Cuban economist, interview by USITC staff, Havana, June 17, 2015.

¹⁰⁸⁵ BMI, "Industry Forecast," June 11, 2015.

¹⁰⁸⁶ Cuban government official, interview by USITC staff, Havana, June 18, 2015.

¹⁰⁸⁷ Industry representative, interview by USITC staff, Washington, DC, May 27, 2015.

¹⁰⁸⁸ GTIS, Global Trade Atlas database (accessed March 7, 2016).

¹⁰⁸⁹ See appendix H for a complete list of the HS subheadings comprising this sector.

original equipment manufacturers (OEMs) and aftermarket suppliers would be likely to increase with elimination of existing Cuban barriers to trade and market growth.

U.S. Industry Profile

The United States is reported to be the world's largest single-country producer of motor vehicle parts, with output totaling approximately \$216 billion in 2013¹⁰⁹⁰ and employment reaching 548,000 at the end of 2014.¹⁰⁹¹ The industry manufactures a wide range of original equipment and aftermarket products, from engines and transmissions to small fasteners and trim pieces, to support the world's second-largest motor vehicle market. The U.S. motor vehicle and parts industries are largely regional in nature, with local production of vehicles and parts to meet consumer preferences, standards, and pricing, for example.

The United States is the world's second-largest exporter of motor vehicle parts, trailing Germany. Global U.S. parts exports, which totaled \$42.7 billion in 2014, are largely destined for NAFTA partner markets (Canada and Mexico), which accounted for 77 percent of U.S. exports in 2014. Official U.S. exports of motor vehicle parts to Cuba are minimal, totaling roughly \$30,000 during 2005–14. Double-flanged wheel hub units that incorporate ball bearings accounted for nearly all such U.S. exports. No exports were reported during 2005–08 or 2013–14. In 2015, U.S. exports of motor vehicle parts resumed and totaled \$20,724.¹⁰⁹² However, travelers to Cuba from the United States are known to bring in components purchased at U.S. retailers to service Cuban vehicles; such exports are not captured in the official U.S. export data.¹⁰⁹³

Cuban Industry and Market

The motor vehicle parts manufacturing industry in Cuba is reported to be extremely limited in scope, reflecting in part the small and tightly controlled nature of the country's motor vehicle market as well as the absence of a motor vehicle manufacturing industry in Cuba. In a population of roughly 11 million, the number of motor vehicles per 1,000 people in Cuba is just 38, compared to 128 vehicles for the Dominican Republic and 802 for the United States.¹⁰⁹⁴ Approximately 650,000 vehicles are on the road in Cuba, half of them government owned.¹⁰⁹⁵ The small size of the Cuban motor vehicle parts industry is further reflected in its minimal exports, which totaled less than \$500,000 in 2014, over half of which were destined for Venezuela. Clutches and their parts and miscellaneous motor vehicle parts accounted for nearly one-half of these exports. These may represent re-exports, although the exact nature of these parts exports is unknown.

¹⁰⁹⁰ U.S. Census, "Value of Products Shipments: Value of Shipments for Product Classes," 2013.

¹⁰⁹¹ BLS, Tables and Calculators by Subject (accessed August 5, 2015).

¹⁰⁹² USITC DataWeb/USDOC (accessed February 8, 2016).

¹⁰⁹³ See, for example, Fagenson and Adams, "Miami Mechanic Is Mr. Fix-it," February 11, 2015; Armario, "Cubans Fix Cars," February 13, 2013; Allen, "Miami Stores Enjoy Thriving Business," July 8, 2014.

¹⁰⁹⁴ World Bank, "Traffic and Congestion," WDI database (accessed December 30, 2015).

¹⁰⁹⁵ Frank, "Cuban Hopes Dashed," January 3, 2014.

Because the Cuban market for motor vehicle parts is small and tightly controlled, components are largely imported by the government to service government-purchased vehicles. *Servicio Automotriz, Sociedad Anónima (SASA)*, a national automotive service organization, controls motor vehicle servicing and parts in Cuba.¹⁰⁹⁶ Replacement parts are expensive and very hard for the average citizen to obtain. According to one source, “Most Cuban car owners are forced to keep their vehicles moving any way they can, manufacturing parts in home workshops and using innovative replacements that range from tractor engines to using shampoo as brake fluid and house paint as coatings.”¹⁰⁹⁷

Moreover, the infrastructure to provide spare vehicle parts is not in place.¹⁰⁹⁸ A limited network of spare parts has been developed by a few automakers, such as China’s Geely and France’s Citroën, which maintain warehouses of parts to service their vehicles. Citroën has a consignment warehouse for its parts, and it has developed a network of shops to provide service to their vehicles.¹⁰⁹⁹ Similarly, Geely maintains a warehouse in Cuba for its spare parts. To speed delivery of spare parts and maintenance services to the numerous vehicles it supplies to the Cuban market, Geely’s office in Cuba has signed agreements with SASA to jointly build standard service stations and spare-parts consignment stores.¹¹⁰⁰

In spite of the comparatively small size of the Cuban market, motor vehicle parts were a top nonagricultural import during 2005–14. Cuba’s imports of motor vehicle parts totaled \$104.3 million in 2014, down nearly 27 percent from the 2013 total of \$142 million. These imports are reported to be largely aftermarket components used as replacement parts, given the lack of local automakers that would require OEM parts for vehicle assembly. Because of its leading role as a source of motor vehicles, the principal supplier of such imports is the EU, accounting for over one-half of Cuba’s imports in 2014 (table 6.15). These imports represent a full range of motor vehicle components, and are likely aftermarket parts for European vehicle models. Within the EU, Spain is the largest source, accounting for 53 percent (\$30.5 million) of Cuba’s imports from the EU.

China and Russia accounted for another 25 percent of Cuba’s imports of motor vehicle parts in 2014. China has emerged as an important supplier of motor vehicle parts to support Chinese motor vehicles sold in the Cuban market. Russia remains a leading source of imports because of its long ties with Cuba and the relatively large Russian vehicle fleet requiring replacement parts.

According to one report, the purchase of all transportation equipment imports, including vehicles and parts, is centralized in two agencies, Transimport and Maquimport. Citroën, for example, worked through its dealer in Cuba, Zepol Marin S.A., to conclude a three-year deal

¹⁰⁹⁶ *Havana Times*, “Chinese Firm to Assemble Cars in Cuba,” December 28, 2013. SASA is one of Cuba’s leading firms with military management; RESDAL, “Cuba,” 2012. SASA is a subsidiary of *Grupo de Administración Empresarial S.A.* (Enterprise Management Group) (GAESA), which is a holding company for the Cuban Defense Ministry. Ros-Lehtinen, Hearing Before the Committee on Foreign Affairs, November 19, 2009.

¹⁰⁹⁷ Howie, “Automakers, Suppliers Warm to U.S.-Cuba Trade Thaw,” February 13, 2015.

¹⁰⁹⁸ Reyes, “It Would Take 111 Years of Work,” January 8, 2014.

¹⁰⁹⁹ Carrillo Ortega, “Cuba and Citroën to Sign Strategic Alliance,” November 7, 2012.

¹¹⁰⁰ *Havana Times*, “Chinese Firm to Assemble Cars in Cuba,” December 28, 2013.

with Transimport to deliver vehicles and parts valued at \$21 million on consignment to Cuba.¹¹⁰¹

Table 6.15: Cuba: Motor vehicle parts, imports by major supplier and the United States, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Spain	13.5	24.6	32.9	44.4	18.2	16.3	20.9	24.8	33.7	30.5
China	2.0	3.7	9.3	16.0	21.0	16.8	14.5	16.0	19.2	14.5
Russia	16.6	22.9	26.8	57.9	15.9	13.9	11.9	14.9	18.0	10.4
France	1.7	3.2	3.2	3.8	0.9	3.8	5.5	5.9	7.1	10.0
Netherlands	4.1	4.9	2.8	6.5	4.1	3.9	3.7	5.2	7.1	8.9
Canada	6.4	10.4	16.5	16.5	6.2	7.5	15.3	10.5	18.9	7.1
South Korea	6.5	9.0	14.3	18.4	5.6	7.0	11.1	8.2	14.2	5.9
Ukraine	0.2	0.4	0.5	4.4	2.3	1.1	2.6	4.1	3.3	4.4
Italy	4.6	5.7	7.6	10.0	3.2	2.6	4.5	6.6	8.2	3.6
Belgium	0.2	0.4	0.3	0.3	^(a)	0.1	0.2	0.1	0.5	2.0
United States	0.0	0.0	0.0	0.0	0.0	^(a)	^(a)	^(a)	0.0	0.0
All other	8.2	8.0	10.5	10.3	6.6	9.3	11.0	12.5	11.8	7.2
Total	64.1	93.2	124.8	188.5	84.1	82.3	101.1	108.9	142.0	104.3

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015).

^a Less than \$50,000.

Effects of the Removal of U.S. Restrictions

Removal of U.S. restrictions on exports to Cuba would be unlikely to result in any significant immediate increase in the level of U.S. exports of motor vehicle parts to Cuba. Reasons include the Cuban government's current and past restrictions on purchases of motor vehicles (box 6.4) and its control of the retail distribution of motor vehicles and parts, as well as the lack of purchasing power for most of its citizens. In addition, the Cuban vehicle market includes a large number of vintage Soviet-bloc and newer European, Chinese, and South Korean vehicle models for which the U.S. industry is not currently a major source of aftermarket components, thus limiting component substitutability.¹¹⁰²

Box 6.4: Motor Vehicle Regulations

The size and composition of the Cuban auto parts market has been directly affected by the strict regulations imposed on the motor vehicle market by the Cuban government. The Cuban government generally banned the importation of nearly all foreign vehicles by individuals for most of the last 50 years.^a The older U.S. vehicles that are a symbol of the closed Cuban market were in the country before the first U.S. restrictions were imposed in 1960. These were followed by imports of Russian vehicles in the 1970s and 1980s, which were owned by the Cuban government. As a result, the Cuban motor vehicle fleet is composed of older U.S. and Russian vehicles, which the private sector largely holds, with

¹¹⁰¹ Carrillo Ortega, "Cuba and Citroën to Sign Strategic Alliance," November 7, 2012.

¹¹⁰² Commission modeling in manufactured goods occurred at a more aggregated sector level than the sectors discussed here. Estimates for ISIC sector 34, which includes motor vehicle parts (as well as motor vehicles and trailers), comprises 17 percent of the Cuban import market, with U.S. exports calculated to be \$67 million. See chapter 8 and appendix I for modeling methodology, assumptions, and results.

the more recently introduced new vehicles from the EU, China,^b and South Korea largely purchased by government agencies, corporations, and tourism-related sectors.

Through 2013, three markets existed in Cuba, with a price difference of up to 500 percent: used vehicles that were in Cuba prior to 1959, other used vehicles, and new vehicles. Used vehicles, which were sold among the local citizens, were the priciest. Vehicles sold by the state-controlled dealers were required to receive approval from Cuba's vice president.^c These vehicles were usually former rental cars.^d Foreign residents who wanted to buy a vehicle had to obtain authorization from "the agency that serves them" in Cuba.^e Only certain individuals, such as officials, doctors, and others with government connections or proof of foreign exchange income, were allowed to purchase new imported cars. All other individuals could only buy, sell, and refit vehicles that were already in Cuba before Fidel Castro took power in 1959.^f

In April 2009, a program was enacted that allowed Cuban car owners to import vehicles to replace their pre-1990 vehicles, with the goal of reducing fuel consumption and pollution. The older vehicles were then turned over to the government. This program reportedly led some Cubans to buy older cars with the intent to import a new car to replace it, and the program was subsequently canceled in early 2010 based on "irregularities."^g

Another step toward market liberalization occurred in 2011, when the Cuban government allowed sales between individuals of vehicles which entered the country after 1959. However, the government still required letters of authorization from the state, banned the sale of new vehicles, and limited purchases of vehicles by foreign residents to two over the duration of their stay in the country.^h

In its most recent liberalization, enacted on January 1, 2014, the Cuban government lifted its restrictions on sales of private vehicles, allowing the "retail sale of new and used motorcycles, cars, vans and minibuses." This essentially means vehicles purchased from the state-owned stores because of the state's control over retail distribution. However, taxes of 100 percent were levied on new car sales, with the proceeds funding Cuban infrastructure projects.ⁱ Markups on vehicles have reportedly ranged between 400 and 1,000 percent. The price of a Peugeot 508, for example, was listed at the equivalent of \$262,000 for a vehicle that typically retailed for \$30,000 in 2014.^j These high prices have been attributed to several factors, such as the desire for higher profit margins or the lack of hard currency to purchase imports, which could encourage the government to set high prices to limit sales.^k The majority of the Cuban population lacks the income to buy motor vehicles at such prices, particularly since the freezing of credit in Cuba in 1959 has required that such purchases be all-cash transactions.

^a *Telegraph*, "Cuba Lifts 50-Year-Old Car Import Ban," December 19, 2013.

^b Nearly 10,000 Geely-brand cars and trucks are operating on Cuban roads now, with government agencies the only buyers of new cars. Geely's CK models are used as senior government officials' cars, and most of the police cars in Havana are Geely CK models as well. About 80 percent of rental cars in Cuba are also Geely models. *Cuba Standard*, "Top-selling Automaker Planning Assembly in Cuba," December 26, 2013.

^c Ravsberg, "Car Sales in Cuba," December 22, 2013.

^d *Automotive News*, "Under New Law, Cuban Dealers Sell 50 Cars," July 1, 2014.

^e Ravsberg, "Car Sales in Cuba," December 22, 2013.

^f Watts, "Cuba's Classic Cars Set to Disappear," January 3, 2014.

^g *Automotive News Europe*, "Wealthy Cubans Are Blocked from Buying," March 7, 2010.

^h Ravsberg, "Car Sales in Cuba," December 22, 2013.

ⁱ *Ibid.*

^j Ramey, "New Car Sales in Cuba," January 5, 2014.

^k *Ibid.*; Miroff, "Cuba, Land of the \$250,000 Family Sedan," January 10, 2014.

However, some U.S. aftermarket parts manufacturers would likely benefit from the opening of the Cuban market in the short term,¹¹⁰³ with longer-range benefits for both OEM and aftermarket suppliers likely increasing with full dismantling of existing barriers. According to the Specialty Equipment Market Association, one of the first groups of U.S. companies to benefit will be that producing parts for classic cars.¹¹⁰⁴ U.S. parts manufacturers reportedly have several competitive advantages, including the quality of their products, available warranties and aftersales service, and geographic proximity that results in significantly shorter lead times when compared to Asian or European competitors.¹¹⁰⁵ In fact, the relaxed travel restrictions are reportedly already benefiting several U.S. auto parts stores in the Miami area, as Cuban entrepreneurs travel to the area to purchase auto parts that are either not available or too expensive in Cuba.¹¹⁰⁶

Moreover, certain categories of motor vehicle-related maintenance were opened to self-employment in Cuba as of September 2013. These categories include automobile electrician, electric motor rewiring, spark plug cleaner and tester, tire repair, car painter, automobile battery repair, and car body remolding.¹¹⁰⁷ Since U.S. companies are now allowed to export goods to these types of authorized private enterprises under liberalized U.S. regulations, U.S. exports of motor vehicle components may expand and continue to increase if this sector grows.

U.S. State-level Effects

According to the Automotive Aftermarket Suppliers Association, suppliers located in the U.S. southeast would be “the biggest beneficiaries of demand” when Cubans can start servicing their vehicles with the correct components,¹¹⁰⁸ likely due to their proximity to the Cuban market.

¹¹⁰³ Legal representative, interview by USITC staff, Miami, June 22, 2015.

¹¹⁰⁴ *Ward's Automotive Reports*, “Automakers, Suppliers Warm to U.S.-Cuba Trade Thaw,” February 23, 2015.

¹¹⁰⁵ Auto Care Association, written submission to the USITC, May 20, 2015.

¹¹⁰⁶ *Ibid.*

¹¹⁰⁷ Feinberg, “Soft Landing in Cuba,” November 2013, 54–57.

¹¹⁰⁸ *Ward's Automotive Reports*, “Automakers, Suppliers Warm to U.S.-Cuba Trade Thaw,” February 23, 2015.

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Chapter 7

Services

Cuba Services Overview

Cuban Trade in Services with the World

Despite more than doubling during 2005–14, Cuba’s services imports are limited. The country imported \$2.5 billion in commercial services in 2014, up 9 percent from \$2.3 billion in 2013. Cuba has run a persistent surplus in the balance of services trade over the past decade, valued at \$9.8 billion in 2014, which has helped to offset its trade deficit in manufactured goods and agricultural products.¹¹⁰⁹ Cuba’s imports of services are likely concentrated in the foreign management services needed to operate many tourist hotels, as well as transportation, telecommunications, and architecture and construction services.

Cuba relies heavily on its services sector exports to earn hard currency to finance its imports. Cuba exported \$12.3 billion in commercial services in 2014, down 5 percent from \$13 billion in 2013.¹¹¹⁰ Services are said to account for approximately 70 percent of Cuba’s export earnings, compared with 19 percent in 1990.¹¹¹¹ However, while Cuba’s services exports rose nearly 75 percent during 2005–14, its services imports rose nearly 150 percent over the same period, albeit from a small base of only \$1 billion (table 7.1).

Table 7.1: Cuban trade in commercial services with the world (billion dollars), 2005–14

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Exports	7.1	7.2	8.6	9.3	8.4	10.5	11.1	12.8	13.0	12.3
Imports	1.0	1.3	1.3	2.1	1.7	1.9	2.5	2.4	2.3	2.5

Source: WTO, International Trade Statistics 2015, tables A8, A9.

While the Cuban government does not publish disaggregated services trade data (with the exception of data on revenue derived from tourism), the country’s services exports are primarily concentrated in the health and travel services sectors. Health services are estimated to account for 65 percent of Cuba’s total services exports, which typically take the form of medical treatment provided by Cuban professionals working abroad.¹¹¹² About 30,000 Cuban healthcare personnel are working in Venezuela alone, while another 7,400 operate under contract in Brazil.¹¹¹³ Travel services account for an additional 21 percent of Cuban services exports, primarily provided to tourists visiting Cuba from Canada and the EU. The remainder

¹¹⁰⁹ WTO, International Trade Statistics 2015, Tables A8, A9 (accessed January 29, 2016).

¹¹¹⁰ Ibid.

¹¹¹¹ Cuban economist, interview by USITC staff, Havana, June 17, 2015.

¹¹¹² Cuban economist, interview by USITC staff, Havana, June 17, 2015.

¹¹¹³ Sabo, “Cuba Forecasts \$8.2 Billion from Doctors Abroad,” March 21, 2014.

consists primarily of other services such as professional services and education (in particular, education in the medical field).¹¹¹⁴

Cuban Trade in Services with the United States

Current U.S. restrictions prohibit most trade in services between the United States and Cuba, with limited exceptions in the transportation, telecommunications, banking, and travel sectors. The United States supplies transportation services to Cuba in the form of maritime shipping, which transports virtually all U.S. merchandise exports to the island. But total cargo volume is very low, and firms are required to obtain a special license and adhere to other U.S. Office of Foreign Assets Control (OFAC) restrictions regarding the types of cargo that can be transported.¹¹¹⁵ Air passenger services provided by U.S. airlines to Cuba have also grown since the recent easing of restrictions, with several carriers adding routes and expanding the number of flights offered. Passenger ferry service to Cuba is being planned by multiple operators, although none have begun operations.

There is currently minimal trade between the United States and Cuba in telecommunications and financial services. One U.S. company offers direct telephone service to Cuba, two U.S. firms have reached an agreement with the Cuban government to provide cellular roaming services on the island, and a correspondent banking relationship has been established between a Cuban bank and a U.S. bank based in Florida.¹¹¹⁶ Continuing legal and regulatory uncertainty surrounding recent changes in U.S. restrictions have caused U.S. companies to take a wait-and-see approach to doing business in Cuba.

With regard to travel, U.S. residents are permitted to travel to Cuba under a general license without prior approval from OFAC if the purpose of their visit falls into one of 12 designated categories, or they may travel under a specific license from OFAC on a case-by-case basis.¹¹¹⁷ Around 350,000 U.S. residents traveled to Cuba in 2014, including 259,000 Cuban-Americans, placing the United States second only to Canada in total annual visitors traveling to the island.¹¹¹⁸ Since the loosening of U.S. restrictions in December 2014, Cuban officials reported that U.S. visitor arrivals increased 54 percent in the first seven months of 2015 compared with

¹¹¹⁴ Cuban economist, interview by USITC staff, Havana, June 17, 2015; Sosin, “Cuba Banks on Exporting Services,” September 2, 2014.

¹¹¹⁵ Industry representative, interview by USITC staff, Miami, June 13, 2015.

¹¹¹⁶ A correspondent bank is a financial institution that provides services on behalf of another financial institution. In this case a U.S. bank, Stonegate, is able to conduct transactions (including providing debit card services) for its clients through its partner bank in Cuba. Goldman, “Verizon Offers Roaming in Cuba,” September 18, 2015; Trotta, “Stonegate First U.S. Bank to Sign Deal,” July 22, 2015; industry representative, interview by USITC staff, November 20, 2015.

¹¹¹⁷ See appendix F for additional information.

¹¹¹⁸ Cuban government official, interview by USITC staff, Havana, June 15, 2015.

the same period in the previous year, while in 2014 almost 40,000 Cubans traveled as tourists to the United States, a slight increase from 2013.¹¹¹⁹

Summary of Effects

Overall Effects

Cuba's services imports are quite small relative to its services exports, and the recent easing of some U.S. restrictions has had only a limited impact on U.S. services exports to Cuba. However, for certain services sectors in which the United States is highly competitive, Cuba represents a significant potential market for U.S. exporters, if U.S. restrictions are lifted completely. U.S. providers operate in and are global leaders in a number of services sectors, so the recent liberalizations in travel, financial, and telecommunications services in particular have spurred great anticipation, publicity, and renewed interest. The current status and prospects for expanded trade in these sectors if restrictions are lifted are described in detail below.

The removal of U.S. restrictions on travel to Cuba would not increase cross-border U.S. travel services exports directly, as a U.S. tourist visit to Cuba is counted as a U.S. import, and Cuba maintains restrictions on its own citizens' travel to the United States. However, unrestricted U.S. travel to Cuba could result in an additional 1.5 million to 3.5 million U.S. tourists visiting the island, with a total net increase of 2 million tourists after accounting for the likelihood that some future tourists from other countries would be diverted from Cuba to other Caribbean islands.¹¹²⁰ This would boost Cuban revenue and allow Cuba to purchase more U.S. products, as tourism is one of the country's primary sources of foreign exchange earnings.¹¹²¹ The tourism sector is highly import dependent, with \$58 million worth of goods currently being purchased from foreign suppliers that potentially could be procured from the United States at lower prices.¹¹²²

The United States is also a major provider of travel services through the foreign affiliates of U.S. companies operating abroad, with 6 of the top 10 global hotel chains based in the United

¹¹¹⁹ *Granma*, "Increase in U.S. Tourist Arrivals," August 5, 2015; USDOS, Bureau of Consular Affairs, *Report of the Visa Office 2014*, 2014, Table 4.

¹¹²⁰ World Bank Group, "The Impact of Easing the US Travel Restrictions," June 2015; Romeu, "Vacation Over: Implications for the Caribbean," July 2008, Table 7. Romeu estimates 3.5 million total tourists would visit Cuba in the absence of U.S. restrictions, compared to a baseline of 1.5 million arrivals in 2008. Hotel constraints and price increases in the high season would lead to a diversion of some existing tourists away from Cuba; however Cuba's annual hotel room utilization rate is lower than the regional average which suggests spare capacity to accommodate increased numbers of visitors during non-peak months.

¹¹²¹ Cuban government official, interview by USITC staff, Havana, June 15, 2015; Romeu, "Vacation Over: Implications for the Caribbean," July 2008, 17–27. Cuban revenue from tourism is forecast to reach \$1.8 billion in 2016.

¹¹²² Cuban government official, interview by USITC staff, Havana, June 15, 2015. Other effects of increased tourism to Cuba on U.S. exports of manufactured goods and agricultural products to the island are included in the model discussed in chapter 8.

States.¹¹²³ Several large U.S. hotel operators have expressed an interest in doing business in Cuba.¹¹²⁴ Operating in Cuba would allow U.S. firms to take advantage of growing numbers of U.S. tourists visiting the island who have existing loyalties to familiar U.S. hotel brands. However, under Cuban law all foreign participation in the Cuban hotel sector must be conducted through joint venture partnerships or management contracts with Cuban state-owned hotels. Cuba's centralized economy creates additional problems for foreign businesses, including high labor costs, difficulties importing products, and regulatory uncertainty.¹¹²⁵

Cuba's financial services sector is small and state run, which severely limits the potential for U.S. retail banking firms even in the absence of U.S. restrictions. Trade financing by U.S. commercial banks could grow in the long term, but growth is dependent on increased U.S. goods exports and Cuba's ability to improve its creditworthiness—U.S. banks currently consider Cuba a high-risk, low-reward opportunity.¹¹²⁶ Payment processing by U.S. firms for credit and debit card transactions is another area of potential growth, as U.S. residents visiting the island must still generally carry cash to pay for all local expenses despite a growing network of ATMs and point-of-sale systems in Cuba.

Even if restrictions on U.S. companies' ability to participate in the Cuban market were fully lifted, it is unlikely that U.S. telecommunications firms would establish a commercial presence or build network infrastructure in Cuba. Although some U.S. companies have already begun to establish roaming agreements and to set up direct international telephone service, others are concerned that the necessity of partnership with *Empresa de Telecomunicaciones de Cuba S.A.* (ETECSA), the Cuban state-owned telecommunications monopoly, as well as the small size of the market, may not make doing business in Cuba profitable enough to outweigh the risk.¹¹²⁷

Several other U.S. services sectors that are not discussed here may benefit from the removal of U.S. restrictions on trade with and travel to Cuba; these include construction, architecture, and engineering; logistics; and transportation (primarily maritime shipping). Cuba's aging infrastructure needs upgrades and repairs, in particular in its tourism industry. Recent hotel and resort development projects included in the country's investment opportunities portfolio have been awarded to European or Chinese construction firms,¹¹²⁸ although advantages of proximity and expertise suggest that U.S. firms could be competitive suppliers if U.S. restrictions were lifted. Increased trade in manufactured goods and agricultural products between the United States and Cuba would also create opportunities for U.S. shipping firms to export transportation services to Cuba and gain efficiency by integrating the island into their existing Caribbean-wide transportation networks.

¹¹²³ Hotel-Online, "2014 Global Hotel Rankings," June 23, 2014.

¹¹²⁴ Simon, "U.S. Companies See Opportunity in Cuba," February 25, 2015.

¹¹²⁵ Cerviño and Cubillo, "Hotel and Tourism Development in Cuba," 2005. See chapter 4 for a discussion of such barriers.

¹¹²⁶ Industry representative, interview by USITC staff, Washington, DC, July 29, 2015; industry representative, telephone interview by USITC staff, November 24, 2015.

¹¹²⁷ Industry representative, interview by USITC staff, Washington, DC, June 18, 2015.

¹¹²⁸ Frank, "As Cuba Opens, Developers Tee Up," July 3, 2015; Frank, "Chinese Firm to Build Golf Resort," May 8, 2015.

Sector Profiles

Travel Services

Before 1959, Cuba was a major destination for U.S. tourists, with the island attracting one-third of total U.S. visitors to the Caribbean region.¹¹²⁹ After the political unrest surrounding the revolution and the imposition of U.S. restrictions, the flow of travel and investment to Cuba by U.S. citizens stopped, and in 1963 the Cuban Assets Control Regulations (CACR) banned travel to Cuba. Travel was later allowed with varying degrees of restrictiveness provided it fell into an approved category, such as family visits or for educational purposes, and was authorized in advance.¹¹³⁰ If U.S. restrictions are lifted, U.S. citizen travel to Cuba would likely increase substantially. However, because U.S. citizen travel to Cuba is a U.S. import rather than an export this would result in increased U.S. travel services imports from Cuba.¹¹³¹ At the same time, changes in U.S. restrictions could affect U.S. travel services exports; at present, the restrictions prevent foreign affiliates of U.S.-owned firms, such as hotels, from operating in Cuba and selling their services to foreign tourists visiting the island.

The U.S. restrictions on travel and tourism to Cuba have an important indirect effect, as they limit Cuban demand for a variety of imports, including from the United States. Particularly affected are potential imports of food and beverages, construction materials, banking services, and telecommunications services. Growth in U.S. tourist travel to Cuba would likely spur an increase in U.S. exports in these sectors, as the United States is a leading global supplier of these goods and services, and U.S. tourists have been shown to prefer familiar products when vacationing abroad.¹¹³² Tourism revenue is also a major source of the hard currency that Cuba uses to finance its imports. Generating hard currency may be especially important for increasing trade with the United States, as some U.S. firms have expressed reluctance to extend credit to Cuba if restrictions are lifted.

A substantial proportion of Cuba's hotel sector was developed through foreign partnerships, with locally established affiliates of Canadian and Spanish companies involved in joint ventures

¹¹²⁹ Cerviño and Cubillo, "Hotel and Tourism Development in Cuba," 2005, 223–247.

¹¹³⁰ See chapter 3 for additional information on U.S. restrictions on U.S. citizens' travel to Cuba. Currently the Office of Foreign Assets Control (OFAC) permits travel to Cuba under a general license without prior approval in one of 12 categories (see appendix F for more information on U.S. restrictions). Travel may also be permitted under a specific license granted by OFAC on a case-by-case basis. The license categories and other regulations regarding travel and trade with Cuba are listed in the CACR, 31 C.F.R. § 515. For a history of changes in U.S. regulations covering travel to Cuba, see CRS, *Cuba: U.S. Restrictions*, 2015, 6–10.

¹¹³¹ An estimated 1.5 to 3.5 million additional U.S. tourists per year would travel to Cuba if the ban were lifted. World Bank Group, "The Impact of Easing the US Travel Restrictions," June 2015; Romeu, "Vacation Over: Implications for the Caribbean," July 2008, 17, 27. A U.S. tourist's trip to Cuba does not constitute a U.S. export but rather a U.S. import of travel services from Cuba. Likewise, a Cuban citizen's visit to the United States is considered a U.S. export. Restrictions placed by the United States on the ability of U.S. citizens to travel to Cuba are primarily a barrier to U.S. imports of travel services, and the lifting of these restrictions would not affect U.S. travel services exports directly.

¹¹³² U.S. Chamber of Commerce, written submission to the USITC, June 2, 2015, 6.

and management contracts for hotels and resorts with Cuban government entities. At present, foreign value added in Cuba's tourism enterprises is higher than the regional average and accounts for between 40 to 75 percent of total tourism revenue.¹¹³³ The removal of U.S. restrictions would allow U.S. hotel companies, already among the largest in the world, to compete in this market, driving U.S. exports of travel services through foreign affiliate sales. However, Cuba has expressed a desire to increase domestically produced goods in its tourism sector in the future.¹¹³⁴

U.S. Industry

The United States is the world's largest recipient of travel revenues from nonresident visitors. In 2014, the United States recorded a surplus of \$75 billion in the cross-border travel services account (including both personal and business travel), which accounted for one-third of the total U.S. surplus in trade in services.¹¹³⁵ Of the estimated 75 million international visitors arriving in the United States in 2014, however, Cubans accounted for only a small fraction, despite having a large diaspora population and close geographic proximity. In 2014, the United States issued 39,666 visas for both tourism and business to Cubans. While this represents a notable increase from only 18,739 in 2012, it is up only slightly from 35,414 in 2013.¹¹³⁶ The United States began issuing five-year multiple re-entry visas to Cubans in 2013, while the Cuban government eased exit visa requirements for many of its citizens the same year.¹¹³⁷ However, the Cuban government still restricts international travel for skilled workers and those deemed essential for national security. Along with low levels of disposable income, even among the island's middle class, these Cuban restrictions limit tourist flows to the United States.¹¹³⁸

¹¹³³ Padilla, "The Tourism Industry in the Caribbean," 2003. "Foreign value added" is the amount of imported content contained in a final product. For Cuba's tourism sector this includes imported inputs such as food; furniture and other materials for hotels; equipment; and fuel, as well as profit-sharing arrangements with foreign hotel chains for the use of their branding, management services, and capital in the case of joint ventures.

¹¹³⁴ Peters, "International Tourism: The New Engine," 2002, 7.

¹¹³⁵ USDOC, BEA, International Services Tables, table 2.1, "U.S. Trade in Services, by Type of Service," October 15, 2015. Travel services are measured through foreign nationals' purchases of goods and services, such as food, lodging, recreation, local transportation, and entertainment, while traveling abroad. Although air passenger fares are included here as a component of the total travel services account for ease of comparison with Cuban travel statistics, these fares are recorded on a separate line in the BEA data.

¹¹³⁶ USDOS, Bureau of Consular Affairs, Non-Immigrant Visa Statistics, "FY 1997-2014 NIV Detail Table" (accessed February 8, 2016). Schedule B visas are issued for non-immigrant travel related to both business and tourism, although they are often used interchangeably. By comparison, the United States issued 54,197 schedule B visas to residents of the Dominican Republic in 2014. The United States maintains a free trade agreement with the Dominican Republic; however, this does not substantially affect tourist flows.

¹¹³⁷ USDOS, "U.S. Relations with Cuba Fact Sheet," July 21, 2015; Wilkinson, "Cubans No Longer Need Special Exit Permit," January 15, 2013. U.S. immigration laws grant automatic asylum protections to Cubans who arrive on U.S. soil and request them. By issuing passports selectively, the Cuban government seeks to forestall migration of its citizens, particularly skilled professionals, to the United States.

¹¹³⁸ Cave, "Easing Path Out of Country," October 12, 2012. The length of time Cubans were allowed to reside abroad increased from 11 months to 24 months. However, the cost of obtaining a Cuban passport also increased, from \$55 to \$100, while the application fee for a U.S. visa is \$160. Doctors and other healthcare professionals are

In addition to cross-border travel services, the United States also exports travel services through the foreign affiliates of U.S. companies operating abroad. U.S. global exports of travel services through foreign affiliates totaled \$22.4 billion in 2013, an increase of 3 percent from \$21.7 billion in 2012.¹¹³⁹ Seven of the top 10 global hotel chains are based in the United States, and it is noteworthy that several are expanding their presence in the Caribbean region.¹¹⁴⁰ U.S. brands account for a sizable share of the hotel market in other Caribbean destinations, ranging from 5 percent in the Dominican Republic to 49 percent in Bermuda.¹¹⁴¹ Average growth in revenue per room for Caribbean hotels is among the highest of any region at 8 percent annually. Many U.S. brands operating in the Caribbean are pursuing expansion opportunities, with both tourist arrivals and hotel profits rising in the region.¹¹⁴² U.S. firms, however, currently have no commercial presence in Cuba's hotel sector.¹¹⁴³

U.S. restrictions have also prevented the large U.S.-owned cruise lines and airlines from pursuing opportunities for providing travel services to and from Cuba. Even though the three biggest cruise lines are all American-owned (either jointly or wholly) and constitute over 75 percent of global market share by revenue, no U.S. cruise lines offered Cuba as a port of call before regulations were eased on December 17, 2014.¹¹⁴⁴ Similarly passenger air transportation from the United States to Cuba has been provided exclusively by charter companies licensed by OFAC, mostly serving Americans traveling to and from the island. However, an air services agreement was signed in February 2016, providing for the reestablishment of scheduled air services between the two countries.¹¹⁴⁵

Cuban Industry and Market

Tourism is one of Cuba's primary exports and the country's chief source of foreign exchange after remittances from its diaspora and aid from Venezuela. In 2014, Cuba reported tourism

also subject to additional scrutiny by the Cuban government when traveling abroad, in part due to U.S. programs designed to encourage their migration.

¹¹³⁹ USDOC, BEA, International Services Tables, table 3.1, "Services Supplied to Foreign Persons by U.S. MNEs," October 15, 2015. Travel services supplied by majority-owned foreign affiliates of U.S. multinational firms are counted as U.S. exports when sold to foreign persons. They consist of both accommodation/lodging services, reported to be \$13.3 billion worldwide in 2013, and travel arrangement and reservation services, valued at \$9.1 billion worldwide in 2013.

¹¹⁴⁰ Hotel-Online, "2014 Global Hotel Rankings," June 23, 2014; Wyndham Worldwide, "Record Year Highlights," September 29, 2015; Burkitt, "Marriott to Invest \$2 Billion," June 19, 2012. U.S. chains Starwood and Marriott announced a merger in 2015, which would create the world's largest hotel company.

¹¹⁴¹ HVS, "U.S. Hotel Brands in the Caribbean," 2010. U.S. companies also account for a large percentage of the shared-ownership, or timeshare, market in the Caribbean.

¹¹⁴² KPMG, "2014 Caribbean Hotel Benchmarking Survey," 2014; Andrews, "IRR Viewpoint: Caribbean Market Update 2015," 2015.

¹¹⁴³ HVS, "U.S. Hotel Brands in the Caribbean," 2010.

¹¹⁴⁴ Cruise Market Watch, "2015 Worldwide Market Share" (accessed August 17, 2015). When U.S. cruise lines provide travel services to U.S. citizens, it is considered a domestic transaction regardless of where the services are rendered. However, U.S. cruise lines supplying travel services to foreigners are recorded as a U.S. export to the foreigners' countries of origin.

¹¹⁴⁵ USDOT, "United States, Cuba sign arrangement," February 16, 2016.

revenues of \$2.5 billion (at the official Cuban convertible peso-dollar exchange rate), and tourism accounts for 21 percent of the value of its services GDP.¹¹⁴⁶ According to the Cuban government, the number of foreign travelers arriving in Cuba increased from about 2.2 million in 2007 to just over 3 million in 2014. This growth made Cuba second in arrivals in the Caribbean behind the Dominican Republic (which had just over 5 million arrivals in the same year), despite U.S. restrictions limiting unlicensed travel by U.S. citizens.¹¹⁴⁷ Beginning in April of 2014 and continuing through the summer (traditionally the low season for tourism in Cuba), hotels were reported to have raised their prices between 30–50 percent to keep up with a surge in demand.¹¹⁴⁸

Canada was the largest source of tourists visiting Cuba, sending over 1.2 million or 39 percent of the total in 2014, followed by Germany (140,000), the UK (124,000) and Italy (112,000) (table 7.2). According to its official statistics, Cuba received slightly more than 91,000 visitors from the United States in 2014. Due to the way Cuba categorizes foreigners, this number excludes the 259,000 Cuban-Americans who traveled to the island in that year, as Cuba still considers them Cuban citizens and records their arrival separately.¹¹⁴⁹ When all travelers from the United States are combined, the United States ranks second behind Canada in total annual visitors traveling to Cuba, with 350,000 total arrivals. Following the liberalization of OFAC travel restrictions, Cuban officials reported that in the first seven months of 2015, U.S. visitor arrivals increased 54 percent over the same period in 2014, while overall arrival growth had increased by 16 percent.¹¹⁵⁰

¹¹⁴⁶ ONEI [Cuban National Statistics Office], *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014], 2015, table 15.11; ONEI [Cuban National Statistics Office], *Turismo: Llegada de Visitantes Internacionales* [Tourism: international visitor arrivals], (accessed December 28, 2015); Cuban economist, interview by USITC staff, Havana, June 17, 2015. Travel services trade data reported for Cuba follows the ONEI definition and includes expenses incurred in the host country by international visitors, including payment of their international transportation to national transportation companies, but only for firms whose primary activity is classified as tourism. Unlike BEA, ONEI excludes spending related to short-term workers and non-tourism industries.

¹¹⁴⁷ ONEI [Cuban National Statistics Office], *Turismo: Llegada de Visitantes Internacionales* [Tourism: international visitor arrivals, January–June 2015], July 2015; UNWTO, “Tourism Highlights, 2015 Edition,” June 2015.

¹¹⁴⁸ Whitefield, “Full House: Cuban Tour Operators Struggle,” November 21, 2015.

¹¹⁴⁹ Cuban government official, interview by USITC staff, Havana, June 15, 2015. Cuban-Americans born in Cuba are required by the Cuban government to travel to and from the island on a Cuban passport and to obtain a visa from the Cuban embassy before they arrive in Cuba.

¹¹⁵⁰ *Granma*, “Increase in U.S. Tourist Arrivals,” August 5, 2015. This includes both U.S. visitors traveling under OFAC licenses and those traveling through third countries, but not the 164,000 Cuban-Americans traveling to Cuba over the same period.

Table 7.2: Cuba: Annual international visitor arrivals by country of origin 2005–14 (thousands)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Canada	602.4	604.3	660.4	818.2	914.9	945.2	1,002.3	1,071.7	1,105.7	1,175.1
Cuban-Americans ^a	*	*	*	*	163.0	263.0	284.9	268.8	261.1	258.8
Germany	124.5	114.3	103.1	101.0	93.4	93.1	95.1	108.7	116.0	139.1
UK	199.4	211.1	208.1	193.9	172.3	174.3	175.8	153.7	149.5	123.9
Italy	169.3	144.2	134.3	126.0	118.3	112.3	110.4	103.3	95.5	112.1
France	107.5	103.5	92.3	90.7	83.5	80.5	94.4	101.5	96.6	103.5
United States ^a	37.2	36.8	40.5	41.9	52.5	63.0	73.6	98.1	92.3	91.3
Mexico	89.2	98.0	92.1	84.1	61.5	66.7	76.3	78.3	84.7	82.8
Venezuela	185.2	83.8	33.6	31.9	28.7	31.0	34.1	36.4	45.9	78.8
Spain	194.1	185.5	133.1	121.2	129.2	104.9	101.6	81.4	73.1	77.1
All Other	610.5	639.1	654.7	739.4	612.5	597.7	667.8	736.7	732.2	760.2
Total	2,319.3	2,220.6	2,152.2	2,348.3	2,429.8	2,531.7	2,716.3	2,838.6	2,852.6	3,002.7

Source: ONEI [Cuban National Statistics Office], *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014]; ONEI, *Turismo: Llegada de Visitantes Internacionales* [Tourism: international visitor arrivals], (accessed December 28, 2015); Perelló Cabrera, “U.S. Tourism to Cuba,” March 11, 2015; USITC calculations.

^a Cuban travel statistics separate Cuban-Americans, who are required to visit the island using their Cuban passport, from other U.S. residents traveling to Cuba. Data for Cuban-Americans are available only beginning in 2009.

In spite of the growth in arrivals, Cuba’s tourism industry is still immature and currently relies on foreign investment and foreign management expertise, as well as imported supplies. Tourism accounts for 40 percent of Cuba’s stock of foreign direct investment (FDI), the largest of any industry.¹¹⁵¹ This FDI is primarily concentrated in the hotel sector, where 18 international chains operate 58 percent of the country’s 63,000 hotel rooms under joint venture arrangements or management contracts.¹¹⁵² Cuba’s current stock of hotel rooms is inadequate to meet rising demand, and many existing properties are also aging and in need of upgrades.

However, European hotel companies operating in Cuba, including the Meliá group, have recently made large investments to expand capacity in Cuba and refurbish current properties to take advantage of growing U.S. arrivals to the island.¹¹⁵³ Recent investments by the UK-based Esencia firm in a golf course and luxury real estate property worth \$350 million, as well as new hotel construction in the Varadero resort area with Canadian and other international financing, signal the Cuban government’s willingness to develop the tourism sector further.¹¹⁵⁴ The government has indicated that it plans to add 2,500 to 3,000 total hotel rooms in the next five years, and Cuba’s 2015 investment guide for prospective foreign investors reflects the importance of this sector, with 94 projects of the 326 total projects focused in the tourism

¹¹⁵¹ Peterson Institute, “Economic Normalization with Cuba,” conference transcript, May 5, 2014, 4.

¹¹⁵² Cuban government official, interview by USITC staff, Havana, June 15, 2015. Foreign participation in the hotel sector comes primarily from Spain, France, Germany, and Jamaica. Cerviño and Cubillo, “Hotel and Tourism Development in Cuba,” 2005, 13.

¹¹⁵³ Stone and Taj, “U.S. Hotel Chains Circle Cuba,” September 30, 2015.

¹¹⁵⁴ *Economist*, “A New Course,” May 25, 2013; Archibold, “Revolutionary Cuba Now Lays Sand Traps,” May 24, 2011.

sector, including real estate.¹¹⁵⁵ However, barriers to growth in Cuba's accommodation sector remain, including a scarcity of high-quality hotel rooms, lack of tourism services outside of hotels and resorts, higher labor costs than in comparable countries, and the high cost and difficulty of importing goods for use in the sector.¹¹⁵⁶

Cuba's cruise industry also remains underdeveloped compared to the rest of the Caribbean. The island received only 8,000 cruise passengers in 2014; this was up from 2,000 the prior year, but far below the 317,000 cruise passengers who sailed to the Dominican Republic in 2014.¹¹⁵⁷ Capacity at the port of Havana remains limited, despite the recent transfer of most cargo traffic to the container port of Mariel, and Cuba is planning upgrades to accommodate the larger ships in use on other Caribbean routes.¹¹⁵⁸

Effects of the Removal of U.S. Travel Restrictions

U.S. restrictions on travel to Cuba by its citizens do not have a direct effect on U.S. exports of travel services, but do create a barrier to U.S. imports of travel services. Estimates of U.S. tourist arrivals to Cuba if travel restrictions were lifted range from 1.5 million to 3.5 million per year, although Cuba's total arrivals would not increase by the same amount.¹¹⁵⁹ Some level of existing tourist flows would be displaced to other destinations in the Caribbean due to Cuba's limited hotel capacity and other infrastructure constraints, with the net effect being an increase in tourist arrivals to Cuba (including Americans) of around 2 million per year.¹¹⁶⁰ U.S. tourist flows may also shift to Cuba from other Caribbean destinations, although the removal of U.S. restrictions on travel to Cuba may still be a net positive for the region as a whole.¹¹⁶¹

Several large hotel operators, including Marriott and Hilton, have held discussions with Cuban officials about doing business in Cuba if U.S. restrictions are fully lifted.¹¹⁶² Their primary target

¹¹⁵⁵ Cuban officials report a goal of 110,000 rooms by 2030. Cuban government official, interview by USITC staff, Havana, June 15, 2015; Government of Cuba, MINCEX, *Portfolio of Opportunities for Foreign Investment 2015*, n.d. (accessed December 9, 2015).

¹¹⁵⁶ Mesa-Lago and Pérez-López, *Cuba under Raúl Castro*, 2013, 136. Cuban government regulations require workers in the tourism sector to be hired through state employment agencies and be paid by the agency rather than the employer. Foreign employers then offer bonuses in addition to the cost charged by the state agency in order to motivate and retain skilled workers.

¹¹⁵⁷ ONEI, *Anuario Estadístico de Cuba, 2014* [Statistical Yearbook of Cuba 2014], 2015, table 15.1; Caribbean Tourism Organization, "Caribbean Tourism Review - Update 2014," February 11, 2015.

¹¹⁵⁸ *Cruise Critic*, "How Long Until Cruise Ships Sail to Cuba?" February 18, 2015; Cuban government official, interview by USITC staff, Havana, June 15, 2015.

¹¹⁵⁹ World Bank Group, "The Impact of Easing the US Travel Restrictions," June 2015. Compared with the Dominican Republic and other Caribbean destinations, Cuba's tourism industry is highly seasonal, with hotel occupancy rates peaking from November to March. If annual tourism arrivals became more evenly distributed, more visitors could be accommodated with the number of hotel rooms now available.

¹¹⁶⁰ Romeu, "Vacation Over: Implications for the Caribbean," July 2008, 17, 27. Romeu estimates 3.5 million total tourist arrivals in the absence of U.S. restrictions, compared with a baseline in 2008 of 1.5 million, for a net increase of 2 million.

¹¹⁶¹ Caribbean Hotel and Tourism Association, written submission to the USITC, June 18, 2015.

¹¹⁶² *Travel Weekly*, "U.S. Hoteliers Foresee Long Road," February 10, 2015; Stone and Taj, "U.S. Hotel Chains Circle Cuba," September 30, 2015.

market is the increasing number of U.S. travelers visiting the island who have existing loyalties to familiar U.S. hotel brands. However, uncertainties surrounding Cuban restrictions on foreign ownership of land and the amount of foreign participation allowed in the hotel sector remain (see chapter 4 for more discussion on investment and property rights in Cuba).¹¹⁶³ Currently, the only U.S. presence in the accommodation sector in Cuba is the home and room rental company Airbnb. Airbnb began operations in Cuba after the loosening of restrictions on December 17, 2014, leveraging an existing network of private guesthouses in Cuba to offer over 2,000 listings across the island.¹¹⁶⁴

Cuban demand for cruise travel is expected to be minimal, but foreign demand (particularly Canadian) for cruise travel with Cuba as a port of call could be significant.¹¹⁶⁵ As a result of changes in U.S. policies, general licenses are now available for carrier services by vessel from the United States to Cuba, provided the purpose of travel fits into one of the existing license categories.¹¹⁶⁶ Carnival Cruise recently launched its brand of social impact travel to Cuba (“social impact” falls into one of the 12 general license categories), and plans to begin service from Miami to Havana in 2016.¹¹⁶⁷ Since travel restrictions were eased, several small U.S.-based yacht cruises have also begun sailing from Florida to Hemingway Marina in Havana, offering a high-end alternative to larger all-inclusive cruises.

Other cruise lines have also shown interest in serving Cuba if restrictions are fully lifted.¹¹⁶⁸ They face limited competition in the Cuban cruise market; although several non-U.S. cruise lines already use Havana as a port of call on multi-destination Caribbean cruises, they have smaller fleets and carry far fewer passengers per ship than U.S. lines.¹¹⁶⁹ Cruise ships docking in Cuba also have the potential to supplement the island’s overstretched hotel sector, if port infrastructure and ground transportation in Havana can be brought up to international standards.¹¹⁷⁰ While not technically a U.S. export, ferry transportation of both U.S. residents and cargo from the United States to Cuba is being planned as well, a development that could result in increased revenue for Florida-based companies.¹¹⁷¹

Air charter companies and travel agents have also seen improved business since December 17, 2014, as more U.S. citizens are now permitted to travel to Cuba. These businesses would be among the first to benefit from full economic relations between Cuba and

¹¹⁶³ Simon, “U.S. Companies See Opportunity in Cuba,” February 25, 2015.

¹¹⁶⁴ Harpaz, “Airbnb Is Booming in Cuba,” June 2, 2015.

¹¹⁶⁵ *Cruise Critic*, “How Long Until Cruise Ships Sail to Cuba?” February 18, 2015. Cruise Cuba, a non-U.S. company offering itineraries around Cuba, saw inquiries from Canada triple over the last year.

¹¹⁶⁶ See chapter 3 for more information on the allowed categories of U.S. citizen travel to Cuba.

¹¹⁶⁷ *Cruise Critic*, “Carnival Corp.’s Fathom Line to Offer,” July 7, 2015.

¹¹⁶⁸ *Weissenstein*, “Cuba Plans Boating Boom,” August 7, 2015; *Cruise Critic*, “How Long Until Cruise Ships Sail to Cuba?” February 18, 2015.

¹¹⁶⁹ Ram, “MSC Cruises Doubles Up on Cuba,” December 2, 2015; *Weissenstein*, “Cuba Plans Boating Boom,” August 7, 2015.

¹¹⁷⁰ Masek, “Haimark Plans Miami-Cuba Cruises,” July 15, 2015; *Cuba Standard*, “U.S. Cruise Giant Enters Cuban Waters,” July 7, 2015.

¹¹⁷¹ Industry representative, telephone interview by USITC staff, June 22, 2015. Cuban law still forbids Cuban citizens to leave the island by boat, so the ferry traffic would be composed entirely of U.S. passengers.

the United States.¹¹⁷² JetBlue has begun to offer nonstop charter service from New York to Cuba in partnership with charter company Cuba Travel Services, and several U.S. airlines have expressed their desire to begin regular service to Cuba.¹¹⁷³ U.S. airlines also provide service from Canada and other markets to Caribbean destinations, either directly or through code-share arrangements with local airlines. The U.S. airlines could see increased revenues from regularized access to Cuba and its integration into their regional passenger air networks.

More importantly—and more likely, in the near term—unrestricted U.S. travel to Cuba would drive U.S. goods exports to Cuba, since U.S. tourists' preference for familiar products while traveling abroad leads tourism providers to import those products.¹¹⁷⁴ Already, the recent boost in tourism in 2015 has caused shortages of Cuban-produced beer and chicken meat as domestic output reportedly lags rising demand.¹¹⁷⁵ Increased imports will be necessary to satisfy the growing number and higher purchasing power of U.S. tourists traveling to Cuba.

The country's tourism industry already depends heavily on imported goods and services, which account for 40 to 75 percent of the total value of the travel services it provides. These imports include foreign management services and profit sharing in the hotel sector, as well as food, fuel, and much of the materials and equipment used in hotels, shops, and restaurants.¹¹⁷⁶ The United States reportedly could become an important supplier to the tourism industry for many of the goods currently sourced from abroad, including fruits and vegetables, meats, wine and other beverages, processed foods, and various durable goods, among others.¹¹⁷⁷ ITH, the Cuban state-owned enterprise charged with procuring products (except food from the United States) for the tourism sector, currently imports \$58 million worth of goods from third-country suppliers that could potentially be purchased from U.S. firms instead. It also spends an extra \$37 million on freight and other charges above what it would cost to source these goods from the United States.¹¹⁷⁸ Caracol, a separate state-owned enterprise that imports products for

¹¹⁷² Industry representative, interview by USITC staff, Washington, DC, July 14, 2015; industry representative, telephone interview by USITC staff, June 3, 2015. Charter companies typically lease their aircraft from larger airlines, but hold the license for travel to Cuba and process passenger paperwork themselves. Regularizing air service to Cuba would allow airlines like JetBlue to offer service without the need for a charter company partner.

¹¹⁷³ Trotta, "JetBlue Expands U.S.-Cuba Service," September 28, 2015; Vora, "U.S. Airlines Preparing," December 17, 2015.

¹¹⁷⁴ Torres, "Toward a Better Understanding of Tourism," 2002, 286.

¹¹⁷⁵ Morales, "Growth of Tourism Affecting Cuba's Infrastructure," November 27, 2015.

¹¹⁷⁶ Padilla, "The Tourism Industry in the Caribbean after Castro," 2003, 84. Cuba has established relationships with several non-U.S. hotel chains participating in joint venture projects or operating under management contracts; as yet there are no fully independent hotels operating on the island.

¹¹⁷⁷ Cuban government official, interview by USITC staff, Havana, June 15, 2015; Cuban government official, interview by USITC staff, Varadero, Cuba, June 19, 2015; industry representative, interview by USITC staff, Varadero, Cuba, June 19, 2015.

¹¹⁷⁸ Cuban government official, interview by USITC staff, Havana, June 15, 2015; Cuban government official, interview by USITC staff, Varadero, Cuba, June 19, 2015. About 16 percent of tourist hotels are joint venture projects with foreign partners. They are allowed to import products directly rather than through ITH; however, there are no reliable estimates of the value of their imports.

specialty tourist shops, also reports spending an extra \$20 million per year to import products that it could purchase directly from U.S. companies.¹¹⁷⁹

In addition, rising tourist revenues are providing the Cuban government with access to more hard currency that could be used to import more goods from the United States. This is particularly important because some U.S. firms may be hesitant to extend the long-term export credit that Cuba seeks, even with U.S. restrictions lifted, given Cuba's past history of late payments.¹¹⁸⁰ It was estimated in 2015 that the recent relaxation of U.S. travel restrictions could boost Cuban foreign exchange earnings by as much as \$500 million that year, while annual Cuban revenue from tourism could rise by \$1.8 billion in 2016 due to increased U.S. tourist arrivals.¹¹⁸¹ Some of the effects of increased tourism to Cuba on U.S. exports of manufactured goods and agricultural products to the island are included in the model discussed in chapter 8.

Telecommunications Services

Despite the fact that Cuba's telecommunications industry is seriously underdeveloped, it is unlikely, at least in the near term, that U.S. carriers would build network infrastructure in Cuba, or otherwise establish a physical presence, even if U.S. restrictions on such activities are lifted. However, some U.S. companies are clearly willing to engage in arms-length commercial arrangements, such as setting up roaming agreements and direct international telephone services. An important reason for U.S. carriers' reluctance is the concern that their payments to the Cuban telecommunications provider (for connecting telephone calls in Cuba) will be garnished to satisfy judgments by winning plaintiffs in U.S. civil lawsuits against the Cuban government.¹¹⁸² As discussed below, the Cuban government's apparent ambivalence toward foreign investment in the telecom sector, illustrated by the government's buyout of foreign investors in Cuba's fixed-line and mobile carriers over the past decade, may also act as a deterrent. Other factors that may work against U.S. carriers establishing a physical presence in Cuba include the small size of Cuba's market, the Cuban government's tight control over the market, and the low incomes of most Cubans.

¹¹⁷⁹ Cuban government official, interview by USITC staff, Havana, June 15, 2015. These goods include food and beverages, building materials, electronics, furniture, nautical equipment, skin care products, shoes, and sportswear.

¹¹⁸⁰ USITC, hearing transcript, June 2, 2015, 118–19 (testimony of Terry Harris, Riceland Foods); Cuba specialist, interview by USITC staff, Washington, DC, September 10, 2015.

¹¹⁸¹ Perelló Cabrera, "El Turismo de Estados Unidos a Cuba" [U.S. Tourism to Cuba], March 11, 2015; *Economist*, "Picturesque, but Doing Poorly," May 16, 2015. A more conservative estimate put the added value of a complete removal of U.S. travel restrictions to Cuba as high as \$1 billion annually. Hufbauer, Kotschwar, and Cimino, "Steps to Economic Normalization with Cuba," 2015, 407.

¹¹⁸² See "Effects" below for more information.

U.S. Industry

In 2014, the United States was the world's largest single-country market for telecommunications services, accounting for roughly 17 percent of the global total.¹¹⁸³ The U.S. telecommunications services market, measured by revenues derived from voice, data, and video services, grew 1.8 percent in 2014 to approximately \$371.8 billion, slightly faster than its average annual rate of 1.4 percent over the preceding four years. The top U.S. telecom service providers are AT&T and Verizon,¹¹⁸⁴ both of which offer a full set of fixed-line and wireless services across most of the United States, followed by Sprint and T-Mobile. Several other small and mid-sized companies are also active in the U.S. telecom services market, focusing mainly on narrow market segments (frequently wireless service) and/or specific geographic regions. Prominent examples include CenturyLink, Cincinnati Bell, Frontier, U.S. Cellular, and Windstream. Over the past 15 years, cable television companies have also moved into the telecom services market, focusing on voice services and broadband Internet access. Leading cable companies involved in providing such services include Cable Vision Systems, Charter Communications, Comcast, and Time Warner Cable.¹¹⁸⁵

In 2014, U.S. cross-border exports of telecom services¹¹⁸⁶ totaled \$13.6 billion,¹¹⁸⁷ with the top five export markets including Brazil (28 percent), the United Kingdom (11 percent), Argentina (9 percent), Venezuela (7 percent), and Canada (5 percent).¹¹⁸⁸ However, the bulk of U.S. international telecom services trade occurs through the sales of U.S. affiliates located in foreign countries. In 2012, the BEA reported total U.S. affiliate sales data for wired telecommunications carriers (\$22.7 billion) and wireless telecommunications carriers (\$6.2 billion),¹¹⁸⁹ with country-level data limited to the China, France, Japan, Netherlands and the United Kingdom.¹¹⁹⁰ Although the United States had a long history of involvement in Cuba's telecom sector before 1959, there was no direct trade in telecom services between the United States and Cuba during 2000–14 (box 7.1).

¹¹⁸³ Calculated by the USITC using data reported by the Telecommunications Industry Association (TIA). TIA, *TIA's 2015–2018 ICT Market Review and Forecast*, 2015.

¹¹⁸⁴ As measured by 2014 revenues.

¹¹⁸⁵ Zino, *Industry Surveys: Telecommunications*, July 2015, 20.

¹¹⁸⁶ Telecom services are traded between countries in two main ways: as cross-border trade between countries—most commonly, as the traditional international telephone call—and as affiliate sales, or the sale of telecom services in one country by an affiliate of a telecom company headquartered in another country.

¹¹⁸⁷ USDOC, BEA, International Services Tables, table 2.1, “U.S. Trade in Services, by Type of Service,” October 15, 2015.

¹¹⁸⁸ USDOC, BEA, International Services Tables, table 2.2, “U.S. Trade in Services, by Type of Service and by Country or Affiliation,” October 15, 2015.

¹¹⁸⁹ Note that 2012 is the most recent year for which U.S. affiliate sales are reported; also, much of BEA's data pertaining to affiliate sales in telecom services is suppressed to avoid disclosing the data of individual companies.

¹¹⁹⁰ USDOC, BEA, International Services Table, table 3.1, “Services Supplied to Foreign Persons by U.S. MNEs,” October 15, 2015.

Box 7.1: U.S. Historical Involvement in Cuba’s Telecommunications Services Sector

In the years leading up to the 1959 revolution, U.S. companies played a leading role in Cuba’s telecom services market. In 1949, for example, AT&T and U.S. conglomerate International Telephone and Telegraph (ITT) installed an undersea cable between Cuba and Florida that would carry telephone and telegraph traffic between the two countries for the next 40 years. On the eve of the revolution, ITT also owned 66 percent of the common stock of Cuba’s monopoly telephone services provider, the Cuban Telephone Company.^a

Although Fidel Castro’s new government nationalized the Cuban Telephone Company after the revolution, voice services continued between the two countries over AT&T’s undersea cable. Even after the U.S. restrictions against Cuba in 1962, the United States government allowed AT&T to use the cable to transmit telephone calls, provided that it did not upgrade the cable’s carrying capacity, a situation that made AT&T the leading U.S. carrier serving Cuba into the early 1990s. During this period, the U.S. government did not allow AT&T to make payments to Cuba for connecting telephone calls on the island, instead requiring it to deposit all such payments into one or more escrow accounts.^b

After the passage of the Cuba Democracy Act in 1992, and several years of negotiations, Cuba reached an agreement with the United States on compensation for connecting telephone calls on the island. As a result, by the mid-1990s, the U.S. Federal Communications Commission had authorized several U.S. telecom services companies, including AT&T, IDB Worldcom Services, MCI International, and WiTel,^c to provide direct telephone service to Cuba.^d

In 2000, however, the government of Cuba severed all direct telecommunications services with the United States after the U.S. Congress passed a bill authorizing the seizure of foreign-country assets for the payment of compensation claims, an action that subjected the money in the AT&T escrow accounts to garnishment.^e As a result, there was no trade in telecom services between the two countries during 2000–2014 because U.S. companies could not offer direct service, although it was possible to indirectly route calls to/from Cuba through third countries.^f Limited telecom services between the United States and Cuba have resumed following the December 2014 announcement (see box 7.2).

^a Guzman, “Telecommunications in Cuba and the U.S. Embargo,” February 4, 2015, 1; Norris, “Market Watch: What ITT and Castro,” December 7, 1997. ITT owned none of the Cuban Telephone Company’s preferred stock.

^b Guzman, “Telecommunications in Cuba and the U.S. Embargo,” February 4, 2015, 2.

^c *Alejandro v. Telefonica Larga Distancia de Puerto Rico, Inc.*, 183 F.3d 1277 (1999).

^d Guzman, “Telecommunications in Cuba and the U.S. Embargo,” February 4, 2015, 2.

^e Anderson, “ETESCA Blocks Access to IP LD Sites,” March 21, 2001; Cawthorne, “Cuba to Cut U.S. Phone Ties,” December 8, 2000.

^f FCC, “IConnect Wholesale, Inc., d/b/a TeleCuba, DA11-654,” April 8, 2011.

Following the December 2014 announcement of normalized relations, however, several U.S. telecommunications companies started to offer limited services to Cuba. In February 2015, for example, IDT Corporation announced that it had reached an agreement with ETECSA to provide direct international long-distance telephone calls, with voice services commencing the following month.¹¹⁹¹ In September 2015, Verizon announced the establishment of a roaming

¹¹⁹¹ Acosta, “U.S. Telecom Firm IDT Establishes Direct Connection,” March 11, 2015.

agreement in Cuba, meaning that its customers will be able to use their cellphones while visiting Cuba.¹¹⁹² In November 2015, Sprint also began offering roaming service in Cuba.¹¹⁹³

Cuban Industry and Market

The Cuban telecom services market, measured by revenues derived from voice, data, and video services, grew 10 percent in 2014 to \$918 million, slightly slower than the average annual growth rate of 12 percent during the preceding four years.¹¹⁹⁴ The industry is tightly controlled by the government, with ETECSA operating as the monopoly provider in both the fixed-line and mobile markets.¹¹⁹⁵ ETECSA is also the largest provider of Internet services in Cuba, although CENIA Internet, operated by a branch of the Cuban Ministry of Science and Technology, also offers Internet services.¹¹⁹⁶

Cuba's telecom industry is among the most underdeveloped in the world, the result of more than 50 years of bureaucratic delays, a persistent lack of funding, and the effects of the U.S. restrictions on trade with Cuba (box 7.2), which have directly prohibited U.S. companies from selling telecommunications equipment to Cuba. U.S. restrictions have also indirectly impaired Cuba's ability to buy telecom equipment from other countries through de minimis U.S.-content restrictions and by curtailing its ability to earn hard currency, particularly U.S. dollars.¹¹⁹⁷ At the end of 2013, Cuba's mobile and Internet penetration rates, defined as the number of subscribers per 100 inhabitants, ranked in the bottom 2 percent and 9 percent of reporting countries worldwide, respectively, and fixed-line penetration ranked in the bottom 43 percent.¹¹⁹⁸

¹¹⁹² Goldman, "Verizon Offers Roaming in Cuba," CNNmoney, September 18, 2015.

¹¹⁹³ Schwartz, "Sprint Signs Deal to Offer Roaming Services," November 2, 2015.

¹¹⁹⁴ Calculated by the USITC using data reported by the Telecommunications Industry Association (TIA). TIA, *TIA's 2015–2018 ICT Market Review and Forecast*, 2015.

¹¹⁹⁵ Lancaster, *Cuba: Telecoms, Mobile, and Broadband Markets*, January 19, 2015, 5. ETECSA offers mobile services under the brand name Cubacel.

¹¹⁹⁶ *Ibid.*, 9.

¹¹⁹⁷ *Ibid.*

¹¹⁹⁸ According to the International Telecommunications Union (ITU), Cuba's mobile penetration stood at 22 subscribers per 100 inhabitants at the end of 2014, whereas its fixed line penetration was 11 subscribers per 100 inhabitants. By contrast, internet penetration totaled less than 1 subscriber per 100 inhabitants in 2013, the most recent year for which data are available. ITU, *World Telecommunication/ICT Indicators 2015 database* (accessed February 8, 2016).

Box 7.2: Easing of Key U.S. Restrictions on Telecommunications Services

The most important U.S. restrictions on U.S. companies' participation in the Cuban telecom services market are found in the Cuban Democracy Act (CDA) and the Cuban Liberty and Democratic Solidarity Act (Helms-Burton Act). Specifically, CDA (1992), as amended, prohibits investment in the domestic telecommunications network in Cuba,^a whereas the Helms-Burton Act (1996) prohibits trafficking in confiscated property claimed by U.S. nationals.^b In 1959, the Cuban government nationalized the Cuban Telephone Company (CTC), in which U.S.-based ITT owned a majority stake. As a result, the remnants of the CTC's network (and other property), which is now largely owned by ETECSA, is considered confiscated property.

In December 2014, the Obama administration reestablished diplomatic relations with Cuba. This change authorized U.S. telecom providers to “establish the necessary mechanisms, including infrastructure, in Cuba to provide commercial telecommunications and Internet service.” It allowed the “commercial sale of certain communications devices, related software, applications, hardware, and services, and items for the establishment and update of communication-related systems.”^c

Although changes to the telecom industry were welcomed by many observers, they directly conflict with the CDA and the Helms-Burton Act. In an attempt to reduce the conflict, the U.S. Department of Commerce and the U.S. Treasury Department have implemented a series of revisions to the Cuban Assets Control Regulations and Export Administration Regulations.^d Similarly, the U.S. Federal Communications Commission (FCC), responding to guidance from the U.S. State Department, removed Cuba from its exclusion list, allowing for U.S. providers to provide telecommunications services to Cuba without prior FCC approval, as was required in the past.^e Also, in July 2015, bills were introduced in the U.S. House of Representatives and the U.S. Senate that seek to repeal or amend requirements and prohibitions pertaining to telecommunications in the CDA and the Helms-Burton Act.^f Nonetheless, telecommunications industry sources stated that uncertainty regarding the conflicting regulations, combined with the possibility that future administrations could change or repeal recent liberalizations, make Cuba a somewhat risky market to consider.^g

^a 22 U.S.C. § 6004(e)(5).

^b 22 U.S.C. § 6033(a).

^c White House, “Charting a New Course on Cuba,” December 17, 2014.

^d U.S. Treasury, “Treasury and Commerce Announce Further Amendments,” September 18, 2015.

^e FCC, “FCC International Bureau Removes Cuba from the Exclusion List,” January 15, 2016.

^g Industry representatives, interview by USITC staff, Washington, DC, October 22, 2015.

^f In the U.S. House of Representatives, Congressmen Kevin Cramer and Peter Welch introduced House bill H.R. 3055—Cuba DATA Act in July 2015; a companion bill was introduced by Senators Tom Udall, Jeff Flake, Richard Durbin, and Michael Enzi in the U.S. Senate (S.1389 Cuba Data Act). As of January 2016, both bills are still in committee.

Fixed-Line Services

The availability of fixed-line voice services is poor in most of Cuba, with only about 11 percent of the population subscribing to such services in 2014; the majority of these subscribers are likely based in urban areas. Although fixed-line subscriptions grew at a 4.4 percent average annual rate during 2005–14 (table 7.3), such growth is from a very low base,¹¹⁹⁹ with the limited reach of Cuba's network infrastructure being the main hindrance to the uptake of fixed-line voice services. Much of Cuba's fixed-line network was installed in the early part of the 20th

¹¹⁹⁹ ITU, ITU World Telecommunications/ICT database.

century, with efforts to expand the network suffering from an ongoing lack of financial resources and bureaucratic delays.¹²⁰⁰ Installation delays and a lack of funding have also severely hampered Cuba’s efforts to maintain and upgrade its fixed-line network, not only keeping available services at a very basic level, but also resulting in inconsistent service quality.¹²⁰¹

Table 7.3: Telecommunications market statistics, Cuba, 2005–14 (thousands)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Fixed-line telephone subscriptions	856.0	961.6	1,055.1	1,088.1	1,119.8	1,163.6	1,193.4	1,216.5	1,237.3	1,264.8
Mobile telephone subscriptions	135.5	152.7	198.3	331.7	621.2	1,003.0	1,315.1	1,681.6	1,995.7	2,530.8
Fixed-line Internet subscriptions	n/a	16.0	33.6	n/a	39.9	40.1	41.1	42.0	41.1	n/a

Source: ITU, World Telecommunication ICT Indicators database 2015; ONEI [Cuban National Statistics Office], *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba] (accessed December 23, 2015).

In 2013, Cuba’s incoming international voice traffic totaled 464.4 million minutes, whereas outgoing traffic totaled only 46.6 million minutes.¹²⁰² Currently, virtually all of Cuba’s international Internet traffic (and most likely voice traffic) is routed via Telefónica (Spain) and Tata (India) over the ALBA-1 cable, although Cuba continues to maintain satellite services with two providers, Intelsat (multinational) and NewCom (Mongolian).¹²⁰³ ETECSA demands \$0.84 per minute from foreign operators for connecting calls in Cuba, a requirement that has conflicted with the U.S. Federal Communications Commission (FCC) maximum benchmark rate of 19 cents per minute.¹²⁰⁴ Both IDT and Sprint received approval from the FCC to offer direct telephone service to Cuba at a rate higher than the 19-cent benchmark rate.¹²⁰⁵

Mobile Services

Mobile telephone services emerged in Cuba in the early 1990s following the creation of the Cellular Telephone Company of Cuba (Cubacel). In order to accommodate European tourists, a second company, C-COM, was created to offer mobile services using GSM technologies, the dominant global technology standard. In 2003, both companies were folded into ETECSA (box

¹²⁰⁰ Cereijo, *Republic of Cuba Telecommunications Infrastructure Assessment*, December 2010.

¹²⁰¹ Ibid.

¹²⁰² ITU, World Telecommunications ICT Indicators 2015 database (accessed July 7, 2015).

¹²⁰³ Press, “Cuban International Traffic Shifts,” July 12, 2015.

¹²⁰⁴ FCC, IConnect Wholesale, Inc. d/b/a Telecuba, IB Docket No. 10-95, FCC File No. ISP-WAV-20100412-00007, April 8, 2011.

¹²⁰⁵ IDT, “Request for Review of Service Agreement,” February 19, 2015; Sprint, “Request for Review of Service Agreement,” September 10, 2015. In their service agreement, Sprint agreed to pay 60 cents per minute to ETECSA for phone calls to Cuba; the per-minute rate is redacted in the public version of the service agreement between IDT and ETECSA.

7.3). For more than a decade, mobile services were, for the most part, available only to diplomats, foreign businesspeople, and senior government officials. In 2008, however, the Cuban government lifted its ban on mobile phone ownership,¹²⁰⁶ setting the stage for rapid growth in mobile subscriptions. In 2009, for example, subscriptions grew by 87 percent, and in 2010 by 61 percent. Overall, mobile telephone subscriptions grew from roughly 331,736 in 2008 to 2,530,752 by the end of 2014, an increase of over 600 percent.¹²⁰⁷ By June 2015, the number of mobile telephone subscribers had grown to an estimated 3,069,537, or roughly 27 percent of the population.¹²⁰⁸ Despite this rapid growth, Cuba still lags its neighbors: the number of mobile subscriptions per 100 people in Latin America and the Caribbean region in 2014 ranges from a low of 51 in Belize to 171 in Suriname, with the majority of countries exceeding 100.¹²⁰⁹

Box 7.3: Foreign Investment in Cuba's Telecommunications Services Sector

By the early 1990s, much of Cuba's fixed-line network was dilapidated and rapidly approaching inoperability.^a Of the 20,000-kilometer network, for example, less than 1,000 kilometers incorporated fiber optic cabling, mostly in Havana. The rest consisted of rapidly deteriorating copper cables, over which telephone calls were delivered using a variety of incompatible, old-fashioned equipment. For example, in 1993, roughly 56 percent of Cuba's central offices still used U.S.-made electromagnetic equipment dating to the 1940s, whereas 43 percent used step-by-step equipment manufactured in Eastern Europe in the 1970s. In a few rural areas, telephone calls were still routed using manual switchboards.^b

Faced with the necessity of modernizing Cuba's fixed-line telephone service, yet lacking capital, the government sought a foreign partner. In 1994, Grupo Domos, a Mexican conglomerate, agreed to purchase a 49 percent stake in Cuba's telephone company, the Cuban Telecommunications Enterprise or EMTELCUBA (this was the Cuban Telephone Company before the confiscation of ITT's property). The price was \$700 million, as well as a commitment to invest \$400 million in the network. As part of the deal, EMTELCUBA, which had been operated by the Ministry of Communications, was separated into an independent entity and renamed ETECSA. The following year, in an effort to bring in telecom networking expertise and additional capital, Grupo Domos sold a 25 percent share of its stake to Stet International, a unit of Italy's Telecom Italia.^c

By 1997, however, Grupo Domos faced financial problems (stemming in part from the Mexican peso crisis) and U.S. economic restrictions related to the newly enacted Helms-Burton Act. Grupo Domos pulled out of the venture, leaving Stet with a 29 percent ownership position in ETECSA; the remainder of the company was owned by a variety of state-owned entities.^d In 2011, Cuba effectively renationalized ETECSA when Rafin S.A., a state-owned company, bought out Telecom Italia's share for \$706 million.^e

Foreign investors have also played a role in Cuba's mobile market. In 1992, Cubacel was created as a joint venture between the Cuban government and *Telecomunicaciones Internacionales de México S.A.* (TIMSA), which paid \$8 million for a 50 percent equity stake.^f In 1998, Sherritt International, a Canadian

¹²⁰⁶ TeleGeography, "Cuba to Allow Ordinary Cubans to Go Mobile," March 31, 2008.

¹²⁰⁷ ITU, World Telecommunications ICT Indicators 2015 database (accessed July 7, 2015).

¹²⁰⁸ Cuban government official, interview by USITC staff, Havana, June 17, 2015.

¹²⁰⁹ Penetration rates can exceed 100 percent when mobile telephone subscribers have more than one mobile telephone. ITU, World Telecommunications ICT Indicators 2015 database (accessed January 6, 2016).

company, purchased a 37.5 percent stake for \$38.25 million. Despite being highly profitable, in 2003 both TIMSA and Sherritt sold their ownership positions to the Cuban state-owned firm Telefónica Antillana S.A. for \$43 million. Some sources indicate that the government of Cuba compelled Sherritt and TIMSA to sell their equity position in Cubacel.⁵ After the purchase, the Cuban government reportedly owned a 100 percent position in Cubacel (via several government-owned entities), later incorporating it (and C-Com) into ETECSA. Currently, Cubacel offers mobile services as a subsidiary of ETECSA.

^a U.S. technicians surveying the Cuban network in 1993 reported that network deterioration was at an advanced stage, predicting that the number of working lines would drop by 63 percent within a year, with some interior cities completely losing telephone services. They also reported that, nationwide, less than 18 percent of telephone calls were being completed, although another estimate placed the completion rate as high as 30 percent. Nichols, "Telecommunications in Cuba," 1995.

^b Ibid.

^c Peters, "Cuba Goes Global," November 2001; Guzman, "Telecommunications in Cuba and the U.S. Embargo," February 2015; Nichols, "Telecommunications in Cuba," 1995.

^d Rohter, "Mexican Conglomerate Abandons Cuban Phone Venture," June 30, 1997; Guzman, "Telecommunications in Cuba and the U.S. Embargo," February 2015; Tamayo, "AT&T Seeks Other Routes for Cuba Calls," February 24, 1999.

^e *Cuba Standard*, "Cuban State Buys Out Telecom Italia," January 31, 2011; Guzman, "Telecommunications in Cuba and the U.S. Embargo," February 2015; *Economist*, "Talk Is Cheap," January 24, 2011. Some industry analysts valued Telecom Italia's share of ETECSA at roughly \$500 million, 33 percent lower than the closing price.

^f Nichols, "Telecommunications in Cuba," 1995.

⁵ Luxner, "Sherritt Sells Its 40% Stake in Cubacel," October 2003; Reuters, "Big Potential in Mostly Untapped Cuba Telecom," September 10, 2009. Eighty percent of the payment reportedly went to Sherritt, with the remainder going to TIMSA.

Over the past 10 years, Cuba's mobile network has spread throughout the island, with mobile coverage now available to approximately 85 percent of the population.¹²¹⁰ Since the vast majority of the network operates on older-generation 2G technologies, mobile services are largely limited to telephone calls and text messages.¹²¹¹ Although ETECSA has announced plans to offer limited broadband mobile services, mainly mobile email and Internet access, such services will not likely be readily available to the general populace due to high service prices and the small number of compatible devices. In addition to the roaming services recently launched by both Verizon and Sprint, ETECSA has reportedly established roaming agreements with 365 mobile carriers based in more than 140 countries.¹²¹²

Over the past three years, ETECSA has taken steps to increase the number of mobile users, mainly by reducing costs. In January 2012, for example, the government cut the price of a mobile telephone call from \$0.60 per minute to \$0.45 per minute, followed by another reduction to \$0.35 per minute in early 2013.¹²¹³ Also in 2013, the government reduced costs on mobile users by introducing a "calling party pays" system; previously, both callers and recipients were subject to per-minute calling fees.¹²¹⁴ Despite such efforts, the cost of mobile

¹²¹⁰ Cuban government official, interview by USITC staff, Havana June 17, 2015.

¹²¹¹ USITC, hearing transcript, June 2, 2015 (testimony of Eduardo Guzman); Lancaster, *Cuba: Telecoms, Mobile, and Broadband Markets*, January 19, 2015.

¹²¹² Freedom House, "Freedom on the Net 2015: Cuba," 2015.

¹²¹³ TeleGeography, "Cuba Cuts Mobile Telephony Charges," January 23, 2012; TeleGeography, "ETECSA Cuts Mobile Telephony Rates," January 21, 2013.

¹²¹⁴ TeleGeography, "CPP System Introduced for Mobile Phone Users," January 10, 2013.

service is still prohibitively high for most Cubans. As a result, many mobile customers reportedly use their cellphones to receive calls, but prefer to make calls using fixed-line phones.¹²¹⁵

Internet Services

Until recently, most Internet access in Cuba was delivered via low-bandwidth dial-up connections, although faster Internet access speeds were reportedly available at tourist hotels, educational institutions, and government offices. Broadband access, like that delivered via digital subscriber line or cable modem technologies, is still rare in Cuba, although ETECSA has recently opened roughly 600 “navigation halls” and cybercafés.¹²¹⁶ Such government-sanctioned outlets charge \$0.60 per hour to access Cuban websites, and \$4.50 per hour to access the global Internet.¹²¹⁷ As of January 2016, ETECSA had opened 65 Wi-Fi access points across the island, which offer Internet access for \$2 per hour.¹²¹⁸

Although the government has reduced the price of Internet services (and other telecom services) over the past two years, such services are still largely unaffordable to the majority of Cubans, given Cuba’s average salary of about \$20 per month.¹²¹⁹ Indeed, some observers have expressed the view that the Cuban government limits the Cuban population’s access to information not by using sophisticated filtering and blocking techniques, but instead by rationing the technology needed to access the Internet (i.e., limiting the number of navigation halls and Wi-Fi access points), and also by maintaining prohibitively high pricing for Internet and mobile services, as well as necessary access devices like computers, smartphones, and tablets.¹²²⁰ Some observers suggest that the government may also keep costs for telecom services relatively high as a way to attract hard currency from abroad. In particular, they point to the government’s new policy of allowing friends and relatives living outside Cuba to pay the phone bills of domestic users via a Cuban government website.¹²²¹

Although official statistics indicate that 26 percent of the Cuban population uses the Internet,¹²²² most users are confined to a tightly controlled, island-wide “intranet,” consisting of

¹²¹⁵ BMI, *Caribbean Telecommunications Report*, Q1 2015, 78.

¹²¹⁶ TeleGeography, “Cuba to Expand Internet Access to Homes,” June 25, 2013; Cuban government official, interview by USITC staff, Havana, June 17, 2015. The reported average speed at navigation halls/cybercafés is 2 Mb per second.

¹²¹⁷ Freedom House, “Freedom on the Net 2015: Cuba,” 2015, 4. In February 2015, ETECSA temporarily reduced the hourly price for global Internet access to \$2.00 per hour; the rate was extended beyond its original August 2015 expiration date.

¹²¹⁸ ETECSA website, “Espacios Públicos de Conexión Inalámbrica (WIFI)” [Public spaces for Wi-Fi connection] (accessed December 15, 2015), http://www.etcসা.com/?page=internet_conectividad&sub=wifi; Burnett, “Cuba Offers Citizens Better Access to Internet,” June 18, 2015.

¹²¹⁹ BMI, *Caribbean Telecommunications Report*, Q1 2015, 80; Freedom House, “Freedom on the Net 2015: Cuba,” 2015.

¹²²⁰ Grosbois, “Internet in Cuba Only for the Rich,” December 5, 2014; Freedom House, “Freedom on the Net 2015: Cuba,” 2015.

¹²²¹ Freedom House, “Freedom on the Net 2015: Cuba,” 2015; TeleGeography, “Fixed Telephony Bills Can Be Paid Online,” January 23, 2014. Starting on January 21, 2014, individuals living outside of Cuba can top up prepaid mobile accounts and pay for fixed-line bills of Cuban users via the website <http://www.ezetop.com>.

¹²²² ITU, World Telecommunications ICT Indicators database 2015 (accessed July 7, 2015).

a national email system; an encyclopedia; academic journal articles and other educational materials; Cuban websites; and a limited number of international websites.¹²²³ In addition, however, some are able to access the Internet through alternate channels, such as the unofficial Internet-like network known as “StreetNet” or “SNet” (box 7.4). Only 5 percent of the population is estimated to have access to the global Internet.¹²²⁴

Box 7.4: SNet: Cuba’s Unofficial Internet

SNet is a loose grouping of users that have created a network by linking their computers with Wi-Fi antennas and Ethernet cables strung over streets and rooftops throughout Havana; similar networks also exist in other Cuban cities. Starting with only a handful of users in 2001, SNet has grown organically over the past 15 years to more than 9,000 users, with roughly 2,000 users connecting on any given day. Although the SNet network is not connected to the global Internet, or even Cuba’s domestic internet, users have formed an active community that uses the network to chat with friends, play games, and download movies and television shows. SNet also features a copy of Wikipedia, which is periodically updated, and a Cuban version of Facebook. Although the use of Wi-Fi equipment without a license is against the law in Cuba, making SNet technically illegal, the government reportedly tolerates the network as long as users do not break Cuban laws. Indeed, hundreds of volunteer administrators monitor SNet to ensure that users do not share pornography, discuss politics, connect to the global Internet, or engage in other illegal activities.

Source: Weissenstein, “Cuban Youth Build Secret Computer Network,” January 26, 2015.

Effects of the Removal of U.S. Restrictions

If U.S. restrictions on U.S. companies’ participation in the Cuban telecom services market are removed, it is unlikely that U.S. carriers would build a network in Cuba or otherwise establish a physical presence. Some companies indicate they are willing to engage in arms-length commercial arrangements, notably the reestablishment of direct international telephone services and the negotiation of mobile roaming agreements. Yet even if U.S. firms would consider going further in entering the Cuban market, several sources state that the Cuban government has little interest in foreign investment because it is concerned with maintaining its dominance in this sector and its control over communications.¹²²⁵

An important consideration facing U.S. carriers thinking of entering the Cuban telecom market is the threat of having their payments to ETECSA garnished to satisfy judgments by winning plaintiffs in U.S. civil lawsuits against the Cuban government. Plaintiffs in U.S. civil cases¹²²⁶ have sought to execute judgments for compensatory damages against Cuban assets in the

¹²²³ Freedom House, “Freedom on the Net 2015: Cuba,” 2015.

¹²²⁴ Scola, “Only 5 Percent of Cubans,” December 17, 2015.

¹²²⁵ Whitefield, “Cuba Still Wary of U.S. Telecom and Internet Offers,” January 25, 2016; USITC, hearing transcript, June 2, 2015, 147, 172, and 202 (testimony of Eduardo Guzman); 149 (testimony of Kent Bressie).

¹²²⁶ Eleven civil cases were won in U.S. courts to satisfy judgments against Cuba under the Foreign Sovereign Immunities Act’s terrorism exception. CRS, “Can Creditors Enforce Terrorism Judgments Against Cuba?” September 29, 2015. This garnishment issue is unrelated to the claims involving nationalized U.S. property in Cuba discussed in box 3.1.

United States for nearly 20 years,¹²²⁷ with such actions frequently involving U.S. telecom services companies.¹²²⁸ The experience of having to defend themselves in these cases has likely made some U.S. telecom services companies reluctant to put themselves into a situation in which they are making payments to ETECSA.¹²²⁹

Many observers believe that Cuba's removal from the list of state sponsors of terrorism in May 2015, which likely restores Cuba's sovereign immunity under the Foreign Sovereign Immunities Act, will protect it from future lawsuits.¹²³⁰ However, it is generally believed that civil judgments—which still amount to hundreds of millions of dollars—rendered before the removal are valid and that plaintiffs can attempt to execute writs of garnishment, if they can locate Cuban government assets in the United States.¹²³¹ In recent years, for example, attorneys seeking to enforce civil judgments for their Cuban clients have sought to seize Cuban airplanes, patents and trademarks related to Cuban cigars, and even Cuba-related electronic funds transfers (EFTs) passing through New York banks. Some attorneys have expressed the view that it is now relatively safe for U.S. companies to enter into commercial arrangements with companies in Cuba.¹²³² Nonetheless, the risk of additional garnishment actions may still remain,¹²³³ with one knowledgeable industry observer suggesting that U.S. companies should protect themselves by making payments to Cuban entities through a bank outside the United States.¹²³⁴ Indeed, such concerns over payment garnishment may have influenced the structure of the IDT Corporation's agreement with ETECSA in 2015 to directly exchange telephone calls. The agreement stipulates that IDT must make pre-payments to ETECSA through a bank outside the United States.¹²³⁵

Several other issues may deter U.S. carriers from establishing a physical presence in the Cuban market, or investing in Cuba's telecom network. First, as noted earlier, some companies may be concerned that Cuba's small market and low per-capita income will not generate enough profits

¹²²⁷ Lyons, "Dead Fliers' Families Pursue Frozen Bank Assets," October 27, 1998; Guzzo, "Lawsuits Block Cuba's Path to Normalization," January 24, 2015; Kay, "Miami Lawyers Race Each Other," October 1, 2007.

¹²²⁸ Between 1963 and 1994, the U.S. government required AT&T and other telecommunication companies to deposit money owed to the Cuban telecom company (for connecting telephone calls in Cuba) into escrow accounts, with the total amount in escrow totaling more than \$100 million. The U.S. telecom industry has been historically targeted by winning plaintiffs in U.S. civil actions against the Cuban government because, aside from these escrow accounts, there were very few, if any, additional Cuban assets that could be garnished in the United States.

¹²²⁹ Industry representative, interview by USITC staff, Washington, DC, June 18, 2015.

¹²³⁰ Davis, "U.S. Removes Cuba from State-sponsored Terrorism List," May 29, 2015.

¹²³¹ Industry representatives, telephone interviews by USITC staff, June 22, 2015, August 5, 2015, August 12, 2015; Guzzo, "Lawsuits Block Cuba's Path to Normalization," January 24, 2015; Echevarría, "First Direct U.S.-Cuba Telecom Agreement," March 2015.

¹²³² Industry representative, telephone interview by USITC staff, August 5, 2015; U.S. government representatives, interview by USITC staff, July 29, 2015.

¹²³³ Industry representative, telephone interview by USITC staff, August 12, 2015.

¹²³⁴ Industry representative, telephone interview by USITC staff, August 5, 2015.

¹²³⁵ IDT Telecom, Inc., *Request for Review of Service Agreement*, U.S. Federal Communications International Bureau Docket No. 10-95, February 19, 2015.

to offset the risks and uncertainties associated with investing in Cuba.¹²³⁶ Second, due to a precedent set by the Cuban government's buyout of foreign investors in both Cubacel and ETECSA, some U.S. carriers may be concerned about being forcibly bought out or having their assets nationalized at some future time.¹²³⁷ Third, the tight control exercised by the Cuba government over the telecom services market likely concerns some U.S. telecom services providers, with such concerns ranging from potential surveillance requirements to a nontransparent regulatory environment.¹²³⁸

Financial Services

As a result of the U.S. restrictions on Cuba, the U.S. financial services industry has faced stringent barriers to doing business with Cuba for many years. Nevertheless, there has been some loosening of restrictions since December 2014, especially regarding correspondent banking and payment processing. U.S. banks can now open correspondent banking accounts with banks in Cuba, credit card transactions are permitted, and U.S. banks in foreign markets can serve Cuban citizens.¹²³⁹ In addition, in May 2015 Cuba was removed from the State Department's list of state sponsors of terrorism, which had imposed additional limitations on financial activities involving Cuba.¹²⁴⁰ Nevertheless, even with these openings, the dominance of state-owned institutions in the Cuban financial services industry and Cuban sensitivity to the entry of foreign banks will likely prevent U.S. financial institutions from markedly increasing their activities in the Cuban market in the near future.¹²⁴¹ In the event that all U.S. restrictions are lifted, industry representatives do not anticipate significant Cuban imports of U.S. financial services in the short run, although greater Cuban imports are possible in the medium to long term.¹²⁴²

¹²³⁶ Industry representative, interview by USITC staff, Washington, DC, June 18, 2015; presenter, ASCE 25th annual meeting, "Cuba: What's Next?" Miami, July 31, 2015; industry representative, interview by USITC staff, Washington, DC, October 22, 2015.

¹²³⁷ Guzman, "Telecommunication in Cuba and the U.S. Embargo," February 4, 2015, 8; industry representative, interview by USITC staff, Washington, DC, June 18, 2015.

¹²³⁸ Industry representative, interview by USITC staff, Washington, DC, June 18, 2015. In addition, reportedly strong legal and operational ties between the ETECSA and the Cuban military also raise the risk that any U.S. telecom carrier entering into a joint venture with ETECSA would effectively be partnering with the Cuba military, potentially increasing exposure to violations of the U.S. Foreign Corrupt Practices Act and various anti-money laundering statutes. Guzman, "Telecommunication in Cuba and the U.S. Embargo," February 4, 2015, 7; USITC, hearing transcript, June 2, 2015, 147 (testimony of Eduardo Guzman, Drinker, Biddle & Reath LLP).

¹²³⁹ U.S. Treasury, "Frequently Asked Questions," September 18, 2015.

¹²⁴⁰ Cuba was formally removed from this list on May 29, 2015. USDOS, "Rescission of Cuba," May 29, 2015.

¹²⁴¹ Industry representatives, interviews by USITC staff, Washington, DC, June 10 and July 29, 2015; presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 16, 2015.

¹²⁴² Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 16, 2015. Financial services also include insurance services, such as property and casualty, life, and reinsurance. However, this section focuses on non-insurance financial services, as there are unlikely to be significant effects on U.S.-Cuba trade in insurance services.

U.S. Industry

The U.S. financial services industry is among the most highly developed in the world. U.S. firms are active in markets globally and offer the full spectrum of financial services, including bank lending and credit card transaction services, export financing, financial asset management and advisory services, investment banking advisory services, stockbroking, and share dealing, among others. Many of the largest U.S. banks are active internationally. For instance, Citigroup's Global Consumer Bank operates about 3,280 branches in 700 cities worldwide.¹²⁴³

Financial services are primarily traded either on a cross-border basis or through commercial presence. An example of the first mode is a U.S.-based financial institution providing financial services to a consumer in another country; an example of the second is a U.S. financial institution providing financial services through a subsidiary or branch in a foreign country.¹²⁴⁴ Both financial services modes generate a great deal of export volume for the United States. In 2014, for example, the United States exported a total of \$87.3 billion of non-insurance financial services on a cross-border basis, generating a trade surplus of \$67.8 billion. Cross-border services exports increased nearly 4 percent from 2013 to 2014, while the surplus increased by over 3 percent.¹²⁴⁵ Likewise, in 2013, the most recent year for which data are available, U.S. financial services firms provided \$156.1 billion of non-insurance financial services through a commercial presence in another country, a slight decrease from the \$157.2 billion provided in 2012.¹²⁴⁶

During 2005–14, the United States had no financial services exports to Cuba. By comparison, the United States exported \$21.8 billion of non-insurance financial services on a cross-border basis to Latin America in 2014, down from \$23.0 billion in 2013. It also provided \$25.8 of non-insurance financial services to Latin America through commercial presence in 2013, up from \$24.8 billion in 2012.¹²⁴⁷ As a result of the December 2014 loosening of trade restrictions with Cuba, U.S. banks gained permission to open correspondent banking accounts with banks in Cuba, process credit card transactions, and serve Cuban citizens in foreign markets (box 7.5).¹²⁴⁸ While no official data have been published on financial services trade with Cuba since the U.S. announced the normalization of relations, there have been some reported exports of U.S. financial services to Cuba (box 7.6).

¹²⁴³ Citigroup, "About Us: Consumer Business," http://www.citigroup.com/citi/about/consumer_businesses.html (accessed November 18, 2015).

¹²⁴⁴ USITC, *Recent Trends in U.S. Services Trade*, 2012, 3-8.

¹²⁴⁵ USDOC, BEA, International Services Tables, table 2.3, "U.S. Trade in Services by Country or Affiliation and by Type of Service," October 15, 2015.

¹²⁴⁶ Most recent year available. USITC calculations, USDOC, BEA, International Services Tables, table 3.1, "Services Supplied to Foreign Persons by U.S. MNEs," October 15, 2015.

¹²⁴⁷ USDOC, BEA, International Services Tables, table 2.3, "U.S. Trade in Services by Country or Affiliation and by Type of Service," October 15, 2015; USITC calculations, based on USDOC, BEA, International Services Tables, table 3.1, "Services Supplied to Foreign Persons by U.S. MNEs," October 18, 2015.

¹²⁴⁸ U.S. Treasury, "Frequently Asked Questions," September 18, 2015.

Box 7.5: Easing of Key U.S. Restrictions on Financial Services

Prior to liberalizations coinciding with the Administration's announcement of normalized relations with Cuba, U.S. engagement with Cuba in the financial services sector was largely prohibited. Additionally, before May 29, 2015, Cuba was designated as a state sponsor of terrorism by the U.S. State Department. This designation prohibited all financial entities under U.S. jurisdiction, including foreign banks, from engaging in financial transactions with a Cuban financial firm, individual, or entity.^a The U.S. government has aggressively pursued financial firms that violated these restrictions, including the French banks BNP Paribas in July 2014 and Crédit Agricole in October 2015.^b Until Cuba's removal from this list, increased U.S. activity in Cuba's financial sector was precluded.

As a result of the December 2014 changes to U.S. restrictions and following Cuba's removal from the state sponsors of terrorism list, OFAC regulations were amended, most recently in September 2015. As a result of these changes, U.S. banks may now engage with Cuba in a variety of ways. U.S. financial institutions may process credit and debit card transactions for authorized activities in Cuba. U.S. institutions may now open correspondent banking accounts at Cuban financial institutions, which will facilitate payments and transactions with the United States.^c Furthermore, U.S. banks in third countries may now offer financial services to Cuban citizens.^d Perhaps most significantly, U.S. financial institutions may now directly support OFAC-authorized U.S. activities involving Cuba using a correspondent banking relationship with a Cuban bank, instead of having to use third-party accounts.^e

U.S. regulations state that financial institutions may rely on their customers' judgment when it comes to ensuring that a particular transaction falls under one of the general license categories, "provided that such persons do not know or have reason to know that a transaction is not authorized by this section."^f This change may pose a problem: industry representatives report that the "have reason to know" standard is unclear and potentially exposes U.S. banks to significant legal liability. While some U.S. banks are engaging with Cuba, industry representatives state that the lack of clarity in OFAC regulations remains a barrier to many financial firms' engagement with Cuba.^g

On January 27, 2016, additional changes to U.S. restrictions on trade with Cuba were made that further affect the ability of U.S. firms to provide financial services. The United States removed limitations on payments and financing of U.S. Department of Commerce-authorized exports from the United States of 100 percent U.S.-origin goods or re-export of 100 percent U.S.-origin goods from a third country, other than exports of agricultural products.^h

^a U.S. Treasury, OFAC, "Terrorist Assets Report," May 2015; 31 C.F.R. § 596 (2015).

^b BNP Paribas was fined \$8.9 billion for transactions that violated sanctions against Cuba, Iran, and Sudan. Crédit Agricole was fined \$787 million for transactions involving those same countries. Ax, Viswanatha, and Nikolaeva, "U.S. Imposes Record Fine on BNP," July 1, 2014; Reuters, "Credit Agricole Pays \$787M Fine," October 20, 2015.

^c See 80 Fed. Reg. 2291 (January 16, 2015).

^d Previously, citizens of Cuba living in third countries were considered blocked under the State Sponsor of Terrorism designation. U.S. Treasury, "Frequently Asked Questions," September 18, 2015.

^e U.S. Treasury, "Treasury and Commerce Announce Further Amendments," September 18, 2015.

^f 31 C.F.R. § 515.

^g Industry representatives, interviews by USITC staff, Washington, DC, June 10, 2015, and Miami, June 16 and 17, 2015; presenter, Cuba Finance, Infrastructure and Investment Summit, New York, NY, October 8, 2015.

^h 81 Fed. Reg. 4583 (January 27, 2016).

Box 7.6: Banking for the Cuban Embassy in Washington, DC

On February 14, 2014, the Cuban Interests Section in Washington, DC, suspended nearly all consular services because the Interests Section could not find a bank to handle the accounts of its diplomatic mission.^a M&T Bank Corp. had been providing those services, but announced that it would stop offering banking services to diplomatic missions.^b The Cuban Interests Section was without a bank from February 2014 until May 2015.^c

In May 2015, Stonegate Bank began to provide banking services in the United States for the Cuban government. In July 2015, Stonegate opened a correspondent bank account with Cuba's *Banco Internacional de Comercio S.A.* to provide banking services for the Cuban Embassy in Washington, DC.^d In November 2015, Stonegate further announced that it would offer a debit MasterCard to its U.S. customers that could be used in Cuba.^e David Seleski, Stonegate's CEO, had already stated that Stonegate's smaller size allowed it to engage in the kind of "relationship" banking—as opposed to the volume and transaction banking favored by large banks—needed to operate in an unclear regulatory environment.^f

Although small in value terms, the banking services provided by Stonegate to the Cuban government count as a U.S. export, and could pave the way for more substantial classic exports of financial services.^g One industry representative speculated that this relationship could spur more interest in serving the Cuban financial services sector by confirming that the Cuban government's governance may be trusted.^h

^a Adams, "Cuba Suspends Consular Services," February 14, 2014.

^b Ibid.

^c Ibid.; Lakshmanan, "The Bank That Took a Risk," May 21, 2015.

^d Schwartz and Tracy, "U.S., Cuban Banks Agree to Form Financial Link," July 22, 2015.

^e Stonegate Bank, "Stonegate Bank and MasterCard," November 19, 2015.

^f Chase, "In Conversation: Dave Seleski," August 26, 2015.

^g Industry representative, email message to USITC staff, July 22, 2015.

^h Ibid.

Credit card payment processing is one type of cross-border trade in financial services with Cuba that may increase. Particularly if U.S. travel restrictions are fully lifted, U.S. travelers using credit cards could stimulate significant demand for payment processing services. These services are traded internationally, on a cross-border basis, when a U.S.-based payment processor processes a payment for a merchant in another country.¹²⁴⁹ In 2014, the U.S. exported credit card and other credit-related financial services valued at \$19.3 billion.¹²⁵⁰

¹²⁴⁹ U.S. payment processors operate on either a four-party or a three-party model. The four-party model, used by Visa and MasterCard, connects a customer and a merchant with their respective banks. The three-party model differs in that the payment processor acts as the consumer's bank extending a line of credit, as is the case with American Express, and connects a customer and merchant with the merchant banks.

¹²⁵⁰ USDOC, BEA, International Services Tables, table 2.1, "U.S. Trade in Services, by Type of Service," October 15, 2015.

Cuban Industry and Market

Cuba has a strong tradition of banking. Its first bank began operating in 1832, and by 1959 Cuba had over 49 commercial banks with over 200 branches.¹²⁵¹ The largest privately owned bank in Latin America at the time was Cuban, and two Cuban banks ranked in the top 500 globally.¹²⁵² Additionally, a number of foreign banks were located in the Cuban market, including three U.S. banks.¹²⁵³ After the Cuban revolution, both Cuban and foreign-owned banks were nationalized.¹²⁵⁴ Currently, the Cuban banking system is severely limited, unable to provide substantial credit to the private sector or offer trade finance to support international commerce.¹²⁵⁵ Some Cubans have acknowledged that their banking system is far from international standards and in need of reforms.¹²⁵⁶ Some of these needed reforms include measures to increase lending opportunities, as well as actions to separate state functions from the business functions of banks.¹²⁵⁷

The *Banco Central de Cuba* (BCC), Cuba's central bank, began operating on May 28, 1997. Before the creation of the BCC, the *Banco Nacional de Cuba* (BNC) was the central state bank. On February 23, 1998, Decree-Law 181 clarified the legal relationship between the BCC and the BNC.¹²⁵⁸ It stated that the BCC would operate as a traditional central bank, executing monetary policy and acting as a banking industry supervisor, while the BNC would support the economy more broadly by issuing bank guarantees, offering official export credit insurance, and managing the national debt.¹²⁵⁹ However, industry representatives report that the BNC does not engage in those commercial transactions in practice. Instead, it focuses on obtaining credit from foreign banks and financial institutions.¹²⁶⁰

Cuba also maintains a number of financial institutions to address particular financial service needs throughout Cuba. The *Banco Popular de Ahorro* (People's Savings Bank), founded in 1978, provides full individual and corporate banking services to about 40 percent of Cubans throughout Cuba, with the exception of Havana. The *Banco Metropolitano*, founded in 1996, is the principal retail bank in Havana; it primarily serves the diplomatic corps and foreign firms

¹²⁵¹ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015; Shelton, "The Historical Development of the Cuban Banking System," 1994, 1–2.

¹²⁵² Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁵³ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁵⁴ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁵⁵ Feinberg and Miller, written submission to the USITC, June 19, 2015, 3.

¹²⁵⁶ Cuban academic, interview by USITC staff, Havana, June 15, 2015; Brookings, "Rethinking Cuba" event transcript, Washington, DC, June 2, 2015, 13 (Juan Triana Cordoví, University of Havana).

¹²⁵⁷ Cuban academic, interview by USITC staff, Havana, June 15, 2015; Brookings, "Rethinking Cuba" event transcript, Washington, DC, June 2, 2015, 13 (Juan Triana Cordoví, University of Havana).

¹²⁵⁸ Decree-Law No. 172, <http://www.bc.gob.cu/English/Laws/Law172en.pdf>; Decree-Law No. 181, http://www.cubagob.cu/des_eco/banco/espanol/regulaciones_bancarias/bcc-i-3.htm.

¹²⁵⁹ Central Bank of Cuba, http://www.bc.gob.cu/English/commercial_banks.asp#BIVC (accessed August 3, 2015); Capablanca, "Cuban Banking and Financial Institutions," April 22, 2015.

¹²⁶⁰ Correa Riera, "Moving Capital In and Out of Cuba," October 9, 2015; Capablanca, "Cuban Banking and Financial Institutions," April 22, 2015.

operating in Cuba.¹²⁶¹ Another full-service retail bank, the *Banco de Crédito y Comercio*, founded in 1997, is reported to operate a large, automated network of ATMs and provides many of its services via remote, electronic banking services.¹²⁶²

Cuba maintains no formal barriers to the entry of foreign banks. In particular, Article 10 of Cuban Decree-Law 173 theoretically allows for the establishment of non-state banks.¹²⁶³ In practice, however, this market has been largely closed to foreign providers. Currently there is only one foreign bank operating in Cuba—the *Banco Industrial de Venezuela-Cuba*—although industry representatives report that the bank is inactive.¹²⁶⁴ Additionally, there are nine foreign banks with representative offices in Cuba (table 7.4) and two foreign non-bank financial companies.¹²⁶⁵ The activities of all of these foreign institutions are limited, as the financial services industry in Cuba is almost entirely state run¹²⁶⁶ and no private-sector capital markets exist.¹²⁶⁷ The foreign non-bank financial companies serve to coordinate and fund international trade activities with Europe.¹²⁶⁸ Havin Bank Ltd. is a UK bank based in London but owned by the Cuban government.¹²⁶⁹ Many Cuban bankers gain experience in international banking at the London location. As a result of this institution and the training it provides to Cuban bankers, Cuba maintains a cadre of highly skilled professionals to run its banking system.¹²⁷⁰

Table 7.4: Foreign banks in Cuba

Bank	Nationality
Havin Bank Ltd.	United Kingdom
National Bank of Canada	Canada
Banco Bilbao Vizcaya Argentaria (BBVA)	Spain
Banco Sabadell	Spain
Fransabank	Lebanon
Republic Bank Ltd.	Trinidad and Tobago
BPCE International et Outre-Mer	France
Scotiabank	Canada
Bankia	Spain

Source: Central Bank of Cuba, http://www.bc.gob.cu/English/foreign_banks.asp (accessed May 22, 2015); Capablanca, “Cuban Banking and Financial Institutions,” April 22, 2015.

¹²⁶¹ Central Bank of Cuba, http://www.bc.gob.cu/English/foreign_banks.asp (accessed November 24, 2015).

¹²⁶² Central Bank of Cuba, http://www.bc.gob.cu/English/commercial_banks.asp#BIVC (accessed November 24, 2015).

¹²⁶³ Promulgated May 28, 1997; www.bc.gob.cu/English/Laws/Law173.pdf.

¹²⁶⁴ Industry representative, interview by USITC staff, Miami, June 17, 2015; Correa Riera, “Moving Capital In and Out of Cuba,” October 9, 2015.

¹²⁶⁵ Central Bank of Cuba, http://www.bc.gob.cu/English/foreign_banks.asp (accessed May 22, 2015); Central Bank of Cuba, http://www.be.gob.cu/English/foreign_financials.asp (accessed May 22, 2015).

¹²⁶⁶ Since the Central Bank is the majority shareholder and regulator of most Cuban banks, public information on bank balance sheets and banking activities is not readily available. Capablanca, “Cuban Banking and Financial Institutions,” April 22, 2015.

¹²⁶⁷ A capital market is a market where buyers and sellers of financial instruments (like stocks and bonds) can engage in trades. BTI, “Cuba Country Report,” 2014.

¹²⁶⁸ Central Bank of Cuba, http://www.bc.gob.cu/English/foreign_financials.asp (accessed November 24, 2015).

¹²⁶⁹ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁷⁰ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

While increasing numbers of Cubans have savings accounts at Cuban banks,¹²⁷¹ some industry representatives state that devaluation concerns associated with Cuba's dual currency and the currency's expected unification still induce many Cubans to avoid depository institutions.¹²⁷² Industry representatives report that although Cuba's ATM network is small, it is used with some frequency by Cubans to obtain government cash payouts.¹²⁷³ Industry representatives express skepticism about the sophistication of Internet banking in Cuba, citing Cuba's relatively undeveloped telecommunications infrastructure.¹²⁷⁴ It has been suggested, however, that Cuba has the potential to move to more modern types of financial activities, such as electronic and mobile payment methods.¹²⁷⁵

For foreign firms considering doing business in Cuba, industry representatives identify Cuba's liquidity management system as a potential barrier. The Cuban Central Bank manages liquidity, and can affect a business's ability to access cash for day-to-day operations by imposing short-term restrictions on access to a business's account.¹²⁷⁶ This occurred during a liquidity crisis during the 2008–09 recession, leading to the freezing of an estimated \$1 billion of foreign firms' hard currency in Cuban banks in 2009.¹²⁷⁷ However, industry representatives report that generally businesses have access to the cash needed for operational purposes and can repatriate profits.¹²⁷⁸

Effects of the Removal of U.S. Restrictions

Because the financial services industry in Cuba is largely state run, there is limited potential for U.S. firms to provide commercial and retail banking services even if current U.S. restrictions are lifted. It has been suggested that Cuba may allow foreign banks to enter the market through joint ventures with Cuban state-owned banks in the event that U.S. restrictions are removed.¹²⁷⁹ Reportedly, however, U.S. banks are not considering opening branches in Cuba or engaging in financing.¹²⁸⁰

Growth is possible in the short term in credit card payment processing. Before the executive order issued June 1, 2015, U.S. payment processors maintained a global block on all transactions emanating from Cuba for credit cards issued by U.S. banks.¹²⁸¹ Following the executive order, payment processors that wish to process Cuban payments replaced the global

¹²⁷¹ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁷² Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

¹²⁷³ ATMs are found commonly in the larger cities, although an exact number of ATMs is not readily available.

Industry representative, interview by USITC staff, New York, October 8, 2015; industry representative, telephone interview by USITC staff, November 24, 2015.

¹²⁷⁴ Industry representatives, interviews by USITC staff, Miami, June 16 and 17, 2015; presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁷⁵ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

¹²⁷⁶ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁷⁷ Luis, "Crisis Management of Cuban International Liquidity," 2010.

¹²⁷⁸ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁷⁹ Industry representative, telephone interview by USITC staff, November 24, 2015.

¹²⁸⁰ Lincoff, "Three Reasons Why U.S. Banks," March 13, 2015.

¹²⁸¹ Industry representative, interview by USITC staff, Washington, DC, June 10, 2015.

block with individual bank blocks, which banks could request to have removed. However, so far few banks have requested this, due to ongoing U.S. restrictions.¹²⁸² Nonetheless, if U.S. restrictions on trade with and travel to Cuba are lifted and those activities begin to occur with higher frequency, U.S. firms and travelers will likely begin to demand financial services, and U.S. financial services firms may increasingly engage in Cuba to provide them.¹²⁸³

Currently there are a reported 10,000 point-of-sale terminals for credit cards in Cuba. However, significant investment in expanding Cuba's terminal base will be required for its credit card network to operate effectively.¹²⁸⁴ Point-of-sale terminals must also connect to a network to transmit information associated with purchases, and this will require significant investment in the Internet infrastructure in Cuba.¹²⁸⁵ On November 19, 2015, MasterCard and Stonegate Bank, which provides banking services for the Cuban Embassy, announced that a MasterCard issued by Stonegate would be the first U.S.-issued debit card capable of completing a transaction in Cuba.¹²⁸⁶

Trade finance reportedly has potential for growth in the longer term.¹²⁸⁷ If U.S. restrictions on credit financing are removed for all U.S. exports, U.S. financial service firms could export the full range of credit-based trade finance products. U.S. agricultural companies have repeatedly reported that the inability of U.S. firms to provide credit for U.S. exports has resulted in lost market share in Cuba.¹²⁸⁸ The U.S. Grains Council testified that the removal of the restrictions on financing exports to Cuba will result in larger sales of many types of U.S. goods,¹²⁸⁹ but concerns about the government's lack of creditworthiness remain.¹²⁹⁰ Since 2011, Cuba has restructured its debt with Chinese, Japanese, Mexican, and Russian creditors, enabling large portions of its debt to be written off and allowing Cuba to gain a longer repayment schedule on the remainder.¹²⁹¹ However, Cuba has recently made efforts to address defaulted loans, a signal that the country wishes to return to international debt markets.¹²⁹² Additionally, Moody's Investors Service reports that a further loosening of U.S. restrictions may have a positive impact on the country's credit rating.¹²⁹³

¹²⁸² Industry representative, interview by USITC staff, Washington, DC, June 10, 2015.

¹²⁸³ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015; industry representative, telephone interview by USITC staff, November 24, 2015.

¹²⁸⁴ A point-of-sale terminal is the machine where the credit card is swiped. Stonegate Bank, "Stonegate Bank and MasterCard," November 19, 2015.

¹²⁸⁵ Presenter, Cuba Finance, Infrastructure and Investment Summit, New York, October 8, 2015.

¹²⁸⁶ Stonegate Bank, "Stonegate Bank and MasterCard," November 19, 2015; industry representative, telephone interview by USITC staff, November 24, 2015.

¹²⁸⁷ Provision of trade finance cross-border constitutes a services trade flow— for example, when a U.S. bank offers credit to a foreign importer.

¹²⁸⁸ USITC, hearing transcript, June 2, 2015, 27 (testimony of Bill Christ, U.S. Grains Council).

¹²⁸⁹ *Ibid.*

¹²⁹⁰ Industry representative, interview by USITC staff, Washington, DC, July 29, 2015.

¹²⁹¹ Strohecker, "Cuba Debt Holder Hangs on," May 18, 2015.

¹²⁹² *Ibid.*

¹²⁹³ Moody's, "Moody's Changes Cuba's Outlook to Positive," December 10, 2015.

In the longer term, investment banking may present another opportunity to U.S. financial services providers. Compared to the retail banking sector, the investment banking sector in Cuba is relatively undeveloped.¹²⁹⁴ However, there may be significant investment opportunities for U.S. firms in Cuba if all U.S. restrictions are removed and Cuba updates and modernizes its physical and technological infrastructure.¹²⁹⁵ Investment banking, likely in the form of joint ventures with Cuban banks, could expand opportunities for U.S. firms to participate in this sector.¹²⁹⁶

Overall, industry observers anticipate that any developments in the financial services sector are likely to depend heavily on the willingness of the Cuban government to allow foreign banks to enter its market.¹²⁹⁷ More generally, it has been noted that even with the removal of the U.S. restrictions, much will have to change in Cuba for a deep commercial relationship to develop. This includes the development of general policies, such as a uniform commercial code, which would serve as a basis for broad private sector growth, increasing the demand for retail and commercial banking services. The experience of the financial sector after the removal of sanctions in Burma could help illustrate how developments in Cuba could unfold (box 7.7).¹²⁹⁸

¹²⁹⁴ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁹⁵ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁹⁶ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015.

¹²⁹⁷ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 17, 2015; industry representative, telephone interview by USITC staff, November 24, 2015.

¹²⁹⁸ USITC, hearing transcript, June 2, 2015, 86 (testimony of Devry Boughner Vorwerk, Cargill, Inc.).

Box 7.7: Possible Lessons from Burma

Before U.S. sanctions ended on May 17, 2012, Burma had no Western financial services.^a Previously, Burma was an entirely cash-based economy.^b Since the lifting of the embargo, foreign financial firms, particularly payment processors, have aggressively expanded into Burma. Starting from a base of zero, Visa and MasterCard, along with the Chinese card payment processor China UnionPay, have worked to expand the set of merchants with point-of-sale terminals, and banks have begun to introduce ATMs.^c Within a few months, just under 2,500 payment machines and over 450 ATMs were set up. However, compared with those of Burma's neighbors, these seemingly large numbers are relatively small.^d For instance, Thailand, which is roughly similar in size to Burma, had nearly 48,000 ATMs and over 260,000 merchants accepting credit cards.^e Today, although still comparatively underserved, Burma has over 1,000 ATMs, with a 50 percent growth in the rate of installation from 2013 to 2014.^f

In Burma, the adoption of automated banking and credit cards has been driven in part by the demand for those services from Western visitors and firms locating in Burma, along with domestic reform efforts aiming to increase efficiency and lower costs. However, deployment of the required technologies has been hampered by a poor telecommunications network and distrust of financial institutions by the local population.^g An observer states that if Burma does provide a lesson for U.S. financial services providers, it is that engaging in a previously embargoed nation unfamiliar with Western-style banking requires patience and perseverance. But as infrastructure improves and Western consumers and firms begin to act in the economy, according to this observer, demand for financial services will follow, with large growth potential.^h

^a Szep, "Myanmar Banking's New 'Wow' Factor," May 30, 2012.

^b Vallikappen, "Sacks of Cash in Myanmar," October 21, 2013.

^c KPMG, *The Banking and Financial Services Sector in Myanmar*, November 2013.

^d Vallikappen, "Sacks of Cash in Myanmar," October 21, 2013.

^e Ibid.

^f Gordon, "Myanmar: Biggest Growth Market," December 1, 2015.

^g Vallikappen, "Sacks of Cash in Myanmar," October 21, 2013.

^h Industry representative, interview by USITC staff, Washington, DC, June 10, 2015.

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Chapter 8

Modeling the Effects of U.S. Restrictions and Cuban Barriers on U.S. Exports to Cuba

In the request letter of December 2014, the Senate Committee on Finance (the Committee) requested a quantitative estimate of U.S. exports of goods and services to Cuba in sectors that are likely to be significantly affected in the event that statutory, regulatory, and other trade restrictions on U.S. exports of goods and services, as well as those on travel to Cuba by U.S. citizens, are lifted. In August 2015, the Committee also requested an estimate of the aggregate effects of Cuban tariff and nontariff measures on U.S. exports to Cuba. Both estimates were to be supplied by the Commission to the extent feasible. In response to these requests, this chapter presents a quantitative analysis of U.S. exports to Cuba under two scenarios. The first scenario estimates U.S. exports in certain sectors in the event that U.S. statutory, regulatory, and other restrictions on trade, as well as restrictions on U.S. citizen travel to Cuba, are removed. The second scenario estimates the aggregate effect on U.S. exports in those sectors in the event that all U.S. restrictions are removed and Cuban import barriers are lowered as well.

Data and Challenges

The data required for economic modeling were gathered from various sources and concurred. A number of methods were used to check data or provide best estimates to make the data internationally comparable. The analysis here is limited to 9 agricultural sectors but covers all manufacturing sectors.¹²⁹⁹ Due to a lack of available data, a number of agricultural goods sectors, the entire mining sector, and the services sectors could not be included in the estimates.

Obtaining Cuban data presented a particular set of difficulties. Cuban data by industry, as presented in international trade and output databases, are incomplete. Valuing Cuban production is challenging because Cuba is not a market economy and goods are often not valued using market prices. Data from multiple sources, including Cuban sources and the United Nations (UN), were cross-checked and analyzed by industry and Cuba experts in order to

¹²⁹⁹ Selected agricultural sectors include wheat, rice, corn, pulses, soybeans, other oilseeds, beef, pork, and poultry. See appendix table I.3 for a description of the manufacturing sectors.

ensure the quality and reliability of data used in the analysis.¹³⁰⁰ A detailed description of the data used to produce the estimates presented in this chapter is given in appendix I.

To estimate the model's parameters, bilateral trade and production data for a large number of countries were used. Much of the data came from the UN Statistics Division (UNSD), the UN Industrial Development Organization (UNIDO), and the Food and Agriculture Organization of the UN (FAO). Trade and production data were concorded to the same industrial classification system to construct a large and consistent trade and production dataset. Industry-level aggregation was necessary because of data limitations. The base year for the analysis uses the average of data from 2010–13 in order to maximize data availability and minimize fluctuations over time. Note that the sector discussions in chapters 5 and 6 may use industry estimates based on 2014 trade data, which in some cases can be quite different from the 2010–13 trade data.¹³⁰¹

Analysis of the agricultural sector includes nine sectors classified according to the FAO's industrial classifications. These sectors are those in which Cuba has significant imports and in which an increase in U.S. exports to Cuba would be likely if U.S. restrictions were removed. Although FAO reports some data for additional industries, the above-mentioned limited availability of data constrained the number of agricultural industries that could be included in the model.¹³⁰²

Manufacturing industries analyzed in this chapter represent all of those classified in the International Standard Industrial Classification of All Economic Activities (ISIC) at the 2-digit level, meaning that they were broken down into very broad categories. This high level of aggregation (the merging of categories) reflects the lack of availability of production or trade data at more disaggregated levels. Thus, the results presented here do not correspond to the more disaggregated sectors discussed in chapter 6 but are meant to provide a broader description of potential U.S. exports of manufactured goods to Cuba. Further, because the ISIC industry 15 ("food and beverages") includes some products that are also included in the nine agricultural sectors analyzed, including fresh and frozen meat products, total U.S. agricultural exports (tables 8.3 and 8.5) cannot accurately be summed with the total U.S. manufactured goods exports (tables 8.4 and 8.6) without excluding some products.

In addition, quantitative analysis of the services and mining sectors could not be performed because the data needed to estimate the model were not available. Specifically, no data are available on bilateral trade and output in services and mining industries for a large number of the countries needed for this study.

¹³⁰⁰ Some Cuban data reported in pesos were converted to dollars, using the appropriate exchange rate (Cuban peso or convertible peso to USD), and used to cross-check the data from the UN sources.

¹³⁰¹ The choice of the base year does not affect estimated U.S. exports to Cuba without restrictions presented throughout this chapter, beyond statistical discrepancy.

¹³⁰² The decision on which agricultural industries to include in the analysis was made in consultation with industry experts at the Commission.

The estimates generated by the model necessarily make a number of assumptions that may not hold in the case of Cuba. The economic model assumes a market-based economy where trade responds to changes in price. This assumption is necessary to quantify the effects of U.S. restrictions and is common to all economic models used for this type of estimation. However, as discussed in chapters 2 and 4, a number of other factors play an important role in Cuban decisions about trade, including state control of trade and import budgets, the state's preference for using credit, and limits on foreign currency. Political and security considerations also play an important role in Cuban decisions about what products are purchased and from which trading partner. For example, if the U.S. share of Cuba's imports of certain products surpasses some level, Cuba could decide that sourcing so much of its imports of those goods from a single country threatens its national security.¹³⁰³ These non-price-based decisions have typically limited Cuban imports of U.S. goods rather than increased them. Therefore, the estimates of U.S. exports to Cuba provided by the model are likely to be an upper bound on potential U.S. exports to Cuba.¹³⁰⁴

The task set for this study—estimating how the removal of U.S. restrictions on trade with and travel to Cuba would affect certain U.S. exports—also presents a number of methodological challenges. These challenges prevent the use of computable general equilibrium (CGE) models, such as that produced by Global Trade Analysis Project (GTAP), as well as partial equilibrium (PE) models.¹³⁰⁵

Previous Commission studies have used basic gravity models, which use distance, language differences, and other factors that affect trade between countries, to generate estimates.¹³⁰⁶ However, the basic gravity model is not well suited for the current analysis because it does not account for key general equilibrium effects such as trade diversion. Ignoring trade diversion would overestimate possible U.S. gains in trade, because it would assume that U.S. exporters would not face any foreign competition in Cuba. In reality, there would be competition from producers in many other countries, particularly Canada, Spain, Brazil, and China.

Methodology

As noted in chapter 3, even in sectors where U.S. exports to Cuba are allowed, the U.S. restrictions raise trade costs—sometimes to the extent of choking off trade entirely. Thus,

¹³⁰³ Presenter, Caribbean-Central American Action 39th Annual Conference, Miami, November 16, 2015; Cuban economist, interview by USITC staff, Washington, DC, December 9, 2015. See chapter 4.

¹³⁰⁴ See box 8.2 for a comparison of USITC modeling results with other estimates of potential U.S. exports to Cuba.

¹³⁰⁵ Existing U.S. exports to Cuba in many sectors are zero. Zero initial trade means that trade estimates cannot be obtained in a PE model by multiplying current trade by change in tariff and trade elasticity. The lack of tariff equivalents also prevents PE and CGE models from being used, because they require the use of such measures for policy changes (in this case, removal of restrictions). Finally, Cuban data are incomplete (see data discussion above); as a result, an input-output table, required to use the GTAP model, is not available.

¹³⁰⁶ The approach to using the gravity model in previous Commission studies has been to use the gravity model to estimate the key parameters needed and then to enter the parameters into a CGE simulation to produce a counterfactual. Although this method can be used to estimate trade costs in many situations, due to zero U.S. trade with Cuba in many sectors and the lack of Cuban input-output data, this method could not be used here.

removing U.S. restrictions on trade with Cuba would reduce trade costs, and the total value of U.S. exports would increase.¹³⁰⁷ Although there are currently many sectors with little to no U.S. exports to Cuba, trade costs in those and other sectors, absent U.S. restrictions, can be estimated using an extension of a gravity model (a widely used type of economic model). These trade costs are then used to calculate the potential value of U.S. exports to Cuba in selected sectors.

To estimate U.S. exports in selected sectors to Cuba, an enhanced gravity model that incorporates general equilibrium features is used.¹³⁰⁸ Like basic gravity models, this model accounts for the effects of impediments to trade such as distance between countries and income differences. Additionally, the enhanced features of the model allow productivity and wages to play a role in determining trade. General equilibrium features of the model ensure that supply is equal to demand in every market. It explicitly models changes in the price of goods due to changes in competition from various suppliers.¹³⁰⁹ These features allow the model to estimate the reversal of trade diversion that would occur when U.S. restrictions are removed.¹³¹⁰

There are several important assumptions necessarily underlying the results presented in this chapter. The model assumes that productivity and wages in Cuba do not change when U.S. restrictions are removed or Cuban import barriers are reduced.¹³¹¹ As discussed above, the model also assumes that purchasing decisions are based on economic considerations, such as price and quality. But since, as noted, some purchasing decisions in Cuba are made for political reasons, the best supplier in terms of cost and quality does not necessarily get the contract. For example, as suggested above, Cuban security considerations may keep U.S. agricultural producers from capturing a share of Cuban imports that policymakers determine is too high.

¹³⁰⁷ International trade costs include all costs of trading goods internationally. Trade cost, in this context, is defined as the difference between the cost of a good at its production source and its cost at the destination market. The components of trade costs are discussed in the methodology section below.

¹³⁰⁸ The model is based on Eaton and Kortum, "Technology, Geography, and Trade," 2002, 1741–79. Their model has been used in many studies since its introduction. For a review of recent literature, see Eaton and Kortum, "Putting Ricardo to Work," 2014, 65–90; Costinot and Rodríguez-Clare, "Trade Theory with Numbers: Quantifying the Consequences," 2014; and appendix I of this study.

¹³⁰⁹ The general equilibrium conditions ensure that countries cannot spend more than their total income on imports. Therefore, if Cuba were to import more from the United States, it would need to import less from other countries as, in the model estimates, Cuba's income would not increase significantly when U.S. restrictions are removed. In addition, increased U.S. exports to Cuba would push down prices in Cuba, thus driving out some producers from other countries that are not as competitive as the U.S. producers.

¹³¹⁰ The removal of U.S. restrictions would reverse the trade diversion that occurred when restrictions were imposed. Without the U.S. restriction, U.S. firms would be able to compete in Cuba on a level playing field with firms from other countries. Therefore, Cuban consumers would be able to buy from the most efficient suppliers. The entry of U.S. firms into Cuban market would make competition there more fierce and result in lower product prices in the Cuban market.

¹³¹¹ While the monetary value of the wage does not change, the purchasing power of the wage may change if the prices of products change.

Similarly, security considerations may prevent Cuba from buying U.S. communications equipment.¹³¹²

The quantitative analysis proceeds in multiple steps. The first step estimates trade costs in the base year. Trade costs are estimated by sector for bilateral trade between all countries in the model, including Cuba and the United States. The second step estimates trade costs between the United States and Cuba in the absence of U.S. restrictions. The third step estimates the value of U.S. exports to Cuba in the selected sectors, given the trade costs estimated in the previous step. Finally, the model estimates the costs of trade between the United States and Cuba in the absence of U.S. restrictions combined with lower Cuban trade barriers, and it estimates U.S. exports to Cuba given these further reduced trade costs.

Trade costs include all costs of trading goods internationally. They include costs of freight, buying insurance, paying tariffs, translating documents (if needed), complying with regulations of the importing country, financing trade, servicing goods at long distance, and other expenses. Trade costs depend on the distance between countries, commonality of language, trade agreements (if any), trade restrictions, level of corruption, state of infrastructure, and other factors.

Trade costs are not directly observed, but they can be estimated by applying the gravity model to trade and production data. The gravity model looks at international trade flows, domestic trade (purchases from domestic producers), and spending in each industry. Based on this information, the model is able to infer the magnitude of the aggregate impediments to international trade (“trade costs”) relative to domestic trade. While components of trade costs (such as cost of credit, translation, or corruption) cannot be broken down, additional information can often be used to interpret differences in trade costs across countries and industries. For example, relatively low trade costs for Vietnamese exports of rice to Cuba likely reflect the special terms of credit that Vietnam provides to Cuba for purchases of its rice.¹³¹³

Trade costs are closely related to the observable country characteristics, such as the distance between countries, commonality of language, and others.¹³¹⁴ Trade costs between the United States and Cuba in the absence of U.S. restrictions can be estimated as the trade costs between the United States and Cuba that are expected to prevail in the absence of U.S. restrictions, based on their distance, difference in language, and other observable determinants of trade.

The trade costs for U.S. exports to Cuba for the two scenarios are estimated as ad valorem trade costs and are measured relative to Cuba’s domestic trade costs (table 8.1).¹³¹⁵ Base year

¹³¹² See chapter 6 for details.

¹³¹³ See appendix I for estimated trade costs across sectors and countries.

¹³¹⁴ For example, greater distance increases trade costs because freight, insurance, marketing, and post-sale service are all more expensive when distance is greater. See the summary of the literature in Head and Mayer, “Gravity Equations: Workhorse, Toolkit, and Cookbook,” 2014.

¹³¹⁵ Domestic trade costs include costs of moving goods within a country. Because international trade costs are measured relative to domestic trade costs, international trade costs can be negative if they are lower than

trade costs are an average based on trade and production values for 2010–13 and represent total trade costs under the current restrictions. Base year trade costs cannot be estimated for sectors without trade in the base year, such as tobacco, leather, and paper products. While they are not estimated, trade costs in such sectors are evidently high enough to prevent U.S. exports.

If U.S. restrictions are removed, large reductions in trade costs would occur in many sectors, particularly manufactured goods (such as electrical machinery, rubber and plastic products, and fabricated metal products). The changes in trade costs are less significant for most agricultural products. This is generally consistent with the fact that many of the U.S. restrictions on agricultural products have already been relaxed under Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA).

In some agricultural industries, however, base-year trade costs are high. For example, trade costs are high for rice—and there are very little U.S. exports of rice to Cuba in the base year.¹³¹⁶ The high base-year trade costs are related to many remaining U.S. restrictions. For example, remaining restrictions prohibit financing and require payments in advance in cash. In addition, U.S. exporters do not receive export marketing assistance, technical trade assistance, or credit guarantees.¹³¹⁷

Uncertainty regarding trading conditions is also a significant component of trade costs. Trade involves establishing lasting relationships between exporters and importers. U.S. restrictions introduce a large element of uncertainty into current U.S.-Cuba trade, which adds to base-year trade costs. For these reasons, even industries in which U.S. exports to Cuba exist in the base year would see declines in trade costs if U.S. restrictions are completely removed.

Most U.S. manufacturing industries would see large reductions in trade costs if U.S. restrictions are removed. Exports of most manufactured products are prohibited or highly restricted. Even in the industries where U.S. exports to Cuba are possible, such as in medical instruments, many restrictions remain in place. In addition, sales of many manufactured goods, especially machinery and equipment, require travel between Cuba and the United States (which is restricted) for marketing, training, and post-sale service. Reliability of supply of parts and post-sale service are also important, so uncertainty (as mentioned earlier) is a significant barrier to trade.

domestic trade costs. Appendix I provides a more detailed discussion of trade costs. Ad valorem cost is calculated as a percentage of the value of the good, rather than being applied on a per-unit or other basis.

¹³¹⁶ There have been very limited U.S. exports of rice to Cuba since 2008, and very limited to no U.S. exports of beef to Cuba in the period covered by this report, 2005–15. There have been no U.S. exports of other oilseeds to Cuba in the 2010–13 period. See chapter 5 for further information on trade in these sectors.

¹³¹⁷ Chapter 3 provides a more detailed description of U.S. restrictions. Some of the restrictions that existed in the years used to calculate the base year (2010–13) have since been relaxed.

Table 8.1: U.S.-Cuba trade costs as tariff equivalents

	Base year	No U.S. restrictions (percent)	No U.S. restrictions and lower Cuban barriers
Agricultural goods			
Wheat	-28.9	-50.9	-55.6
Rice	455.2	72.0	55.6
Corn	62.1	50.0	35.7
Pulses	126.5	95.0	76.4
Other oilseeds ^a	^(b)	210.3	180.8
Soybeans	-37.3	-41.0	-46.6
Beef	267.5	119.0	98.2
Poultry	84.9	66.5	50.6
Pork	160.9	134.8	112.4
Manufactured goods^c			
Food products and beverages	157.4	140.0	128.3
Tobacco products	^(b)	146.0	122.6
Textiles	485.5	232.8	128.7
Wearing apparel; dressing and dyeing of fur	583.3	377.8	332.3
Leather, handbags, footwear	^(b)	269.6	116.0
Wood and wood products	279.4	194.3	130.1
Paper and paper products	^(b)	148.4	124.7
Publishing, printing, and reproduction of recorded media	702.8	271.8	196.3
Coke, refined petroleum products, and nuclear fuel	^(b)	83.2	65.8
Chemicals and chemical products	407.3	201.6	105.3
Rubber and plastics products	718.8	255.6	162.6
Other non-metallic mineral products	^(b)	252.5	168.6
Basic metals	^(b)	186.0	129.2
Fabricated metal products	695.7	243.9	145.6
Other machinery and equipment	560.7	267.1	130.7
Office, accounting and computing machinery	^(b)	224.5	152.7
Electrical machinery and apparatus	751.5	234.7	127.3
Radio, television and communication equipment	439.1	231.0	145.0
Medical, precision and optical instruments, watches	470.5	234.3	138.9
Motor vehicles, trailers, and semi-trailers	510.3	208.7	167.2
Other transport equipment	594.8	268.5	161.0
Furniture; other manufacturing	501.0	350.8	307.9

Source: USITC estimates.

^a "Other oilseeds" includes copra, cottonseed, palm kernel, peanut, rapeseed, and sunflower seed.

^b Lack of trade in base year (2010-13 average) precludes estimates of base year trade costs.

^c See table I.3 for ISIC sector descriptions.

For the second scenario (measuring the aggregate effects of the removal of U.S. restrictions and the lowering of Cuban trade barriers), Cuban barriers are lowered to the average level for developing countries.¹³¹⁸ The resulting trade costs are shown in the last column of table 8.1. In

¹³¹⁸ The calculation of the average importer-specific trade cost is based on rankings of the trade costs of developing countries used in the model. See appendix I for a more detailed discussion.

agricultural goods, trade costs for U.S. exports to Cuba fall most significantly in other oilseeds, rice, and beef.¹³¹⁹ In manufactured goods, the largest additional reductions, compared to the cost savings for removing U.S. restrictions, are in other machinery and equipment, other transport equipment, and chemicals and chemical products.

The full removal of U.S. restrictions would include the lifting of U.S. restrictions on tourism, which is anticipated to generate additional Cuban spending on U.S. goods. As requested by the Committee, this model also incorporates some of the effects of increased tourism in Cuba on demand for U.S. production (box 8.1).

A technical discussion of the methodology, the data used in the model, and sensitivity analyses are described in further detail in appendix I.

Box 8.1: Modeling the Effects of Increased Tourism

In the event that all U.S. restrictions on trade with and travel to Cuba were removed, U.S. tourist travel to Cuba is expected to increase and, with it, Cuban spending on U.S. goods. Although spending by U.S. tourists in Cuba would be considered a U.S. import from Cuba, some of that spending in Cuba would be on goods originally imported from the United States. Indeed, any increase in Cuban tourism, regardless of where the added tourists are coming from, would result in additional U.S. exports to Cuba.

Romeau (2008) uses a gravity model to estimate that 2 million U.S. tourists per year would visit Cuba if U.S. restrictions were removed (see also chapter 7).^a These additional tourists are expected to spend on average about 4.5 days per visit and \$55 per day per person on food items.^b Therefore, the added tourists are expected to generate approximately \$495 million of extra spending on food items per year.^c This extra spending is included in the model estimation in the agriculture sectors as well as the manufactured food and beverage sectors. The amount of additional U.S. exports in each industry—including additional U.S. exports due to increased tourism, calculated using the estimated U.S. market shares in each sector—is presented in tables 8.3–8.6.

^a Romeau, “Vacation Over,” 2008.

^b USITC estimates; Peters, “International Tourism: The New Engine,” 2002; Robyn et al., “The Impact on the U.S. Economy of Lifting Restrictions,” 2002; Rosson, “Estimated Agricultural Economic Impacts,” 2003; Statistics Canada, *Travel by Canadians to Foreign Countries, Top 15 Countries Visited, 2013*; Lonely Planet, “Cuba: Money and Costs” (accessed December 16, 2015).

^c A large part of spending by tourists is on hotel services, which are not part of the quantitative modeling in this report. A portion of tourists’ spending may go toward non-food manufactured goods. Due to the lack of data on this spending, demand by tourists for non-food manufactured goods is not reflected in the model results.

Estimates of U.S. Exports to Cuba

The analysis estimates that if U.S. restrictions on U.S. exports to Cuba were lifted, U.S. exports to Cuba of the selected agricultural and manufactured products would increase to approximately \$1.8 billion annually (table 8.2).¹³²⁰ U.S. exports of manufactured goods would increase by 444 percent, while U.S. exports of selected agricultural products would increase by

¹³¹⁹ These are the industries in which Cuban restrictions on imports are the highest (see table I.8).

¹³²⁰ Total exports of agricultural products are calculated as the sum of the nine industries analyzed in this report (see table 8.2).

155 percent from their 2010–13 levels. Exports of manufactured goods would increase more than those of agricultural products because U.S. restrictions generally impose much higher trade costs on manufactured goods.¹³²¹ The results also indicate that in the absence of U.S. restrictions, there would be substantial new trade in many industries in which there is little to no trade currently, such as non-food manufactured goods. According to the model results, most of this new trade would be the result of trade diversion, increasing U.S. exports to Cuba while reducing exports to Cuba from its other trading partners.

Table 8.2: Estimated U.S. exports to Cuba in selected sectors

	Base year	Estimated annual value	
	(2010–13 average)	(medium term)	
	Million dollars		Percent change ^a
U.S. restrictions on trade with Cuba are removed			
Selected U.S. agricultural exports	312.8	797.1	154.8
U.S. manufactured exports	225.0	1,222.7	443.5
U.S. agricultural and manufactured exports ^b	400.8	1,790.2	346.7
U.S. restrictions are removed and Cuban import barriers are lowered			
Selected U.S. agricultural exports	312.8	886.2	183.3
U.S. manufactured exports	225.0	1,631.9	625.4
U.S. agricultural and manufactured exports ^b	400.8	2,232.3	457.0

Source: USITC estimates.

Note: The results include the effects of increased tourism in Cuba due to lifting of U.S. restrictions.

^a Calculations based on unrounded values.

^b Some food products have been unavoidably included in both agriculture and manufacturing industries. The total excludes overlapping products to avoid double-counting.

Further, if U.S. restrictions were removed and Cuban import barriers were reduced to those of the calculated average for developing countries, the model estimates that U.S. exports of selected agricultural and manufactured goods would increase by an additional \$442 million, to about \$2.2 billion.¹³²² U.S. exports of manufactured goods would increase by 625 percent, and U.S. exports of selected agricultural products would increase by 183 percent from their 2010–13 average levels. In sum, while U.S. exports to Cuba would increase further if Cuban tariff and nontariff barriers were decreased, the largest share of the effects on U.S. exports would come from the removal of U.S. restrictions on trade. The modeling results complement and tend to confirm the qualitative analysis in chapters 5 and 6, which discuss U.S. exports at a more disaggregated product level.

Trade estimates produced by the model are best interpreted as medium-term estimates, looking to a time approximately five years after the removal of restrictions. The medium term allows enough time for U.S. firms to learn about and enter the Cuban market, particularly for those sectors in which there are currently no U.S. exports to Cuba. Beyond the medium term, the removal of the U.S. restrictions would change some features of the Cuban economy assumed constant in our model, especially productivity, thus making the model results less

¹³²¹ Trade in many agricultural products has been permitted, subject to TSRA, as described in chapter 5.

¹³²² The methodology section and appendix I explain in greater detail how lower Cuban import barriers were estimated.

applicable. Modeling results suggest which selected U.S. sectors could capture a significant share of the Cuban market and which could only capture a small part. The results also show which countries' products would most likely be displaced by U.S. products.

The review of other recent studies that estimate the effects of the removal of U.S. restrictions on U.S. exports to Cuba is presented in box 8.2.

Box 8.2: Other Estimates of Potential U.S. Exports to Cuba

The quantitative analysis in the Peterson Institute study of U.S.-Cuba trade (Hufbauer and Kotschwar 2014) uses a gravity model to estimate potential U.S. exports to Cuba.^a This book does not provide a technical description of the model that was used, so it is not possible to provide an assessment of how their estimates were obtained. Relying on the short description of the model provided in the book, it seems that the study used a basic gravity model. The authors estimate that total U.S. exports of goods to Cuba in the absence of U.S. restrictions in 2010 and 2011 would have reached \$4.1 to \$4.3 billion, increasing from a base of \$370 and \$352 million, respectively. As shown in table 8.2, Commission estimates are lower. This is so because, compared to their methodology, the Commission model used in this study is able to account for the reversal of trade diversion (see appendix I), which results in more realistic estimates of the value of possible U.S. exports to Cuba.

A Texas A&M study by Rosson et al. (2010) models the removal of U.S. restrictions by applying the percentage changes in U.S. exports to Cuba estimated in the 2007 USITC study to 2009 base year values.^b Industries analyzed in Rosson et al.'s study include grains (rice, wheat, corn), dry milk and other dairy, poultry meats, processed food products, wood products (lumber), pork, beef and products, seafood products, soy complex, and other food and agricultural products. They state that in 2009, U.S. exports to Cuba were \$528 million and estimate that removal of U.S. restrictions would result in U.S. exports to Cuba increasing to \$893.2 million.

^a Hufbauer and Kotschwar, "Economic Normalization with Cuba," April 2014; USITC, hearing testimony, June 2, 2015 (testimony of Barbara Kotschwar, Peterson Institute).

^b Rosson, Adcock, and Manthei, "Estimated Economic Impacts," March 2010, 2.

Effects of the Removal of the U.S. Restrictions on U.S. Exports to Cuba

In the event that U.S. restrictions on trade with and travel to Cuba were removed, there would likely be substantial U.S. exports to Cuba in many industries that currently have little or no trade. Most of the new trade would be the result of the reversal of trade diversion from other countries. In other words, U.S. exports to Cuba would increase, while exports to Cuba from other countries and Cuban purchases from domestic producers would decline. As discussed above, the reductions in U.S. trade costs in the model result in corresponding increases in the value of U.S. exports.

Modeling results are reported in three different ways: as the value of U.S. exports to Cuba; as the share of U.S. exports in Cuban imports; and as the share of U.S. exports in total Cuban spending, including Cuban spending on domestic goods. The second and third categories—the import and market share estimates—are more informative and appropriate to examine than

the first category (the value of exports), as they are more consistent than a dollar value over time and less sensitive to macroeconomic fluctuations (such as growth and recessions).

Table 8.3 shows U.S. exports to Cuba in agricultural products in the event that restrictions are removed.¹³²³ The table compares values from the base year, which is the average of 2010–13 values, with the values estimated by the model.¹³²⁴ Of the U.S. export sectors examined, wheat would gain the most from the removal of U.S. restrictions. Wheat exports would increase by almost \$170 million, as U.S. wheat's share of Cuban imports and the Cuban market would grow from 6 percent to 58 percent. The gains in wheat are driven by moderately reduced trade costs (see table 8.1) and high U.S. productivity in wheat. Rice exports are also projected to increase substantially, growing from a negligible amount to a 32 percent share of the Cuban spending on rice. The large gains in rice are driven by a substantial reduction in trade costs. U.S. exports of corn and poultry would grow by substantial amounts as well.¹³²⁵ Overall, U.S. agricultural exports to Cuba in the selected sectors are estimated to rise from just under \$313 million in the base year to \$797 million, with corresponding large increases in their share of Cuban spending and their share of Cuban imports.¹³²⁶ The numbers presented in table 8.3 are broadly comparable with the estimates from industry experts presented in chapter 5.

The model estimates that total Cuban spending on agricultural products would not change substantially when U.S. restrictions are removed, in part because Cuban income levels do not change in the model.¹³²⁷ Hence, U.S. gains would come at the expense of Cuban domestic producers (when present) and other countries' exports to Cuba.

Figure 8.1 shows the Cuban market for the nine selected agricultural sectors with U.S. restrictions (left panel) and without them (right panel). In the base year, the United States accounts for 16 percent of the market, while Cuban producers account for 58 percent. Other major exporters of agricultural goods to Cuba include Vietnam (6 percent of the market), Brazil (5 percent), and Canada (4 percent). Without U.S. restrictions, the U.S. share of the Cuban market in these agricultural products is estimated to increase to 34 percent, while the shares of other producers would fall. For example, the share of Cuban producers would fall to 51 percent.

¹³²³ These industries represent the industrial classification of the Food and Agriculture Organization of the United Nations (FAO), although not all FAO industries are analyzed in this study. The focus is on industries in which Cuba has significant imports.

¹³²⁴ This chapter uses FAO's approach to measuring values of trade and output of beef and pork while chapter 5 uses a different approach (based on carcass weight or live cattle values). Therefore, base year trade values reported in tables 8.3 and 8.5 may be different from those reported in chapter 5.

¹³²⁵ According to the testimony of Terry Harris of Riceland Foods, U.S. share of Cuban imports could exceed 50 percent within five years of the removal of U.S. restrictions. USITC, hearing transcript, June 2, 2015, 30. That number is similar to the 45 percent estimated by the model and reported in table 8.3. See earlier in this chapter for a discussion of the reasons it may take up to five years for U.S. firms to take advantage of new opportunities in the Cuban market.

¹³²⁶ Note that the model estimates very high shares in Cuban imports for some U.S. agricultural products (last column of table 8.3). As mentioned earlier, such high shares may not be attainable because of Cuba's political and security concerns.

¹³²⁷ To be precise, Cuban income in nominal (monetary) terms would be unchanged. As previously mentioned, in real terms (purchasing power), their income would increase because the cost of imports would decrease.

Table 8.3: Estimated U.S. exports to Cuba in nine agricultural sectors, with U.S. restrictions removed

Industry name	U.S. exports to Cuba		U.S. shares of Cuban imports		U.S. shares of Cuban spending	
	Million dollars		Percent		Percent	
	Base year	Estimated	Base year	Estimated	Base year	Estimated
Wheat	18.0	187.6	6.1	58.2	6.1	58.2
Rice	(^a)	141.6	(^b)	44.9	(^b)	31.6
Corn	100.6	153.5	45.3	61.1	36.8	51.9
Beans and pulses	6.6	21.3	10.6	29.1	5.7	17.0
Other oilseeds ^c	0.0	1.8	0.0	53.4	0.0	12.8
Soybeans	50.6	61.6	74.0	82.5	74.0	82.5
Beef	0.4	27.1	5.8	81.6	0.2	13.0
Poultry	125.4	175.2	74.3	87.4	56.4	73.9
Pork	11.3	27.2	78.7	89.8	3.6	8.1
Total	312.8	797.1	28.7	68.2	16.3	33.5

Source: USITC estimates.

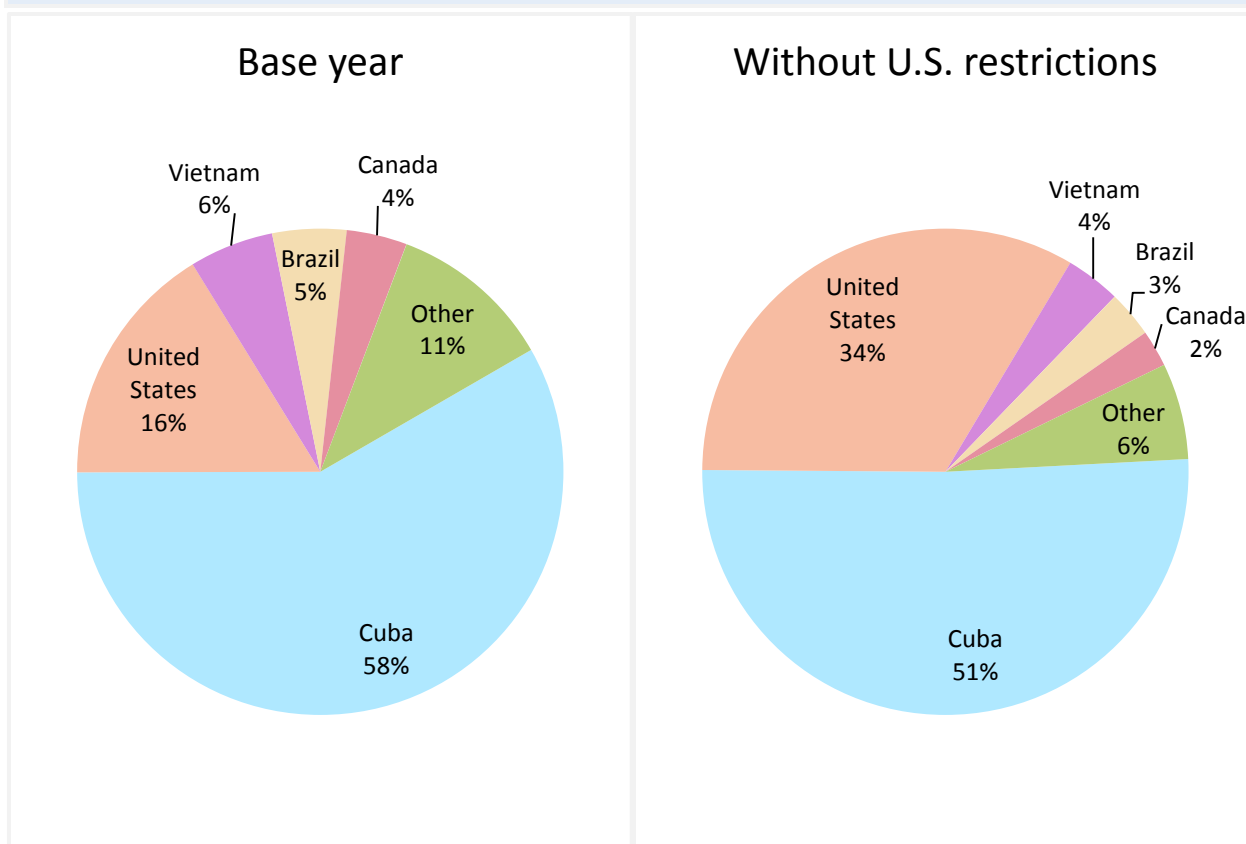
Note: Base year is the average of 2010–13 levels. The results include the effects of increased tourism in Cuba due to lifting of U.S. restrictions (see box 8.1).

^a Less than \$50,000.

^b Less than 0.05 percent.

^c “Other oilseeds” includes copra, cottonseed, palm kernel, peanut, rapeseed, and sunflower seed.

Figure 8.1: Cuban market for nine agricultural industries, with (base year) and without U.S. restrictions



Source: USITC estimates.

Note: Due to rounding, shares may not add to 100 percent.

See appendix [table J.8](#).

Table 8.4 shows U.S. manufactured goods exports in the event that U.S. restrictions are lifted. Analysis is performed using ISIC, revision 3.¹³²⁸ The model estimates that in value terms, the U.S. industry with the largest exports to Cuba in the absence of U.S. restrictions would be the food and beverages industry. This industry includes food and beverage products that have been processed in manufacturing facilities.¹³²⁹ For food and beverage products, the share of U.S. products in Cuban imports in the sector would grow from 23 percent to 35 percent, while the share of U.S. products in Cuban spending in this sector would increase from 5 percent to 9 percent. Although this industry would have only a modest reduction in trade costs (see table 8.1), it is a very large part of the Cuban economy, and hence even modestly lower trade costs generate a large U.S. export increase.¹³³⁰

The industry with the second-largest exports to Cuba would be chemicals and chemical products. This industry includes fertilizers, nitrogen compounds, plastics, synthetic rubber, pesticides and other agrochemical products, paints, manmade fibers, pharmaceuticals, medicinal chemicals and botanical products, soap and detergents, perfumes, and other chemical products. In this industry, the share of U.S. products in Cuban imports would grow from 0.4 percent to 23 percent, while the share of U.S. products in the Cuban market would increase from 0.2 percent to 12 percent. This industry would experience a substantial reduction in trade costs from the elimination of U.S. restrictions.

The United States would also gain substantial market share in some smaller industries, such as paper products and office and computing machinery. In these industries, U.S. restrictions completely eliminated trade in the base year, indicating that current trade costs are very high, and hence that the implied reduction in trade costs is also quite high.

The results presented in table 8.4 are broadly similar to the industry estimates in chapters 5 and 6.¹³³¹ For example, as described in chapter 6, U.S. exports to Cuba of intermediate products and capital goods used in agriculture are expected to increase significantly if U.S. restrictions are removed. In the event that U.S. restrictions are removed, the model estimates show large increases in U.S. exports to Cuba of “chemicals and chemical products” (ISIC 24), which includes fertilizers and other agricultural chemicals. In addition, the model estimates high levels of U.S. exports to Cuba of “other machinery and equipment” (ISIC 29), which includes such capital goods as agricultural machinery.

¹³²⁸ Analysis is performed at the 2-digit ISIC level. The level of aggregation was determined by availability of data. Industries analyzed in this study represent all manufacturing industries.

¹³²⁹ This industry also includes meat produced by slaughterhouses. Therefore, a part of this industry overlaps with some of the agricultural industries listed in table 8.3. As a result, one cannot add total U.S. agricultural exports from table 8.3 to total manufactured goods exports from table 8.4.

¹³³⁰ About one-half of the base year ISIC 15 exports are pork, for which trade costs drop modestly when U.S. restrictions are removed (see table 8.1).

¹³³¹ The model does not take into account the differences between U.S. supply and Cuban demand in terms of product characteristics such as octane level and lead content. Hence the model estimate for the “petroleum products” sector is more likely indicative of U.S. export potential in the long term.

Table 8.4: Estimated U.S. exports to Cuba in manufacturing industries to Cuba, with U.S. restrictions removed

ISIC	Industry name ^a	U.S. exports to Cuba		U.S. shares of Cuban imports		U.S. shares of Cuban spending	
		Million dollars		Percent		Percent	
		Base year	Estimated	Base year	Estimated	Base year	Estimated
15	Food and beverages	212.4	391.7	22.8	34.5	5.0	8.6
16	Tobacco products	0.0	0.3	0.0	25.6	0.0	0.1
17	Textiles	0.1	6.9	0.1	6.7	0.0	5.0
18	Wearing apparel, fur	^(b)	0.7	0.1	1.6	^(c)	0.6
19	Leather products	0.0	0.9	0.0	0.9	0.0	0.7
20	Wood products (excl. furniture)	1.3	8.9	2.6	18.2	2.1	14.9
21	Paper and paper products	0.0	37.2	0.0	41.0	0.0	36.7
22	Printing and publishing	^(b)	7.6	0.1	29.4	^(c)	11.8
23	Petroleum products	0.0	56.2	0.0	18.4	0.0	9.8
24	Chemicals and chemical products	3.2	201.6	0.4	23.2	0.2	12.0
25	Rubber and plastics products	^(b)	25.5	^(c)	10.8	^(c)	7.7
26	Non-metallic mineral products	0.0	17.6	0.0	12.8	0.0	8.4
27	Basic metals	0.0	26.7	0.0	9.5	0.0	5.3
28	Fabricated metal products	^(b)	22.7	^(c)	8.3	^(c)	6.9
29	Other machinery and equipment	1.5	163.0	0.2	21.6	0.2	16.2
30	Office and computing machinery	0.0	14.9	0.0	36.3	0.0	30.0
31	Electrical machinery and apparatus	^(b)	40.9	^(c)	14.0	^(c)	11.9
32	Communication equipment	0.3	12.1	0.5	20.9	0.4	16.9
33	Medical and precision instruments	0.7	45.0	0.5	29.4	0.4	23.0
34	Motor vehicles, trailers, and parts	0.3	67.4	0.1	17.4	0.1	15.8
35	Other transport equipment	0.1	24.5	0.1	14.4	0.0	8.1
36	Furniture; other manufacturing	5.0	50.6	4.0	30.8	0.5	5.2
	Total	225.0	1,222.7	4.3	19.7	1.8	11.5

Source: USITC estimates.

Note: The base year is the average of 2010–13 levels. Results include the effects of increased tourism in Cuba due to lifting of U.S. restrictions (see text box 8.1).

^a See table I.3 for ISIC sector descriptions.

^b Less than \$50,000.

^c Less than 0.05 percent.

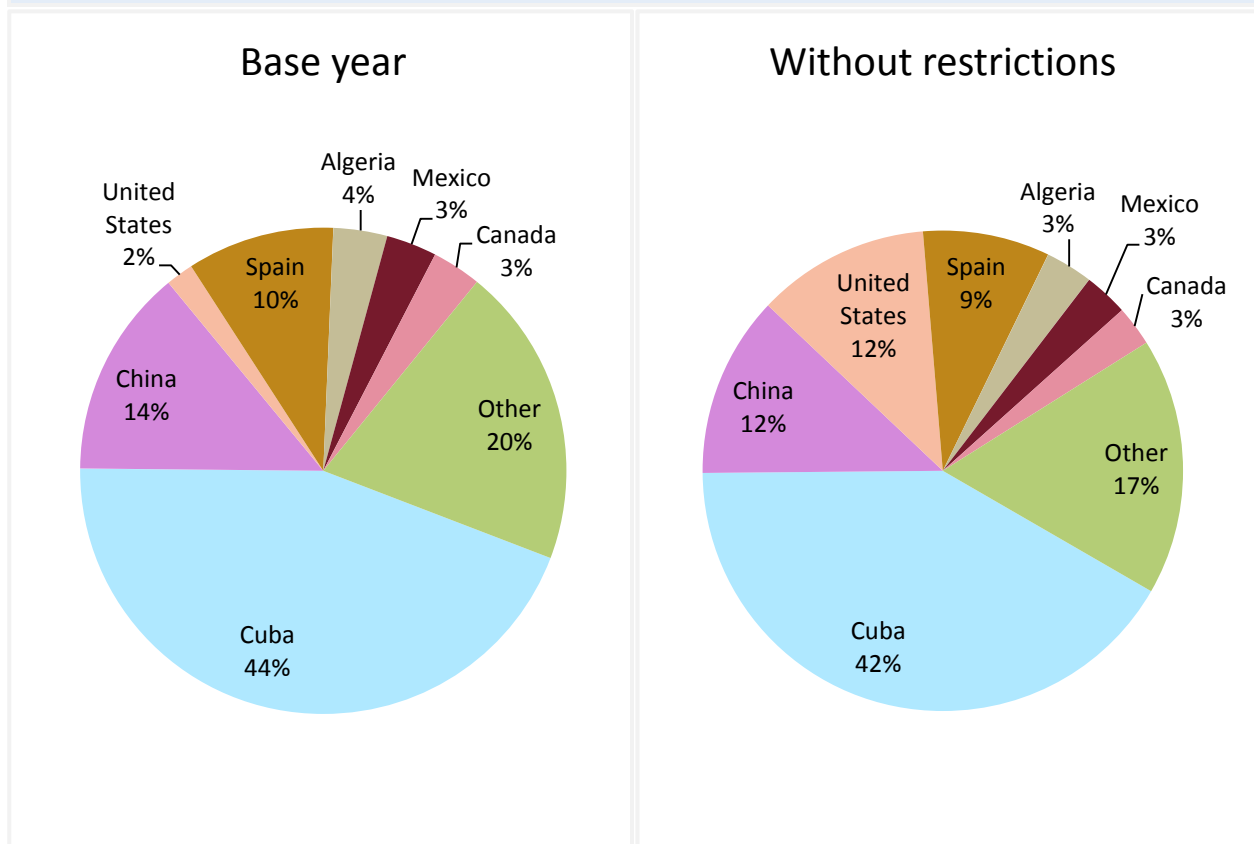
Overall, U.S. manufactured goods exports to Cuba are estimated to increase from about \$225 million to over \$1.2 billion. The share of U.S. manufactured products in Cuban imports would increase from 4 percent to 20 percent. The share of U.S. manufactured products in the Cuban market for manufactured goods would increase from nearly 2 percent to 12 percent.

As with agricultural products, the model estimates that total Cuban spending on manufactured goods would not change substantially when U.S. restrictions are removed. Therefore, increased

Cuban spending on U.S. products would come at the expense of products from domestic Cuban producers and producers from other countries.

The left panel of figure 8.2 shows how the Cuban market for manufactured goods is currently divided. It shows that 44 percent of all spending on manufactures goes towards purchases of Cuban-made goods, while the rest is spent on imported goods. China is currently the largest single-country source of Cuban imports of manufactured goods, with a 14 percent share of the Cuban market, while Spain is the second-largest single-country source with a 10 percent share. The United States currently accounts for less than 2 percent of the Cuban market for manufactured goods.

Figure 8.2: Cuban market for manufactured goods, with (base year) and without U.S. restrictions



Source: USITC estimates.

Note: Due to rounding, shares may not add to 100 percent.

See appendix [table J.9](#).

The right panel of figure 8.2 shows the estimated Cuban market for manufactured goods with U.S. restrictions removed. The model estimates that the U.S. share of Cuban imports would increase to 12 percent, whereas China’s and Spain’s shares would decrease to 12 and 9 percent, respectively. Canada and Mexico would maintain their approximately 3 percent shares in the

Cuban market. The share of Cuban goods in Cuban spending would decrease from 44 percent to 42 percent.¹³³²

Effects of Removal of U.S. Restrictions and the Reduction of Cuban Import Barriers on U.S. Exports to Cuba

As requested in the August 2015 request letter, this section presents the estimated effects on U.S. exports to Cuba of the removal of U.S. restrictions combined with the lowering of Cuban tariff and nontariff measures that may limit Cuban imports.¹³³³ To do so, Cuban import barriers that apply equally to all exporters are set equal to the average for developing countries.¹³³⁴

While the removal of U.S. restrictions benefits the United States rather than all of Cuba's trading partners, the reduction of Cuban import barriers would lower barriers to all of Cuba's trading partners and thus benefit all countries. Thus the gains to the U.S. exports would not be as marked with the lowering of Cuban barriers as they are with the removal of U.S. restrictions.

Since all countries experience an equal reduction in Cuban import barriers, countries' shares in Cuban imports do not change.¹³³⁵ If Cuban import barriers were lowered, however, total Cuban imports would increase because prices from all foreign sources decline. Therefore, U.S. exports to Cuba and the U.S. share of the Cuban market would increase. As before, the gains by U.S. producers in the Cuban market result from the drop in trade costs for U.S. exporters, high U.S. productivity, and strong Cuban demand for certain products. The share of Cuban production in the Cuban market would decrease because it would be harder for Cuban producers to compete with cheaper imports.

Total U.S. exports of selected agricultural products to Cuba would increase to \$886 million from their current level of \$312 million, an increase of \$574 million (table 8.5). Compared to the scenario in which only U.S. restrictions are removed (table 8.3), this would result in an additional \$89 million of U.S. agricultural exports to Cuba. A large fraction of this increase would come from greater exports of rice and beef. These are the industries in which Cuba has relatively high import barriers.¹³³⁶

¹³³² In all scenarios analyzed in this chapter, the Cuban share of spending on domestically produced goods declines. At the same time, because there is little change in Cuban output, exports of Cuban products increase as Cuban resources are reallocated to the production of Cuban export-intensive products.

¹³³³ Selected Cuban tariff and nontariff measures that may affect trade or act as import barriers are discussed in chapter 4.

¹³³⁴ Table 8.1 shows the reduction of trade costs for U.S. exports to Cuba that occurs when Cuban trade barriers are lowered. Appendix I presents estimates of U.S. exports to Cuba when U.S. restrictions are removed and Cuban imports barriers are set equal to the lowest levels for developing countries (for sensitivity analysis).

¹³³⁵ Hence, this section does not report U.S. shares in Cuban imports, since they remain the same as in the previous section.

¹³³⁶ As discussed earlier in this section and appendix I.

Total U.S. exports in manufactured goods to Cuba would rise to \$1.6 billion from their current level of \$225 million, an increase of \$1.4 billion (table 8.6). Compared to the scenario in which only U.S. restrictions are removed (table 8.4), this would represent an additional \$409 million of U.S. exports of manufactured goods to Cuba. The total gain in both manufactured and agricultural products is \$442 million; as noted in the data section above, there is some overlap in the agricultural and manufacturing industries, so the total gain is less than the sum of the two individual increases. A large portion (\$136 million) of the additional \$409 million in exports of manufactured goods comes from the chemical products industry (ISIC 24). This is because of the high share of this industry in total U.S. exports to Cuba, as well as the high Cuban import barriers in this industry in the base year. There is also significant growth of U.S. exports to Cuba in other machinery (ISIC 29) and food and beverage (ISIC 15) industries.

Table 8.5: Estimated U.S. exports to Cuba in nine agricultural sectors, with U.S. restrictions removed and Cuban import barriers lowered

Sector	U.S. exports to Cuba			U.S. shares in Cuban spending		
	Base year	No U.S. restrictions	No U.S. restrictions and lowered Cuban barriers	Base year	No U.S. restrictions	No U.S. restrictions and lowered Cuban barriers
		Million dollars	Million dollars		Percent	Percent
Wheat	18.0	187.6	187.7	6.1	58.2	58.2
Rice	^(a)	141.6	160.0	^(b)	31.6	36.9
Corn	100.6	153.5	162.5	36.8	51.9	55.9
Beans and pulses	6.6	21.3	25.7	5.7	17.0	21.3
Other oilseeds ^c	0.0	1.8	2.9	0.0	12.8	21.4
Soybeans	50.6	61.6	61.6	74.0	82.5	82.5
Beef	0.4	27.1	47.5	0.2	13.0	23.6
Poultry	125.4	175.2	185.8	56.4	73.9	79.7
Pork	11.3	27.2	52.6	3.6	8.1	16.2
Total	312.8	797.1	886.2	16.3	33.5	40.3

Source: USITC estimates.

Notes: Base year is the average of 2010–13 levels. Results include the effects of increased tourism in Cuba due to lifting of U.S. restrictions (see box 8.1).

^a Less than \$50,000.

^b Less than 0.05 percent.

^c “Other oilseeds” includes copra, cottonseed, palm kernel, peanut, rapeseed, and sunflower seed.

Table 8.6: Estimated U.S. export to Cuba in manufacturing industries, with U.S. restrictions removed and Cuban import barriers lowered

		U.S. exports to Cuba			U.S. shares of Cuban spending		
		Million dollars			Percent		
ISIC	Industry name ^a	Base year	No U.S. restrictions and lowered Cuban barriers		Base year	No U.S. restrictions and lowered Cuban barriers	
			Base year	No U.S. restrictions		No U.S. restrictions	No U.S. restrictions
15	Food and beverages	212.4	391.7	501.4	5.0	8.6	11.2
16	Tobacco products	0.0	0.3	0.6	0.0	0.1	0.2
17	Textiles	0.1	6.9	8.5	^(c)	5.0	6.5
18	Wearing apparel, fur	^(b)	0.7	0.9	^(c)	0.6	0.8
19	Leather products	0.0	0.9	1.1	0.0	0.7	0.9
20	Wood products (excl. furniture)	1.3	8.9	10.2	2.1	14.9	17.4
21	Paper and paper products	0.0	37.2	38.7	0.0	36.7	38.6
22	Printing and publishing	^(b)	7.6	13.2	^(c)	11.8	22.5
23	Petroleum products	0.0	56.2	69.4	0.0	9.8	12.7
24	Chemicals and chemical products	3.2	201.6	337.8	0.2	12.0	21.6
25	Rubber and plastics products	^(b)	25.5	32.1	^(c)	7.7	10.2
26	Non-metallic mineral products	0.0	17.6	23.5	0.0	8.4	11.8
27	Basic metals	0.0	26.7	37.8	0.0	5.3	8.0
28	Fabricated metal products	^(b)	22.7	25.8	^(c)	6.9	8.2
29	Other machinery and equipment	1.5	163.0	203.8	0.2	16.2	21.3
30	Office and computing machinery	0.0	14.9	16.8	0.0	30.0	34.8
31	Electrical machinery and apparatus	^(b)	40.9	46.0	^(c)	11.9	13.8
32	Communication equipment	0.3	12.1	13.9	0.4	16.9	20.2
33	Medical and precision instruments	0.7	45.0	54.1	0.4	23.0	28.5
34	Motor vehicles, trailers, and parts	0.3	67.4	70.4	0.1	15.8	16.7
35	Other transport equipment	0.1	24.5	36.8	^(c)	8.1	13.3
36	Furniture; other manufacturing	5.0	50.6	89.0	0.5	5.2	9.4
Total		224.8	1,222.7	1,631.9	1.8	11.5	15.3

Source: USITC estimates.

Note: Base year is the average of 2010–13 levels; the results include the effects of increased tourism in Cuba due to lifting of U.S. restrictions (see box 8.1).

^a See table I.3 for ISIC sector descriptions.

^b Less than \$50,000.

^c Less than 0.05 percent.

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Appendix A

Request Letters

RON WYDEN, OREGON, CHAIRMAN

JOHN D. ROCKEFELLER IV, WEST VIRGINIA
CHARLES E. SCHUMER, NEW YORK
DEBBIE STABENOW, MICHIGAN
MARIA CANTWELL, WASHINGTON
BILL NELSON, FLORIDA
ROBERT MENENDEZ, NEW JERSEY
THOMAS R. CARPER, DELAWARE
BENJAMIN L. CARDIN, MARYLAND
SHERROD BROWN, OHIO
MICHAEL F. BENNET, COLORADO
ROBERT P. CASEY, JR., PENNSYLVANIA
MARK R. WARNER, VIRGINIA

ORRIN G. HATCH, UTAH
CHUCK GRASSLEY, IOWA
MIKE CRAPO, IDAHO
PAT ROBERTS, KANSAS
MICHAEL B. ENZI, WYOMING
JOHN CORNYN, TEXAS
JOHN THUNE, SOUTH DAKOTA
RICHARD BURR, NORTH CAROLINA
JOHNNY ISAKSON, GEORGIA
ROB PORTMAN, OHIO
PATRICK J. TOOMEY, PENNSYLVANIA

United States Senate

COMMITTEE ON FINANCE

WASHINGTON, DC 20510-6200

JOSHUA SHEINKMAN, STAFF DIRECTOR
CHRIS CAMPBELL, REPUBLICAN STAFF DIRECTOR

December 17, 2014

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

DOCKET NUMBER 3047	2014 DEC 19 AM 11:34
Office of the Secretary Int'l Trade Commission	

RECEIVED
OFC OF THE SECRETARY
US INTL TRADE COMM

Dear Chairman Broadbent,

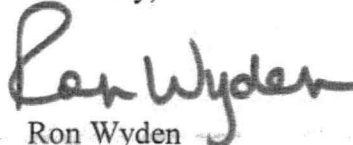
In order to gain a better understanding of the economic effects on exports of U.S. goods and services, including digitally traded goods and services, of statutory and administrative restrictions related to trade with and travel to Cuba by U.S. citizens, I request, pursuant to section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)), that the Commission institute an investigation and provide a report that provides an overview of recent and current trends in Cuban imports of goods and services, including from the United States, and an analysis of U.S. restrictions affecting such purchases, including restrictions on U.S. citizen travel to Cuba.

To the extent possible, the report should include the following:

- an overview of Cuba's imports of goods and services from, to the extent possible, 2005 to the present, including identification of major supplying countries, products, and market segments;
- a description of how U.S. restrictions on trade, including those relating to export financing terms and travel to Cuba by U.S. citizens, affect Cuban imports of U.S. goods and services; and,
- for sectors where the impact is likely to be significant, a qualitative and, to the extent possible, quantitative estimate of U.S. exports of goods and services to Cuba, in the event that statutory, regulatory, or other trade restrictions on U.S. exports of goods and services as well as travel to Cuba by U.S. citizens are lifted.

The report should also include, to the extent possible, state-specific analysis of the impacts described above. The Commission should provide its completed report no later than September 15, 2015. As we intend to make the report available to the public, we request that it not contain confidential business information.

Sincerely,


Ron Wyden

ORRIN G. HATCH, UTAH, CHAIRMAN

CHUCK GRASSLEY, IOWA
MIKE CRAPO, IDAHO
PAT ROBERTS, KANSAS
MICHAEL B. ENZI, WYOMING
JOHN CORNYN, TEXAS
JOHN THUNE, SOUTH DAKOTA
RICHARD BLUMENTHAL, NORTH CAROLINA
JOHNNY ISAKSON, GEORGIA
ROB PORTMAN, OHIO
PATRICK J. TOOMEY, PENNSYLVANIA
DANIEL COATS, INDIANA
DEAN HELLER, NEVADA
TIM SCOTT, SOUTH CAROLINA

RON WYDEN, OREGON
CHARLES E. SCHUMER, NEW YORK
DEBBIE STABENOW, MICHIGAN
MARIA CANTWELL, WASHINGTON
BILL NELSON, FLORIDA
ROBERT MENENDEZ, NEW JERSEY
THOMAS R. CARPER, DELAWARE
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MICHAEL F. BENNET, COLORADO
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MARK R. WARNER, VIRGINIA

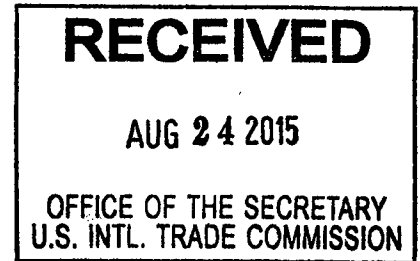
United States Senate

COMMITTEE ON FINANCE

WASHINGTON, DC 20510-6200

August 19, 2015

CHRIS CAMPBELL, STAFF DIRECTOR
JOSHUA SHEINKMAN, DEMOCRATIC STAFF DIRECTOR



The Honorable Meredith M. Broadbent
Chairman
U.S. International Trade Commission
500 E Street, SW
Washington, DC 20436

Dear Chairman Broadbent:

In a letter dated December 17, 2014, the Committee requested that the Commission institute an investigation under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)) and provide a report that overviews Cuba's imports of goods and services and describes how U.S. restrictions on trade affect such imports. The Committee asked that the Commission provide its completed report no later than September 15, 2015. In response to the Committee's request, the Commission instituted investigation No. 332-552, *Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions*, and indicated that it would transmit its report by the requested date of September 15, 2015.

The Committee requests that the Commission expand the scope of its report to include a qualitative analysis of existing Cuban non-tariff measures, Cuban institutional and infrastructural factors, and other Cuban barriers that inhibit or affect the ability of U.S. and non-U.S. firms to conduct business in and with Cuba. To the extent feasible, such measures, factors, and barriers should include, but not be limited to, the following topics: restrictions on trade and investment; property rights and ownership; customs duties and procedures; sanitary and phytosanitary measures; state trading; protection of intellectual property rights; and infrastructure as it affects telecommunications, port facilities, and the storage, transport, and distribution of goods. The report also should provide a qualitative analysis of any effects that such measures, factors, and barriers would have on U.S. exports of goods and services to Cuba in the event of changes to statutory, regulatory, or other trade restrictions on U.S. exports of goods and services to Cuba. To the extent feasible, the report also should include a quantitative analysis of the aggregate effects of Cuban tariff and non-tariff measures on the ability of U.S. and non-U.S. firms to conduct business in and with Cuba.

In order to provide sufficient time to incorporate such information into the Commission's report, the Committee requests that the Commission provide its completed report no later than March 17, 2016. As we intend to make the report available to the public, we request that it not contain confidential business information.

Sincerely,

Orrin Hatch

Chairman

U.S. Senate Committee on Finance

Appendix B

Federal Register Notices

Alabama-Coushatta Tribe of Texas (previously listed as the Alabama-Coushatta Tribes of Texas), Alabama-Quassarte Tribal Town, and Coushatta Tribe of Louisiana.

Determinations Made by Horseshoe Bend National Military Park

Officials of Horseshoe Bend National Military Park have determined that:

- Pursuant to 25 U.S.C. 3001(3)(B), the 265 cultural items described above are reasonably believed to have been placed with or near individual human remains at the time of death or later as part of the death rite or ceremony and are believed, by a preponderance of the evidence, to have been removed from a specific burial site of a Native American individual.
- Pursuant to 25 U.S.C. 3001(2), there is a relationship of shared group identity that can be reasonably traced between the unassociated funerary objects and the Alabama-Coushatta Tribe of Texas (previously listed as the Alabama-Coushatta Tribes of Texas), Alabama-Quassarte Tribal Town, Coushatta Tribe of Louisiana, Kialegee Tribal Town, Poarch Band of Creeks (previously listed as the Poarch Band of Creek Indians of Alabama), The Muscogee (Creek) Nation, and Thlopthlocco Tribal Town.

Additional Requestors and Disposition

Lineal descendants or representatives of any Indian tribe or Native Hawaiian organization not identified in this notice that wish to claim these cultural items should submit a written request with information in support of the claim to Doyle Sapp, Superintendent, Horseshoe Bend National Military Park, 11288 Horseshoe Bend Road, Daviston, AL 36256, telephone (256) 234-7111 x 226, email doyle_sapp@nps.gov, by March 6, 2015. After that date, if no additional claimants have come forward, transfer of control of the unassociated funerary objects to the Alabama-Coushatta Tribe of Texas (previously listed as the Alabama-Coushatta Tribes of Texas), Alabama-Quassarte Tribal Town, Coushatta Tribe of Louisiana, Kialegee Tribal Town, Poarch Band of Creeks (previously listed as the Poarch Band of Creek Indians of Alabama), The Muscogee (Creek) Nation, and Thlopthlocco Tribal Town may proceed. Horseshoe Bend National Military Park is responsible for notifying the Alabama-Coushatta Tribe of Texas (previously listed as the Alabama-Coushatta Tribes of Texas), Alabama-Quassarte Tribal Town, Coushatta Tribe of Louisiana, Kialegee Tribal Town, Poarch Band of Creeks (previously listed as the Poarch Band of Creek Indians of

Alabama), The Muscogee (Creek) Nation, and Thlopthlocco Tribal Town that this notice has been published.

Dated: January 9, 2015.

Melanie O'Brien,

Acting Manager, National NAGPRA Program.

[FR Doc. 2015-02213 Filed 2-3-15; 8:45 am]

BILLING CODE 4312-50-P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 332-552]

Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

AGENCY: United States International Trade Commission.

ACTION: Institution of investigation and scheduling of hearing.

SUMMARY: Following receipt on December 17, 2014, of a request from the Senate Committee on Finance (Committee) under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)), the U.S. International Trade Commission (Commission) instituted investigation No. 332-552, *Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions*.

DATES:

March 10, 2015: Deadline for filing requests to appear at the public hearing.

March 12, 2015: Deadline for filing prehearing briefs and statements.

March 24, 2015: Public hearing.

March 31, 2015: Deadline for filing posthearing briefs and statements.

April 15, 2015: Deadline for filing all other written submissions.

September 15, 2015: Transmittal of Commission report to the Committee.

ADDRESSES: All Commission offices, including the Commission's hearing rooms, are located in the United States International Trade Commission Building, 500 E Street SW., Washington, DC. All written submissions should be addressed to the Secretary, United States International Trade Commission, 500 E Street SW., Washington, DC 20436. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://www.usitc.gov/secretary/edis.htm>.

FOR FURTHER INFORMATION CONTACT:

Project leader Heidi Colby-Oizumi (202-205-3391 or heidi.colby@usitc.gov) or deputy project leader Alissa Tafti (202-205-3244 or alissa.tafti@usitc.gov) for information specific to this investigation. For information on the legal aspects of this investigation,

contact William Gearhart of the Commission's Office of the General Counsel (202-205-3091 or william.gearhart@usitc.gov). The media should contact Margaret O'Laughlin, Office of External Relations (202-205-1819 or margaret.olaughlin@usitc.gov). Hearing-impaired individuals may obtain information on this matter by contacting the Commission's TDD terminal at 202-205-1810. General information concerning the Commission may also be obtained by accessing its Internet server (<http://www.usitc.gov>). Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

Background: As requested by the Committee, the Commission will conduct an investigation and provide a report that provides an overview of recent and current trends in Cuban imports of goods and services, including from the United States, and an analysis of U.S. restrictions affecting such purchases, including restrictions on U.S. citizen travel to Cuba. The Committee asked that the report, to the extent possible, include the following:

1. An overview of Cuba's imports of goods and services from, to the extent possible, 2005 to the present, including identification of major supplying countries, products, and market segments;
2. a description of how U.S. restrictions on trade, including those relating to export financing terms and travel to Cuba by U.S. citizens, affect Cuban imports of U.S. goods and services; and
3. for sectors where the impact is likely to be significant, a qualitative and, to the extent possible, quantitative estimate of U.S. exports of goods and services to Cuba, in the event that statutory, regulatory, or other trade restrictions on U.S. exports of goods and services as well as travel to Cuba by U.S. citizens are lifted.

The Committee also asked that the report include, to the extent possible, state-specific analysis of the impacts described above. The Committee asked that the Commission deliver its report no later than September 15, 2015. The Committee also stated that it intends to make the Commission's report public and asked that the report not include any confidential business information.

Public Hearing: The Commission will hold a public hearing in connection with this investigation at the U.S. International Trade Commission Building, 500 E Street SW., Washington, DC, beginning at 9:30 a.m. on Tuesday, March 24, 2015. Requests to appear at

the public hearing should be filed with the Secretary not later than 5:15 p.m., March 10, 2015, in accordance with the requirements in the "Submissions" section below. All prehearing briefs and statements should be filed with the Secretary not later than 5:15 p.m., March 12, 2015; and all posthearing briefs and statements responding to matters raised at the hearing should be filed with the Secretary not later than 5:15 p.m., March 31, 2015. All hearing-related briefs and statements should be filed in accordance with the requirements for filing written submissions set out below. In the event that, as of the close of business on March 10, 2015, no witnesses are scheduled to appear at the hearing, the hearing will be canceled. Any person interested in attending the hearing as an observer or nonparticipant may call the Office of the Secretary (202-205-2000) after March 5, 2015, for information concerning whether the hearing will be held.

Written Submissions: In lieu of, or in addition to, participating in the hearing, interested parties are invited to file written submissions concerning this investigation. All written submissions should be addressed to the Secretary, and all such submissions (other than prehearing and posthearing briefs and statements) should be received not later than 5:15 p.m., April 15, 2015. All written submissions must conform with the provisions of section 201.8 of the *Commission's Rules of Practice and Procedure* (19 CFR 201.8). Section 201.8 and the Commission's Handbook on Filing Procedures require that interested parties file documents electronically on or before the filing deadline and submit eight (8) true paper copies by 12:00 p.m. eastern time on the next business day. In the event that confidential treatment of a document is requested, interested parties must file, at the same time as the eight paper copies, at least four (4) additional true paper copies in which the confidential information must be deleted (see the following paragraph for further information regarding confidential business information). Persons with questions regarding electronic filing should contact the Secretary (202-205-2000).

Any submissions that contain confidential business information must also conform with the requirements of section 201.6 of the *Commission's Rules of Practice and Procedure* (19 CFR 201.6). Section 201.6 of the rules requires that the cover of the document and the individual pages be clearly marked as to whether they are the "confidential" or "nonconfidential" version, and that the confidential

business information be clearly identified by means of brackets. All written submissions, except for confidential business information, will be made available for inspection by interested parties.

In the request letter, the Committee stated that it intends to make the Commission's report available to the public in its entirety, and asked that the Commission not include any confidential business information in the report it sends to the Committee. Any confidential business information received by the Commission in this investigation and used in preparing this report will not be published in a manner that would reveal the operations of the firm supplying the information.

Summaries of Written Submissions: The Commission intends to publish summaries of the positions of interested persons in an appendix to its report. Persons wishing to have a summary of their position included in the appendix should include a summary with their written submission. The summary may not exceed 500 words, should be in MSWord format or a format that can be easily converted to MSWord, and should not include any confidential business information. The summary will be published as provided if it meets these requirements and is germane to the subject matter of the investigation. In the appendix the Commission will identify the name of the organization furnishing the summary, and will include a link to the Commission's Electronic Document Information System (EDIS) where the full written submission can be found.

By order of the Commission.

Issued: January 29, 2015.

Lisa R. Barton,

Secretary to the Commission.

[FR Doc. 2015-02103 Filed 2-3-15; 8:45 am]

BILLING CODE 7020-02-P

NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

[NARA-2015-024]

Agency Information Collection Activities: Submission for OMB Review; Comment Request

AGENCY: National Archives and Records Administration (NARA).

ACTION: Notice.

SUMMARY: NARA is giving public notice that the agency has submitted to OMB for approval the information collection described in this notice. The public is invited to comment on the proposed

information collection pursuant to the Paperwork Reduction Act of 1995.

DATES: Written comments must be submitted to OMB at the address below on or before March 6, 2015 to be assured of consideration.

ADDRESSES: Send comments to Mr. Nicholas A. Fraser, Desk Officer for NARA, Office of Management and Budget, New Executive Office Building, Washington, DC 20503; fax: 202-395-5167; or electronically mailed to Nicholas_A.Fraser@omb.eop.gov.

FOR FURTHER INFORMATION CONTACT: Requests for additional information or copies of the proposed information collection and supporting statement should be directed to Tamee Fechhelm at telephone number 301-837-1694 or fax number 301-713-7409.

SUPPLEMENTARY INFORMATION: Pursuant to the Paperwork Reduction Act of 1995 (Pub. L. 104-13), NARA invites the general public and other Federal agencies to comment on proposed information collections. NARA published a notice of proposed collection for this information collection on November 14, 2014 (79 FR 68305). No comments were received. NARA has submitted the described information collection to OMB for approval.

In response to this notice, comments and suggestions should address one or more of the following points: (a) Whether the proposed information collection is necessary for the proper performance of the functions of NARA; (b) the accuracy of NARA's estimate of the burden of the proposed information collection; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including the use of information technology; and (e) whether small businesses are affected by this collection. In this notice, NARA is soliciting comments concerning the following information collection:

Title: Use of NARA Official Seals and Logos.

OMB number: 3095-0052.

Agency form number: N/A.

Type of review: Regular.

Affected public: Business or other for-profit, not-for-profit institutions, Federal government.

Estimated number of respondents: 10.

Estimated time per response: 20 minutes.

Frequency of response: On occasion.

Estimated total annual burden hours: 3 hours.

Abstract: The authority for this information collection is contained in 36 CFR 1200.8. NARA's three official

Filing Procedures⁴). Persons with questions regarding filing should contact the Secretary (202–205–2000).

Any person desiring to submit a document to the Commission in confidence must request confidential treatment. All such requests should be directed to the Secretary to the Commission and must include a full statement of the reasons why the Commission should grant such treatment. See 19 CFR 201.6. Documents for which confidential treatment by the Commission is properly sought will be treated accordingly. All nonconfidential written submissions will be available for public inspection at the Office of the Secretary and on EDIS.⁵

This action is taken under the authority of section 337 of the Tariff Act of 1930, as amended (19 U.S.C. 1337), and of sections 201.10 and 210.8(c) of the Commission's Rules of Practice and Procedure (19 CFR 201.10, 210.8(c)).

By order of the Commission.

Issued: February 27, 2015.

William R. Bishop,

Supervisory Hearings and Information Officer.

[FR Doc. 2015–04453 Filed 3–3–15; 8:45 am]

BILLING CODE 7020–02–P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 332–552]

Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

AGENCY: United States International Trade Commission.

ACTION: Rescheduling of public hearing.

SUMMARY: The Commission has rescheduled the public hearing in this investigation from March 24, 2015 to June 2, 2015.

DATES:

May 18, 2015: Deadline for filing requests to appear at the public hearing.

May 20, 2015: Deadline for filing pre-hearing briefs and statements.

June 2, 2015: Public hearing.

June 9, 2015: Deadline for filing post-hearing briefs and statements.

June 19, 2015: Deadline for filing all other written submissions.

ADDRESSES: All Commission offices, including the Commission's hearing rooms, are located in the United States

International Trade Commission Building, 500 E Street SW., Washington, DC. All written submissions should be addressed to the Secretary, United States International Trade Commission, 500 E Street SW., Washington, DC 20436. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://www.usitc.gov/secretary/edis.htm>.

FOR FURTHER INFORMATION CONTACT:

Project Leader Heidi Colby-Oizumi (202–205–3391; heidi.colby@usitc.gov) or Deputy Project Leader Alissa Tafti (202–205–3244; alissa.tafti@usitc.gov). For information on legal aspects, contact William Gearhart of the Office of the General Counsel (202–205–3091; william.gearhart@usitc.gov). The media should contact Margaret O'Laughlin, Office of External Relations (202–205–1819; margaret.olaughlin@usitc.gov). General information concerning the Commission may also be obtained by accessing its Internet address (<http://www.usitc.gov>). Hearing impaired individuals may obtain information on this matter by contacting the Commission's TDD terminal at 202–205–1810. 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.

SUMMARY: As announced in the notice of institution of the investigation published in the **Federal Register** on February 4, 2015 (80 FR 6137), the hearing will be held at the U.S. International Trade Commission building, 500 E Street SW., Washington, DC, 20436; it will begin at 9:30 a.m. In addition to the hearing date, the deadline dates for filing of requests to appear and pre-hearing and post-hearing briefs and statements have been changed: the deadline for filing requests to appear at the hearing has been changed to May 18, 2015; the deadline for filing pre-hearing briefs and statements has been changed to May 20, 2015; the deadline for filing post-hearing briefs and statements has been changed to June 9, 2015; and the deadline for filing all other written submissions has been changed to June 19, 2015. All other requirements and procedures set out in the February 4, 2015, notice continue to apply.

In the event that, as of the close of business on May 18, 2015, no witnesses are scheduled to appear at the hearing, the hearing will be canceled. Any person interested in attending the hearing as an observer or nonparticipant may call the Secretary to the Commission (202–205–2000) after May

18, 2015 for information concerning whether the hearing will be held.

By order of the Commission.

Issued: February 27, 2015.

William R. Bishop,

Supervisory Hearings and Information Officer.

[FR Doc. 2015–04477 Filed 3–3–15; 8:45 am]

BILLING CODE 7020–02–P

DEPARTMENT OF JUSTICE

Notice of Lodging of Proposed Consent Decree Under the Resource Conservation and Recovery Act

On February 26, 2015, the Department of Justice lodged a proposed consent decree with the United States District Court for the District of Nevada in the lawsuit entitled *United States and State of Nevada v. Newmont USA Limited*, Civil Action No. 3:15-cv-00199–HDM–WGC.

In this action, the United States and the State of Nevada filed a complaint under the Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq.*, and the State of Nevada's Disposal of Hazardous Waste statutes, set forth at Title 40 ("Public Health and Safety"), Chapter 459 ("Hazardous Materials") of the Nevada Revised Statutes (NRS 459.400 to 459.600) alleging violations at a gold mining and processing facility located near Carlin, Nevada. The consent decree requires Newmont to pay a civil penalty of \$395,000.00.

The publication of this notice opens a period for public comment on the consent decree. Comments should be addressed to the Assistant Attorney General, Environment and Natural Resources Division, and should refer to *United States v. Newmont USA Limited*, D.J. Ref. No. 90–7–1–10580. All comments must be submitted no later than thirty (30) days after the publication date of this notice. Comments may be submitted either by email or by mail:

To submit comments:	Send them to:
By email	pubcomment-ees.enrd@usdoj.gov .
By mail	Assistant Attorney General, U.S. DOJ—ENRD, P.O. Box 7611, Washington, D.C. 20044–7611.

During the public comment period, the consent decree may be examined and downloaded at this Justice Department Web site: http://www.usdoj.gov/enrd/Consent_Decrees.html. We will provide a paper

⁴ Handbook for Electronic Filing Procedures: http://www.usitc.gov/secretary/fed_reg_notices/rules/handbook_on_electronic_filing.pdf.

⁵ Electronic Document Information System (EDIS): <http://edis.usitc.gov>.

Dated: September 3, 2015.

Yolande Norman,

Acting Assistant Director, Program Support.

[FR Doc. 2015-22878 Filed 9-9-15; 8:45 am]

BILLING CODE 4310-05-P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 332-552]

Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

AGENCY: United States International Trade Commission.

ACTION: Expansion of scope of investigation; extension of deadline for filing written submissions.

SUMMARY: Following receipt of a letter on August 19, 2015, from the Committee on Finance of the United States Senate (Committee), the Commission has expanded the scope of investigation No. 332-552, *Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions*, and extended to October 23, 2015, the deadline for filing written submissions to the Commission.

DATES: October 23, 2015: Deadline for filing all written submissions.

March 17, 2016: Transmittal of Commission report to the Senate Committee on Finance.

ADDRESSES: All Commission offices, including the Commission's hearing rooms, are located in the United States International Trade Commission Building, 500 E Street SW., Washington, DC. All written submissions should be addressed to the Secretary, United States International Trade Commission, 500 E Street SW., Washington, DC 20436. The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <https://edis.usitc.gov/edis3-internal/app>.

FOR FURTHER INFORMATION CONTACT:

Project Leader Heidi Colby-Oizumi (202-205-3391; heidi.colby@usitc.gov) or Deputy Project Leader Alissa Tafti (202-205-3244; alissa.tafti@usitc.gov). For information on legal aspects, contact William Gearhart of the Office of the General Counsel (202-205-3091; william.gearhart@usitc.gov). The media should contact Margaret O'Laughlin, Office of External Relations (202-205-1819; margaret.olaughlin@usitc.gov). General information concerning the Commission may also be obtained by accessing its Internet address (<http://www.usitc.gov>). Hearing impaired individuals may obtain information on

this matter by contacting the Commission's TDD terminal at 202-205-1810. 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.

Background: The Commission instituted the investigation in response to a letter from the Committee on Finance dated December 17, 2014. In that letter the Committee asked that the Commission institute an investigation and provide a report that includes, to the extent possible, the following: (1) An overview of Cuba's imports of goods and services from 2005 to the present, including identification of major supplying countries, products, and market segments; (2) a description of how U.S. restrictions on trade, including those relating to export financing terms and travel to Cuba by U.S. citizens, affect Cuban imports of U.S. goods and services; and (3) for sectors where the impact is likely to be significant, a qualitative and, to the extent possible, quantitative estimate of U.S. exports of goods and services to Cuba in the event that statutory, regulatory, or other trade restrictions on U.S. exports of goods and services as well as travel to Cuba by U.S. citizens are lifted. The Committee also asked that the report include, to the extent possible, state-specific analysis of the impacts described above, and that the report be transmitted by September 15, 2015. In response, the Commission instituted the current investigation and published a notice of the investigation in the **Federal Register** on February 4, 2015 (80 FR 6137). The Commission also announced that it would hold a hearing in the course of the investigation, and the hearing was subsequently rescheduled to and held on June 2, 2015, with post-hearing briefs and statements due on June 9, 2015, and all other written submissions due on June 19, 2015 (see Commission notice published in the **Federal Register** on March 4, 2015, 80 FR 11689).

In a letter dated and received on August 19, 2015, the Committee asked that the Commission expand the scope of its report to include:

(1) A qualitative analysis of existing Cuban non-tariff measures, Cuban institutional and infrastructural factors, and other Cuban barriers that inhibit or affect the ability of U.S. and non-U.S. firms to conduct business in and with Cuba, with such measures, factors, and barriers to include, to the extent feasible, but not be limited to, the following topics: restrictions on trade and investment; property rights and ownership; customs duties and

procedures; sanitary and phytosanitary measures; state trading; protection of intellectual property rights; and infrastructure as it affects telecommunications, port facilities, and the storage, transport, and distribution of goods;

(2) a qualitative analysis of any effects that such measures, factors, and barriers would have on U.S. exports of goods and services to Cuba in the event of changes to statutory, regulatory, or other trade restrictions on U.S. exports of goods and services to Cuba; and

(3) to the extent feasible, a quantitative analysis of the aggregate effects of Cuban tariff and non-tariff measures on the ability of U.S. and non-U.S. firms to conduct business in and with Cuba.

In its letter of August 19, 2015, the Committee asked that the Commission transmit its completed report by March 17, 2016.

Written Submissions: The Commission does not plan to hold a further public hearing in this investigation. However, interested parties are invited to file written submissions concerning this investigation. All written submissions should be addressed to the Secretary, and all such submissions should be received no later than 5:15 p.m., October 23, 2015. All written submissions must conform to the provisions of section 201.8 of the Commission's Rules of Practice and Procedure (19 CFR 201.8). Section 201.8 and the Commission's Handbook on Filing Procedures require that interested parties file documents electronically on or before the filing deadline and submit eight (8) true paper copies by 12:00 p.m. eastern time on the next business day. In the event that confidential treatment of a document is requested, interested parties must file, at the same time as the eight paper copies, at least four (4) additional true paper copies in which the confidential information must be deleted (see the following paragraph for further information regarding confidential business information). Persons with questions regarding electronic filing should contact the Secretary (202-205-2000).

Any submissions that contain confidential business information (CBI) must also conform to the requirements of section 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). Section 201.6 of the rules requires that the cover of the document and the individual pages be clearly marked as to whether they are the "confidential" or "non-confidential" version, and that the confidential business information is clearly

identified by means of brackets. All written submissions, except for confidential business information, will be made available for inspection by interested parties.

The Committee has asked that the Commission's report not contain any confidential business information. Any confidential business information received by the Commission in this investigation and used in preparing this report will not be published in a manner that would reveal the operations of the firm supplying the information.

Summaries of Written Submissions: The Commission intends to publish summaries of the positions of interested persons in an appendix to its report. Persons wishing to have a summary of their position included in the appendix should include a summary with their written submission. The summary may not exceed 500 words, should be in MSWord format or a format that can be easily converted to MSWord, and should not include any confidential business information. The summary will be published as provided if it meets these requirements and is germane to the subject matter of the investigation. In the appendix the Commission will identify the name of the organization furnishing the summary, and will include a link to the Commission's Electronic Document Information System (EDIS) where the full written submission can be found.

By order of the Commission.

Issued: September 3, 2015.

Lisa R. Barton,

Secretary to the Commission.

[FR Doc. 2015-22697 Filed 9-9-15; 8:45 am]

BILLING CODE 7020-02-P

INTERNATIONAL TRADE COMMISSION

[Investigation No. 337-TA-921]

Certain Marine Sonar Imaging Devices, Including Downscan and Sidescan Devices, Products Containing the Same, and Components Thereof; Notice of Commission Determination To Review the Final Initial Determination in Part; Schedule for Filing Written Submissions on the Issues Under Review and on Remedy, Public Interest, and Bonding

AGENCY: U.S. International Trade Commission.

ACTION: Notice.

SUMMARY: Notice is hereby given that the U.S. International Trade Commission has determined to review-in-part the final initial determination

(“ID”) issued by the presiding administrative law judge (“ALJ”) in the above-captioned investigation on July 2, 2015. The Commission requests certain briefing from the parties on the issues under review, as indicated in this notice. The Commission also requests briefing from the parties and interested persons on the issues of remedy, the public interest, and bonding.

FOR FURTHER INFORMATION CONTACT:

Lucy Grace D. Noyola, Office of the General Counsel, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone (202) 205-3438. Copies of non-confidential documents filed in connection with this investigation are or will be available for inspection during official business hours (8:45 a.m. to 5:15 p.m.) in the Office of the Secretary, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436, telephone (202) 205-2000. General information concerning the Commission may also be obtained by accessing its Internet server (<http://www.usitc.gov>). The public record for this investigation may be viewed on the Commission's electronic docket (EDIS) at <http://edis.usitc.gov>. Hearing-impaired persons are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on (202) 205-1810.

SUPPLEMENTARY INFORMATION: The Commission instituted this investigation on July 14, 2014, based on a complaint filed by Navico, Inc. of Tulsa, Oklahoma, and Navico Holding AS, of Egersund, Norway (collectively, “Navico”). 79 *Fed. Reg.* 40778 (July 14, 2014). The complaint alleged violations of section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. 1337, by reason of the importation into the United States, the sale for importation, and the sale within the United States after importation of certain marine sonar imaging devices, including downscan and sidescan devices, products containing the same, and components thereof. *Id.* The complaint alleged the infringement of certain claims of U.S. Patent Nos. 8,305,840 (“the ’840 patent”), 8,300,499 (“the ’499 patent”), and 8,605,550 (“the ’550 patent”). *Id.* The notice of investigation named Garmin International, Inc. and Garmin USA, Inc., each of Olathe, Kansas, Garmin (Asia) Corporation of New Taipei City, Taiwan (collectively, “Garmin”), and Garmin North America, Inc. as respondents. *Id.* The Office of Unfair Import Investigations (“OUII”) was also named as a party. *Id.* The Commission later terminated the investigation as to Garmin North

America, Inc. and various of the asserted claims. Notice (Dec. 31, 2014) (determining not to review Order No. 10 (Dec. 2, 2014)); Notice (Jan. 9, 2015) (determining not to review Order No. 11 (Dec. 11, 2014)); Notice (Jan. 13, 2015) (determining not to review Order No. 13 (Dec. 17, 2014)).

On July 2, 2015, the ALJ issued a final ID finding no violation of section 337 with respect to all three asserted patents. Specifically, the ALJ found that the asserted claims of each patent are not infringed and were not shown to be invalid for anticipation or obviousness. The ALJ found that the economic prong of the domestic industry requirement was not satisfied with respect to the ’550 patent. The ALJ also issued a Recommended Determination on Remedy and Bonding (“RD”), recommending, if the Commission finds a section 337 violation, that a limited exclusion order and a cease and desist order should issue and that a bond should be imposed at a reasonable royalty of eight percent for each infringing device imported during the period of presidential review.

On July 20, 2015, Navico, Garmin, and OUII timely filed petitions for review challenging various findings in the final ID. On July 28, 2015, the parties filed responses. On August 5, 2015, Navico and Garmin filed a post-RD statement on the public interest under Commission Rule 210.50(a)(4). The Commission did not receive any post-RD public interest comments from the public. *See* 80 *FR* 39799 (July 10, 2015).

Having examined the record of this investigation, including the ID, the petitions for review, and the responses thereto, the Commission has determined to review the ALJ's determination of no violation in part. Specifically, the Commission has determined to review (1) the ALJ's construction of the limitation “single linear downscan transducer element” recited in claims 1 and 23 of the ’840 patent (and its variants in the ’499 and ’550 patents); (2) the ALJ's construction of the limitation “combine” (and its variants) recited in claims 1, 24, and 43 of the ’499 patent; (3) the ALJ's findings of noninfringement with respect to the three asserted patents; (4) the ALJ's findings of validity with respect to the three asserted patents; and (5) the ALJ's finding regarding the economic prong of the domestic industry requirement with respect to the ’550 patent.

The Commission has determined not to review the remaining issues decided in the final ID.

The parties are requested to brief their positions on the issues under review

Appendix C

Hearing Calendar

CALENDAR OF PUBLIC HEARING

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

Subject: Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

Inv. No.: 332-552

Dates and Time: June 2, 2015 – 9:30 a.m.

Sessions were held in connection with this investigation in the Main Hearing Room (room 101), 500 E Street, SW., Washington, DC.

CONGRESSIONAL APPEARANCE:

The Honorable Amy Klobuchar, United States Senator, Minnesota

PANEL 1:

ORGANIZATION AND WITNESS:

Dairy Farmers of America (“DFA”)
Kansas City, MO

Jay Waldvogel, Senior Vice President for Strategy and Global Development

U.S. Grains Council
Washington, DC

Bill Christ, Illinois Corn Marketing Board and U.S. Grains Council Advisory Team Leader, Western Hemisphere Programs

USA Rice Federation
Arlington, VA

Terry L. Harris, Senior Vice President for Marketing and Risk Management, Riceland Foods

Cargill, Incorporated
Washington, DC

Devry Boughner Vorwerk, Vice President, Corporate Affairs

PANEL 1 (continued):

ORGANIZATION AND WITNESS:

Texas A&M University
Agri Life Research & Extension
College Station, TX

Marco A. Palma, Associate Professor and Extension Economist

University of Florida
Institute of Food and Agricultural Sciences
Gainesville, FL

William A. Messina, Jr., Agricultural Economist

PANEL 2:

ORGANIZATION AND WITNESS:

Tire Industry Association (“TIA”)
Bowie, MD

Roy Littlefield IV, Government Affairs Manager

Marvin Bozarth, Senior Technical Consultant

Drinker Biddle & Reath LLP
Washington, DC

Eduardo R. Guzman, Partner, Communications & Mass Media
and International Sector

Harris, Wiltshire & Grannis LLP
Washington, DC

Kent Bressie, Partner and Head of International Practice

The University of Texas at Austin
Center for International Energy and Environmental Policy
Austin, TX

Jorge Piñon, Director

Peterson Institute for International Economics
Washington, DC

Barbara Kotschwar, Research Fellow

Cathleen Cimino, Research Analyst

PANEL 2(continued):

ORGANIZATION AND WITNESS:

University of Havana
Havana, Cuba

Ricardo Torres Pérez, Economist

PANEL 3:

ORGANIZATION AND WITNESS:

The Brookings Institution
Washington, DC

Richard Feinberg, Professor of International Economy, University
of California San Diego, Non-Resident Senior Fellow

Government Relations, LLC
Burke, VA

Donald E. Ellison, President

Law Offices of Robert L. Muse
Washington, DC

Robert L. Muse, of Counsel

Georgetown University Center for Business and Public Policy
Washington, DC

J. Robert Vastine, Senior Industry and Innovation Fellow

DevTech Systems, Inc.
Arlington, VA

Rafael B. Romeu, Ph.D., President and Chief Executive Officer

Sandler Trade LLC
Washington, DC

Marideth J. Sandler, Chief Executive Officer

-END-

Appendix D

Written Submissions

Interested parties had the opportunity to file written submissions to the Commission in the course of this investigation. Along with their written submissions, they were asked to provide summaries of the positions expressed in the submissions. This appendix contains these written summaries, provided that they meet certain requirements set out in the notice of investigation. The Commission has not edited these summaries. This appendix also contains the names of other interested parties who filed written submissions during investigation but did not provide written summaries. A copy of each written submission is available in the Commission's Electronic Docket Information System (EDIS).¹³³⁷ The full text of the transcript of the Commission's June 2, 2015, hearing is also available on EDIS.

American Feed Industry Association

No written summary provided. Please see EDIS for full submission.

American Sugar Alliance

The U.S. sugar industry supplies American consumers with a safe, reliable, and affordable source of an essential ingredient in our nation's food supply, provides for 142,000 jobs across America and generates over \$19 billion annually to the U.S. economy.

U.S. sugar policy must be viewed in the context of the distorted, dump nature of the world sugar market. The world price is so distorted by the extensive subsidization and dumping of foreign sugar producers that, over the past 25 years, the world average cost of producing sugar has averaged fully 50% higher than the world price. The world sugar price has dropped by more than half since 2010/11 – from more than 32 cents per pound to less than 13 cents – again barely half of the current estimated world average cost of production.

As a result of market access commitments already entered into by our government in the WTO, NAFTA, CAFTA/DR, Colombia, Panama, and Peru, imports now account for about 30 percent of U.S. sugar consumption. These commitments present a chronic threat of over-supplying the U.S. market. Because of the highly distorted, dysfunctional world market, it is essential that the existing arrangements governing imports stay in place and not be further expanded.

The Cuban sugar industry is completely a creature of the Cuban government. It has not, and will not, operate on anything resembling market principles. While Cuban sugar production has declined sharply since the takeover by the Castro regime, Cuba's sugar industry would still have sufficient supplies (perhaps 600,000 - 1 million tons) available to cause serious disruption of the U.S. market. Opening the U.S. sugar market to Cuba would severely damage the U.S. industry, generate large government expenditures, and make the U.S. domestic sugar policy unworkable.

¹³³⁷ Available online on <http://edis.usitc.gov>.

Auto Care Association

No written summary provided. Please see EDIS for full submission.

Bacardi U.S.A., Inc.

No written summary provided. Please see EDIS for full submission.

BG Consultants, Inc.

No written summary provided. Please see EDIS for full submission.

California Olive Association

No written summary provided. Please see EDIS for full submission.

Caribbean Hotel and Tourism Association

The Caribbean Hotel & Tourism Association (CHTA) is a U.S. based organization which represents over 1,000 hotel and allied members with interest in the hotel and tourism sector throughout the region. We are a federation of 32 national hotel and tourism associations and represent the industry's interests regionally and globally.

First and foremost, CHTA welcomes the lifting of U.S. restrictions on the import of goods and services from Cuba inclusive of travel restrictions.

While we recognize fully that this will present our industry and the region with considerable challenges, we are also of the view that it presents the region's Government's, private sector interests, Cuba, the United States and other stakeholders with tremendous opportunities to:

- Improve the region's economies
- Reduce unemployment
- Control national debts
- Upgrade our industry's tourism product
- Increase investments and tourism arrivals
- Stimulate US and intra-Caribbean trade in goods and services

CHTA cautions the United States that Cuba's development in tourism should not be to the detriment of the rest of the Caribbean. Policies, practices and support emanating from the United States and within the region to stimulate the region's economies must be broadly applied. Overall tourism-related economic activity in the region must increase significantly, rather than there being

a shift from existing countries in the region to Cuba. The socio-economic downside of displacement would be enormous for other countries.

Taking advantage of the opportunities which are presented will require leadership and engagement by all stakeholders and in our view the United States must return to the stewardship role it played in the region's economic development several decades ago. The normalization of US-Cuba relations can be the catalyst for advancing a new Caribbean tourism and economic development agenda.

CHTA's paper, which accompanies our submission, provides a contextual backdrop of the various competitiveness issues facing Cuba and the region's tourism industry. It points to the broader ramifications facing Cuba and the region if these issues are not addressed. More importantly, it speaks to the opportunities presented through trade liberalization.

CHTA presents to the Commission and by extension to the United States Government a single recommendation: the creation of a Caribbean Basin Tourism Initiative (CBTI). This would recognize tourism services as a way in which to support both Cuba and the region's development.

Similar to the original Caribbean Basin Initiative of the 1980s, CBTI contemplates policy and technical support to the region with partners like the CHTA and our Government counterpart, the Caribbean Tourism Organization engaged with the United States and other stakeholders in the development and delivery of an economically sound, safe and stable Caribbean. We believe tourism is a viable vehicle for advancing this.

Cleber LLC

For over 50 years the US policy has relied on forcing a change of government in Cuba through the use of Economic strangulation (The Embargo) of the Castro regime. As the Soviet Union and now Venezuela (both Cuban Economic supporters) have experienced economic collapses themselves, the Cuban Economic model is being changed in favor of opening to the Global Economy. This in itself could be considered as proof that the Embargo has achieved its intention, force change in Cuba and ultimately the end of the Castro dynasty. Whether it is the case that the Embargo provoked the change or not, is irrelevant, what is relevant is that the need to change is now acknowledged by Cuba. This in turn has initiated a change of US policy towards Cuba by President Obama.

The new economic framework defined by Laws 118 & 113 of Cuba, define the new economic framework being sought. It is based on incentivizing foreign investment in Cuba. Although the Embargo could have accelerated this change, as it has happened in other Socialist Experiments (China, Viet Nam, etc.) this change was inevitable. The fact is that, it has already started and the Cuban people have welcomed it. It is up to other countries in the EU and the US to make it irreversible by taking the steps necessary to ensure it takes root as soon as possible.

President Obama announces on Dec. 17, 2014 a new policy toward US and Cuba relations. On January 2015 and September 2015, Treasury and Commerce announce details on amendments to the Cuba Sanctions Regulations (CACR) and (EAR).

DevTech Systems, Inc.

No written summary provided. Please see EDIS for full submission.

Feinberg, Richard and Ashley Miller

No written summary provided. Please see EDIS for full submission.

General Cigar Company

The premium hand-rolled cigar sector is a prime example of the difficult issues that U.S. policymakers must resolve before normalizing relations with Cuba. The story of the cigar sector begins with expropriations and registered compensation claims, but it does not end there. Rather, it includes “bifurcation” of globally famous cigar brands and a complete lack of foreign access to Cuba’s vertically integrated, State-controlled tobacco sector. The original expropriation losses have been compounded by a complete bar on (1) accessing raw Cuban tobacco and (2) producing or marketing 100% Cuban “puro” premium cigars.

General Cigar owns several Cuban heritage trademarks that the Cuban government believes it effectively expropriated many decades past. The U.S. courts have soundly rejected this contention, confirming that title (at least in the U.S.) resides with the exile families and with General Cigar. In other jurisdictions, though, the confiscation announced by the Cuban government in 1960 is viewed as having been, while uncompensated, nevertheless effective in transferring ownership. Thus General Cigar cannot sell famous cigar brands like Partagas in the rest of the world – the Cuban government licenses those privileges to a company other than the one partnered with the brands’ founders.

Conflicting IP claims are only part of the problem. There is a broader concern about the trade and investment barriers that Cuba maintains. Cuba’s cigar sector is not at all normal. It is fully state-monopoly-controlled, with no ability for companies other than Cubatabaco/Habanos to access the Cuban crop, establish cigar production operations in Cuba, or distribute Cuban-made products. Unless removed via domestic reforms in Cuba, the distortions and trade and investment barriers now in place will persist far beyond the expected spike in purchases of Cuban-made products and subsequent market settling on the basis of quality and price. This is ultimately a trade problem similar to, but more serious than, that posed by other “single desk seller” scenarios like the Wheat Boards in Canada and Australia that have rightly been treated as important issues in U.S. trade policy.

In short, without thoughtful and targeted reforms, reopening cigar trade with Cuba would only serve to reward anticompetitive actions and to enshrine cold war era market distortions. Accordingly, cigar trade should not resume until the distortions in the tobacco sector, which emerged over many decades during the embargo period, have been effectively addressed through domestic legal reforms and enforceable government-to-government commitments.

This problem merits professional and official examination in the instant Section 332 investigation. The Commission's report should detail Cuba's restrictions on investment in this sector, and restrictions on access to tobacco and finished cigars produced in Cuba. Ideally, the report will also set out the Commission's expert opinion on what kinds of domestic reforms in Cuba, and disciplines at the government-to-government level, would be needed for legalization to proceed without undermining the competitive position of pertinent U.S. enterprises by reason of the market distortions that have built up during the embargo period.

Institute for Cuban and Cuban-American Studies, University of Miami

The possibilities of entering the Cuban market is of interest to American enterprises. However, upon closer examination the Cuban market offers American companies a very unfavorable risk-benefit analysis.

Unlike most markets where the corporate due diligence focuses on examining the market conditions for doing business *in* a given country; the Cuban due diligence must begin by examining the conditions for doing business *with* Cuba. That is, with the Cuban government and more specifically with the Cuban military, which controls most businesses in the island.

- There is no private sector in Cuba. The *cuentalpropistas* are individuals that have been granted permission by the State to operate in one of 201 highly specified domestic trade activities and under very restricted conditions.
- Doing business in Cuba means doing business in partnership with the Cuban military.
- Arbitrary legal system is controlled by Cuba's military.
- The State controlled legal system in Cuba fails to protect foreign investors. Judges and lawyers are not independent and follow party and military orders.
- The Military controls most of the economy. Military officers manage the means of production, economic institutions and financial activities.
- Corruption is widespread and it is acceptable to steal from employers.
- Corporations doing business in Cuba are required to cooperate with State Security.
- A major obstacle for foreign investors is the collapsing infrastructure.
- Roads and bridges are unsafe and in need of urgent repair and the state lacks the needed funds to make the repairs.
- Cuba's principal ports (Havana, Matanzas, Santiago de Cuba and Cienfuegos) are unable to accommodate large, modern vessels.
- Power plants operate below their estimated capacity level.
- The water supply and sewer infrastructure is at a breaking point and close to catastrophic failure.

- The State controls the flow of high tech internet equipment and information that reaches the island.
- The regime violates the rights of workers to bargain for wages and labor conditions with the complicity of foreign entities engaged in joint ventures with the government.
- There are no free, independent labor unions. All workers are hired by the State and assigned to foreign corporations. Corporations pay the State in hard currency, workers get paid in pesos (1/10 of the foreign payment).
- Cubans have the lowest purchasing power per capita in all of Latin America.
- Cuba is among the most vulnerable recipients of Venezuelan oil subsidies. If Venezuela's economy collapses, the consequences for Cuba could be catastrophic.

Given these conditions and risks, only very daring investors are likely to pluck large sums of money into Cuba. A hostile and controlled legal system together with a collapsing infrastructure does not make Cuba an attractive investing location. The issue of confiscated properties is still pending. All U.S. and Cuban properties were confiscated in the 1960's. Many U.S. firms as well as Cuban-American stand ready to use American courts to try to recover their losses or at least to prevent U.S. trade with and investment in Cuba.

International Trademark Association

No written summary provided. Please see EDIS for full submission.

National Association of Wheat Growers and U.S. Wheat Associates

No written summary provided. Please see EDIS for full submission.

Press, Larry

No written summary provided. Please see EDIS for full submission.

Sandler Trade LLC

No written summary provided. Please see EDIS for full submission.

Stewart and Stewart

No written summary provided. Please see EDIS for full submission.

Sweetener Users Association

No written summary provided. Please see EDIS for full submission.

U.S. Chamber of Commerce

No written summary provided. Please see EDIS for full submission.

U.S. Meat Export Federation

No written summary provided. Please see EDIS for full submission.

Appendix E

List of Authorized *Cuentapropistas*

List of Authorized *Cuentapropistas*¹³³⁸

Categories in which Cubans can seek licenses, as of September 2013

1. Musical instrument tuning and repair
2. Water delivery
3. Construction laborer
4. Animal rental
5. Formal wear rental
6. Knife grinder
7. Party entertainer (i.e., clowns, magicians)
8. Mule driver
9. Artisan (i.e., arts and crafts maker)
10. Mechanical saw operator
11. Babysitter/nanny
12. Barber
13. Embroiderer/knitter
14. Wagon or pushcart operator
15. Flower bed arranger
16. Carpenter
17. Mobile handcart hawker of agricultural products
18. Locksmith
19. Furniture repairman
20. Collector and payer of bills
21. Operator of children’s fun wagon pulled by pony or goat
22. Buyer and seller of records (including CDs)
23. Used book seller
24. Builder/seller/installer of radio and TV antennas
25. Craftsman/seller/repairman of wicker furniture
26. Breeder/seller of pets
27. Window glass repair
28. Animal caretaker
29. Public bathroom attendant
30. Caretaker of elderly/handicapped
31. Public park caretaker
32. Leather tanner (except cows and horses)
33. Decorator
34. Palm tree trimmer
35. Restaurant owner (*paladares*)
36. Café owner (*cafetería*)

¹³³⁸ English version taken from Feinberg, Richard. “Soft Landing in Cuba? Emerging Entrepreneurs and Middle Classes,” Brookings Institution (November 2013), 54–57. Original citation: Gaceta Oficial, No. 027, Special Edition, Resolution 42/2013, September 26, 2013, Annex; and Associated Press, “List of 178 Cuban Private-Sector Jobs,” January 30, 2011. Activities 170–87 are authorized by the Office of the Historian of the City of Havana (“Havana Vieja” or “Old Havana”).

37. Non-alcoholic beverage seller (for home delivery)
38. Café owner (light snacks and beverages)
39. Street-based seller of food and beverages
40. Charcoal manufacturer/seller
41. Wine maker/seller
42. Maker of yokes, harnesses and rope for oxen
43. Electrician
44. Automobile electrician
45. Building superintendent
46. Bookbinding
47. Electric motor rewiring
48. Animal trainer
49. Flower wreath arranger
50. Button coverer
51. Photographer
52. Car washer/oil changer
53. Bus/train/taxi stop barker
54. Engraver of numbers
55. Blacksmith/seller of horseshoes and nails
56. Trader of scrap metals
57. Driving instructor
58. Sports trainer (except martial arts and diving)
59. Gardener
60. Clothes washing/ironing
61. Woodsmen/logger
62. Shining shoes
63. Sparkplug cleaner and tester
64. Septic tank repairman and cleaner
65. Manicurist
66. Make-up artist
67. Masseur
68. Plasterer
69. Refrigerator mechanic
70. Typist and copier
71. Messenger
72. Seamstress/tailor
73. Miller of grains
74. Audio systems installer/operator
75. Tire repair
76. Children's ride operator
77. Parking attendant (including cars and bicycles)
78. Hairdresser
79. Animal groomer
80. Cleaning/household help

81. Car painter
82. Furniture painter and polisher
83. House painter
84. Sign painter
85. Ornamental fish farmer
86. Plastic covering maker for IDs
87. Plumber
88. Well-digger
89. Producer/seller of items used in the home (self-made or made by other self-employed)
90. Producer/seller of rubber accessories
91. Producer/seller of clay goods (pots, planters, cookware)
92. Producer/seller of bricks and tiles
93. Producer/seller of articles and animals for religious use
94. Producer/seller of harnesses, blankets, and saddles
95. Producer/seller of costume jewelry
96. Shoemaker/shoe salesman
97. Producer/seller of brooms and brushes
98. Producer/seller of plaster figurines
99. Grower/seller of ornamental plants
100. Piñata maker/seller
101. Grower/seller of plants for animal feed and medicinal purposes
102. Music/art instructor
103. Shorthand, typing, and language instructor
104. Computer programmer
105. Metal polisher
106. Collector/seller of natural resources (i.e., sea shells)
107. Collector/seller of recyclables
108. Watch repair
109. Leather repair
110. Jewelry repair
111. Bedframe repair
112. Automobile battery repair
113. Bicycle repair
114. Costume jewelry repair
115. Fence and walkway repair
116. Stove/range repair
117. Mattress repair
118. Small household goods repair
119. Office equipment repair
120. Electronic equipment repair
121. Mechanical and combustion equipment repair
122. Eyeglass repair
123. Sewing machine repair
124. Saddle and harness repair

125. Umbrella and parasol repair
126. Disposable lighter repair and refill
127. Tutor (currently employed teachers not eligible)
128. Doll and toy repair
129. Art restorer
130. Night watchman or building doorman
131. Welder
132. Leather craftsman
133. Upholsterer
134. Roofer
135. Accountant/tax preparation
136. Textile dyer
137. Machinist
138. Roaster (i.e., of peanuts, coffee)
139. Part-time farm laborer
140. Document translator
141. Shearer (as in sheep)
142. Thresher
143. Vegetable/fruit street vendor (from fixed venues)
144. Shoe repair
145. Contracted employee of a self-employed
146. Event planner
147. Mason
148. Real estate broker
149. Repair of measurement instruments
150. Food wholesaler
151. Food retailer (i.e., kiosks and farmers markets)
152. Room/home rental
153. Postal agent
154. Telecommunications agent (retail)
155. Building construction services
156. Car body remolding
157. Maker/seller of marble objects
158. Maker/seller of soaps, dyes
159. Welder
160. Iron worker
161. Welder/flamecutter
162. Maker/seller of aluminum products
163. Maker/seller of non-ferrous metals
164. Floor polisher
165. Repairer of water pumps
166. Space rentals in one's home to self-employed
167. Insurance agent
168. Maker/seller of food and beverages in "China Town"

169. Private construction contractor (in Havana “Old Town”)
170. Horse and carriage rides
171. Antique dealer
172. Habaneras (women posing in colorful colonial attire)
173. Fortunetellers
174. Folkloric dancers
175. Mambises-style musical groups (traditional Cuban music)
176. Caricaturists
177. Artificial flowers seller
178. Painters (who sell pictures in the street)
179. Dandy (man dressed in colonial garb)
180. Hair braider
181. Fresh fruit peeler
182. Dance duo “Amor” (traditional Cuban dances)
183. Benny Moré dance team
184. Trained dog exhibitor
185. Musical duo “Los Amigos”
186. Extras (people in period dress)
187. Traditional barber
188. Truck driver
189. Station wagon driver
190. Small-truck driver
191. Bus driver
192. Minibus driver
193. Taxi driver
194. Handcar operator (on rails)
195. Jeep driver
196. Passenger boat operator
197. Motorcycle driver
198. Three-wheeled pedal taxi driver
199. Cart operator
200. Horse-drawn carriage operator
201. Pedal taxi driver

Table E.1: Groupings of *cuentapropistas* by tax category¹³³⁹

	Group description	Examples of designated activities
Group 1	Production and sale of food and beverages	Restaurants (<i>paladares</i>) with up to 50 seats, snack shops (<i>cafeterías</i>), and home delivery
Group 2	Production and sale of artisan and industrial products	Artisan crafts, pottery, shoes, religious articles (including animals for religious purposes)
Group 3	Personal and technical services	Repair of electrical and mechanical equipment, beauty salons, animal grooming, clothing rentals, event planning, photography
Group 4	Room rentals	Bed and breakfasts
Group 5	Construction and remodeling	Carpenters, bricklayers, electricians, plumbers
Group 6	Transportation of persons and materials	Includes trucks, boats, and animal transport
Group 7	Other activities	Music and other arts teachers, sports instructor, computer programming, flower sales, party entertainers
“Simple activities”	A category that benefits from a simplified tax regime	Repairing musical instruments, produce street vendors, care of seniors and the disabled, parking attendants, driving instructors, gardeners, masseurs, messengers, sales of household appliances, translators, accountants, and watch repairs

¹³³⁹ Feinberg, Richard. “Soft Landing in Cuba? Emerging Entrepreneurs and Middle Classes,” Brookings Institution, November 2013, 12. Original citation: *Gaceta Oficial*, No. 03, Special Edition, Resolution 21/2013, January 29, 2013; *Gaceta Oficial*, No. 027, Special Edition, Resolution 42/2013, September 26, 2013.

Appendix F

Regulatory and Legislative Framework of the U.S. Restrictions on Trade with and Travel to Cuba

The U.S. restrictions on trade and travel between the United States and Cuba were developed in the course of 11 presidential administrations over more than 55 years. The restrictions involve a series of statutory provisions, including amendments to those provisions, presidential orders, and agencies' implementing regulations that provide the framework under which trade with and travel to Cuba are conducted. Trade and travel between the United States and Cuba have fluctuated over time as a result of the evolution of the legislation, presidential orders and proclamations, and implementing regulations.

The United States initially recognized the Cuban government headed by Fidel Castro on January 7, 1959.¹³⁴⁰ The relationship, however, quickly deteriorated as the Castro-led government began to nationalize foreign-owned assets and to ally itself with the Soviet Union. From the early 1960s through the late 1970s, legal trade and travel between Cuba and the United States were virtually eliminated. For a short period in the late 1970s and early 1980s, U.S. restrictions on travel and remittances were relaxed; then, for most of the 1980s and 1990s, they were tightened again through regulatory as well as legislative changes. In the 2000s, U.S. legislation was passed to facilitate increased agricultural and medical exports; however, restrictions on travel, remittances, financial payments, and credit remained and, in some cases, increased. Recently, the Obama administration has relaxed travel and remittance restrictions and restored diplomatic relations (for a more extensive timeline of U.S.-Cuba relations, see chapter 3).

Implementation of the Embargo

In response to Cuba's nationalization of oil refineries owned by U.S. corporations, on July 6, 1960, President Eisenhower signed Proclamation 3355 ordering the reduction of Cuba's 1960 sugar import quota by 700,000 short tons (a 22 percent reduction) under his authority in the Sugar Act of 1948.¹³⁴¹ Also in July 1960, Cuba passed Law 851 authorizing the seizure of U.S. nationals' property.¹³⁴² The U.S.-Cuba relationship worsened as Cuba expropriated all U.S.-owned as well as other foreign-owned property and assets, including U.S.-owned banks on September 17, 1960.¹³⁴³ In response, in October 1960 the United States banned all exports to Cuba, with some exceptions, under the authority of the Export Control Act (ECA) of 1949.¹³⁴⁴ Diplomatic relations with Cuba were severed in January 1961.¹³⁴⁵

¹³⁴⁰ USDOS, Office of the Historian, Memorandum from the Secretary of State to the President, January 7, 1959.

¹³⁴¹ Cuba's 1960 sugar quota was originally set at 3,119,655 short tons. Of this, 2,379,903 short tons had been certified for entry, leaving 739,752 short tons to be certified. Proclamation No. 3355, "Determination of Cuban Sugar Quota," July 6, 1960, 25 Fed. Reg. 6414 (1960); USDOS, OH, Memorandum of a Discussion, July 6, 1960.

¹³⁴² Travieso-Díaz, "Alternative Recommendations for Dealing," August 2002, 103.

¹³⁴³ Shelton, "Historical Development of the Cuban Banking System," August 11–13, 1994. See also PBS, "Fidel Castro, Timeline: Post-Revolution Cuba" (accessed December 4, 2015). Expropriation claims by nationals of other countries were considerably smaller than those of U.S. nationals and have mostly been settled through agreements between Cuba and Spain, France, Switzerland, the United Kingdom, and Canada. See Travieso-Díaz, "Alternative Recommendations," August 2002, 104.

¹³⁴⁴ The Secretary of Commerce was authorized to grant exceptions for medicines and non-subsidized foodstuffs.

¹³⁴⁵ USDOS, OH, Telegram, January 3, 1961.

Section 620 of the Foreign Assistance Act of 1961 authorized the President to impose economic sanctions against Cuba and denied Cuba all U.S. foreign assistance.¹³⁴⁶ On February 7, 1962, the Kennedy administration used this authority to prohibit nearly all trade with Cuba, including imports, by issuing Proclamation 3447.¹³⁴⁷ The Treasury Department issued the Cuban Import Regulations to implement Proclamation 3447.¹³⁴⁸ Section 401 of the Tariff Classification Act (TCA) of 1962 also suspended Cuba's preferential and most-favored-nation tariff treatment in May 1962, even though by then virtually all trade was banned.¹³⁴⁹

The Department of the Treasury established the Office of Foreign Assets Control (OFAC) in October 1962.¹³⁵⁰ On July 8, 1963, OFAC published the Cuban Assets Control Regulations (CACR) to replace the Cuban Import Regulations.¹³⁵¹ The CACR are the primary regulations under which the U.S. government applies economic sanctions imposed on Cuba through Congressional legislation and presidential proclamation.¹³⁵² Although the CACR do not specifically forbid travel to Cuba, they specify the conditions under which all persons subject to U.S. jurisdiction may complete transactions in Cuba and with Cuban citizens and entities.¹³⁵³ Thus the CACR directly and indirectly affect all transactions between U.S. citizens and Cuba and its citizens, including all transactions related to and necessary for trade with and travel to Cuba.

As issued in 1963, section 515.201 of the CACR prohibited unlicensed transactions by or on behalf of Cuba or Cuban citizens by any institution or individual subject to the jurisdiction of the United States.¹³⁵⁴ Section 515.204 prohibited the unlicensed purchase, transport, or import of any

¹³⁴⁶ "SEC. 620. [22 U.S.C. § 2370] PROHIBITIONS AGAINST FURNISHING ASSISTANCE.—(a) 23(1) No assistance shall be furnished under this Act to the present government of Cuba. As an additional means of implementing and carrying into effect the policy of the preceding sentence, the President is authorized to establish and maintain a total embargo upon all trade between the United States and Cuba."

¹³⁴⁷ Proclamation No. 3447, "Embargo on All Trade with Cuba"; 27 Fed. Reg. 1085. The Kennedy restrictions left in place the authority of the Secretary of Commerce to grant exceptions for medicines and non-subsidized foodstuffs.

¹³⁴⁸ U.S. Treasury, *Annual Report of the Secretary of the Treasury*, 1963.

¹³⁴⁹ The TCA of 1962 required suspension of reduced duty rates once the United States determined a country was "dominated or controlled by the foreign government or foreign organization controlling the world Communist movement." Sec. 401. (a) states "Cuba is hereby declared to be a nation described in section 5 of the Trade Agreements Extension Act of 1951, as amended (19 U.S.C. § 1362, relating to imports from nations and areas dominated or controlled by the foreign government or foreign organization controlling the world Communist movement). Articles which are—(1) the growth, produce, or manufacture of Cuba, and (2) imported on or after the date of the enactment of this Act, shall be denied the benefits of concessions contained in any trade agreement entered into under the authority of section 350 of the Tariff Act of 1930, as amended (19 U.S.C. § 1351)." Tariff Classification Act of 1962, Pub. L. No. 87-456, § 401, 76 Stat. 72 (1962).

¹³⁵⁰ The Treasury Department has enforced various economic sanctions dating to before the War of 1812. OFAC and its predecessors—the Office of Foreign Funds Control (1940–47), the Office of International Finance (1947–50), and the Division of Foreign Assets Control (1950–62)—were established under the authority of section 5(b) of the Trading with the Enemy Act (TWEA) of 1917 and more recently section 620(a) of the Foreign Assistance Act. U.S. Treasury, "About Terrorism and Financial Intelligence" (accessed on November 17, 2015).

¹³⁵¹ Date given in 80 Fed. Reg. 2291 (January 16, 2015).

¹³⁵² The CACR were issued under the authority of section 5(b) of the Trading with the Enemy Act and also under section 620(a) of the Mutual Defense Assistance Act of 1951.

¹³⁵³ Cuban Asset Control Regulations, 28 Fed. Reg. 6974 (Jul 9, 1963) to be codified 31 C.F.R. § 515; 80 Fed. Reg. 2291 (January 16, 2015).

¹³⁵⁴ 28 Fed. Reg. 6974 (July 9, 1963)

merchandise of Cuban origin, or that has been located or transported from or through Cuba, or is made, in whole or in part, from any article which is the growth, produce, or manufacture of Cuba.¹³⁵⁵ Section 515.533 authorized transactions incident to the export of goods, wares, and merchandise of the United States, but only when the exports were authorized by the Department of Commerce.¹³⁵⁶ The CACR have been modified since they were first issued to respond to presidential directives, reflect internal review and interpretation, and implement congressional legislation.¹³⁵⁷

Although the Department of Commerce was authorized to issue export licenses, and the Secretary of Commerce was authorized to grant exceptions for medical supplies and foodstuffs, virtually all transactions with Cuba were controlled by the CACR. In May 1964, general licensing for U.S. exports of food, medicine, and medical supplies was revoked and a broad policy denying specific licensing of commercial sales was adopted.¹³⁵⁸ Thus, all direct travel, trade, and financial dealings with Cuba and Cuban citizens—including family travel and remittances—were prohibited from May 1964 through 1977.¹³⁵⁹ In response to policy changes over time, the Treasury Department has amended the CACR several times consistent with its authority.

These U.S. policies were reinforced, in effect, by Cuban policies, both real and de facto, inhibiting family ties and remittance flows. These included emigration policies, banking and monetary policies, and official stigmatization of Cubans receiving remittances.¹³⁶⁰

A Period of Relaxed Restrictions on Travel and Remittances

Starting in the 1970s, U.S.-Cuba relations improved as a result of the U.S. détente with the Soviet Union, the defeat of Marxist guerrilla movements in Latin America, and the end of multilateral economic sanctions against Cuba by the Organization of American States. In 1973, the two governments signed an anti-hijacking agreement.¹³⁶¹ The Carter administration signed an accord on fishing rights and maritime boundaries in 1977, and the two countries opened interest sections in each other's capitals.¹³⁶²

Although direct trade with Cuba was still prohibited, foreign subsidiaries of U.S. firms could send goods to Cuba. In 1975, third-country subsidiaries of U.S. firms were required to obtain individual

¹³⁵⁵ Ibid.

¹³⁵⁶ Ibid.

¹³⁵⁷ 31 C.F.R. § 515.

¹³⁵⁸ 29 Fed. Reg. 6381 (May 15, 1964).

¹³⁵⁹ Some goods and cash remittances made their way to Cuba during this period; however, the use of these remittances was discouraged by Cuban policy. Barberia, "Remittances to Cuba: An Evaluation," September 2002, 27.

¹³⁶⁰ Barberia, "Remittances to Cuba: An Evaluation," September 2002, 6.

¹³⁶¹ USDOS, OH, Memorandum from Serban Vallimarescu, February 13, 1973.

¹³⁶² Oberdorfer, "U.S., Cuba Sign Pacts on Fishing," April 29, 1977.

specific licenses to trade with Cuba.¹³⁶³ Between 1980 and 1992, OFAC and the Bureau of Export Administration (BXA) issued 2,938 licenses to more than 100 U.S.-owned foreign subsidiaries, covering up to \$2.6 billion of exports to Cuba and up to \$1.9 billion of imports from Cuba.¹³⁶⁴ Cuban officials reported that Cuba purchased \$800 million in agricultural and medical goods from the foreign subsidiaries of U.S. companies in 1992 alone.¹³⁶⁵ However, as described below, The Cuban Democracy Act of 1992 ended licensing of trade with Cuba by foreign subsidiaries of U.S. firms in 1993.

The Treasury Department amended the CACR in March 1977 to liberalize travel and remittance policy.¹³⁶⁶ Previously, travel-related transactions were subject to two types of licenses: general licenses (not requiring an application to OFAC, but subject to reporting and recordkeeping requirements) and specific licenses (requiring applications to OFAC that were considered on a case-by-case basis). The amended regulations allowed family and tourist travel under general licensing provisions and authorized direct flights between the United States and Cuba. In addition, family remittance limits were increased from \$300 to \$500 per quarter. In 1978, OFAC permitted remittances via licensed family remittance forwarders or U.S. banks.¹³⁶⁷ Nonetheless, the CACR still restricted direct financial transfers; thus, remittances had to be hand carried or transferred via a third-country financial institution, increasing costs.¹³⁶⁸

Restrictions Tightened during 1980s and 1990s

U.S.-Cuba relations began to deteriorate again during the mid-1970s as the Cuban military increased its activity in Africa, most notably during Cuba's interventions in Angola in 1975 and Ethiopia in 1977.¹³⁶⁹ On March 1, 1982, the Reagan administration added Cuba to the list of state sponsors of terrorism, pursuant to section 6(j) of the Export Administration Act of 1979.¹³⁷⁰ This action subjected Cuba to various laws and regulations that limited trade benefits, foreign aid, and support from international financial institutions, and required validated licenses for nearly all exports to countries on the list.¹³⁷¹ The Reagan administration also revoked general licensing for travel expenditures in 1982, effectively banning all the U.S. tourist travel to Cuba that had been allowed by the changes made during the Carter administration. However, travel-related expenditures by U.S. government officials, employees of news or filmmaking organizations, persons

¹³⁶³ Before 1975, U.S.-owned foreign subsidiaries were allowed to trade with Cuba without obtaining a specific license. U.S. GAO, General Government Division, *Report to the Honorable Charles B. Rangel*, March 15, 1994, 6.

¹³⁶⁴ Licenses are requested and issued for the total amount of expected trade within a given period; thus, these values represent the upper limits of potential trade between foreign subsidiaries of U.S. companies and Cuba. U.S. GAO, General Government Division, *Report to the Honorable Charles B. Rangel*, March 15, 1994, 7; U.S.-Cuba Trade and Economic Council, Inc., "Realities of Market Cuba" (accessed September 23, 2015).

¹³⁶⁵ Cuban government official, interview by USITC staff, Havana, June 17, 2015.

¹³⁶⁶ 42 Fed. Reg. 16621 (March 29, 1977).

¹³⁶⁷ Barberia, "Remittances to Cuba," September 2002, 6.

¹³⁶⁸ Ibid.

¹³⁶⁹ During the 1970s and 1980, Cuba was militarily involved in 17 African nations and three African insurgencies. Falk, "Cuba in Africa," Summer 1987.

¹³⁷⁰ CRS, *Cuba and the State Sponsors of Terrorism List*, May 13, 2005, 3.

¹³⁷¹ USDOS, "State Sponsors of Terrorism Overview" (accessed January 8, 2016).

engaging in professional research, and persons visiting close family relatives continued to be allowed under general licenses.¹³⁷²

The Cuban Democracy Act of 1992 (CDA) strengthened selected provisions of the economic sanctions against Cuba.¹³⁷³ CDA Section 1706 prohibited foreign subsidiaries of U.S. firms from engaging in any transactions with Cuba; increased restrictions on vessels associated in any way with Cuba or trade with Cuba; and instructed the President to maintain strict limits on remittances to Cuba.¹³⁷⁴ Section 1704 authorized the President to prohibit economic and military assistance, military sales, or debt forgiveness to any country that provided assistance to Cuba.¹³⁷⁵ Section 1710 provided authority to the Secretary of the Treasury to impose civil fines and forfeitures of property on violators of U.S. sanctions regulations.¹³⁷⁶ Section 1705 subjected authorized medical exports to on-site verification of use.¹³⁷⁷ However, it also authorized telecommunications services between the United States and Cuba, payment to the Cuban government for telecommunications services, and some direct mail services.¹³⁷⁸

The Cuban Liberty and Democratic Solidarity Act of 1996 (also referred to as the Libertad Act or the Helms-Burton Act) made many of the regulations and provisions implementing the embargo mandatory. Specifically, section 102(h), “Codification of Economic Embargo,” stated “The economic embargo of Cuba, as in effect on March 1, 1996, including all restrictions under part 515 of title 31, Code of Federal Regulations, shall be in effect upon the enactment of this Act, and shall remain in effect, subject to section 204 of this Act.”¹³⁷⁹ Section 104 required U.S. representatives to oppose Cuban membership in international financial institutions and to restrict U.S. payments to those international financial institutions that provided assistance to Cuba over U.S. objections.¹³⁸⁰ Regarding confiscated property, sections 205 and 207 of Helms-Burton made lifting U.S. sanctions dependent upon the settlement of claims; section 302 created legal liability for Cuban government entities and foreign investors found to be trafficking in confiscated property; and section 401 directed the Secretary of State to deny visas and entry into the United States to individuals who have confiscated or traffic in confiscated property.¹³⁸¹

Various sections of the Helms-Burton Act outlined the conditions and actions necessary for the economic embargo of Cuba to be lifted.¹³⁸² Section 204 specifically outlines presidential actions necessary for termination of the economic embargo of Cuba: “Upon submitting a determination to the appropriate congressional committees under section 203(c)(1) that a transition government in

¹³⁷² CRS, *Cuba: U.S. Restrictions on Travel and Remittances*, April 10, 2015, 17.

¹³⁷³ The ability of the Secretary of Commerce to waive restrictions and issue specific licenses for exports of medicines, medical devices, and foodstuffs was not affected by the CDA. Cuban Democracy Act of 1992 (CDA), 22 U.S.C. § 6001-6010; Public Law 102-484—October 23, 1992, 106 Stat. 2575–2581.

¹³⁷⁴ Public Law 102-484—October 23, 1992, 106 Stat. 2575–2581.

¹³⁷⁵ *Ibid.*

¹³⁷⁶ *Ibid.*

¹³⁷⁷ *Ibid.*

¹³⁷⁸ *Ibid.*

¹³⁷⁹ Public Law 104-114—March 12, 1996, 110 Stat. 794.

¹³⁸⁰ *Ibid.*

¹³⁸¹ Public Law 104-114—March 12, 1996, 110 Stat. 811, 815, 822.

¹³⁸² *Ibid.*

Cuba is in power, the President, after consultation with the Congress, is authorized to take steps to suspend the economic embargo of Cuba.”¹³⁸³ Section 205 states that neither Fidel or Raúl Castro can be a part of a transitional or democratically elected government for purposes of lifting the embargo.¹³⁸⁴

Travel and remittance regulations were altered several times during the 1990s, initially becoming more stringent and then easing later in the decade. In 1991, the CACR subjected family travel to case-by-case review requiring proof of hardship, and remittance limits were lowered from \$500 per quarter to \$300 per quarter, payable to close family members only.¹³⁸⁵ This reduced the maximum amount that could be legally sent from the United States to Cuba by 40 percent annually. In August 1994, family remittances were subjected to case-by-case authorization and limited to humanitarian purposes requiring demonstration of extreme hardship, virtually eliminating remittances.¹³⁸⁶ In 1999, however, remittances were expanded beyond close family members, and any U.S. citizen could remit up to \$300 per quarter to nearly any Cuban family, although senior-level Cuban government officials and communist party officials were excluded.

Legislation and Regulations to Enhance Opportunities for U.S. Agricultural Exports

Congressional legislation providing Presidential authority to impose the economic embargo of Cuba have generally delegated administration of the economic embargo of Cuba to two U.S. agencies: the Department of Commerce, via the Bureau of Industry and Security (BIS),¹³⁸⁷ and the Department of Treasury, via OFAC. These two agencies are the primary sources of specific regulations regarding trade and travel between Cuba and the United States. Licensing of U.S. exports to Cuba is administered by BIS. Imports from Cuba and all financial transactions involving Cuban assets, including regulations that affect travel, are administered by OFAC. Processes by which these two agencies administer various regulations—primarily governing agricultural trade—were altered by the Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA).¹³⁸⁸

Historically, under BIS regulations, the general policy was to deny specific licenses for exports and re-exports to Cuba of all items subject to the Export Administration Regulations (EAR).¹³⁸⁹ The Secretary of Commerce was initially given discretion over exports of medicine, medical devices, and foodstuffs when sanctions were first imposed in 1960; thus, exports of medicine, medical devices, and foodstuffs were initially subject to less restrictive general licensing provisions.¹³⁹⁰ In May 1964, however, this discretionary authority was used to revoke general licensing for these products, and exports of medicine, medical devices, and foodstuffs were made subject to the more restrictive

¹³⁸³ Public Law 104–114–March 12, 1996, 110 Stat. 810.

¹³⁸⁴ Public Law 104–114–March 12, 1996, 110 Stat. 812.

¹³⁸⁵ 56 Fed. Reg. 49846 (October 2, 1991).

¹³⁸⁶ 59 Fed. Reg. 44884–44886 (August 30, 1994).

¹³⁸⁷ Formerly the Bureau of Export Administration (BXA).

¹³⁸⁸ Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA), 22 U.S.C. § 7201–7211.

¹³⁸⁹ USDOC, BIS, “Policy Guidance, Sanctioned Destinations, Cuba” (accessed September 29, 2015).

¹³⁹⁰ 25 Fed. Reg. 10006 (October 20, 1960); 29 Fed. Reg. 6381 (May 15, 1964).

case-by-case licensing.¹³⁹¹ TRSA, however, directed the President to remove unilateral sanctions on agricultural commodities, medicines, and medical devices, subjecting these products to specific licensing under less restrictive regulations (see below) that substantially increased the potential for U.S. agricultural exports to Cuba.¹³⁹²

Prior to TSRA, all license applications for U.S. exports and re-exports to Cuba were reviewed on a case-by-case basis, including those for agricultural commodities, medicine, and medical devices. Applications for exempt products, including foodstuffs, were subject to the same restrictions as all other products under the EAR, and thus were generally denied. The process could be lengthy because, while applications were to be reviewed within 90 days, various actions related to processing applications did not count against the 90-day limit. (An example would be an agency asking the requestor for additional information.)¹³⁹³

Under TSRA, BIS created License Exception Agricultural Commodities (AGR).¹³⁹⁴ Under AGR, BIS authorizes listed agricultural exports subject to less stringent criteria, provided that the transaction meets all the criteria in section 740.18(a) of the EAR.¹³⁹⁵ The U.S. government has up to 11 business days to review applications submitted under AGR before shipment.¹³⁹⁶ Exporters are required to access the BIS's Internet application and notification system prior to shipment to ensure that the U.S. government has no objections to the proposed transaction.¹³⁹⁷ Reasons for objecting could include a failure to meet eligibility requirements under section 740.18, which are as follows: (1) the goods meet the definition of "agricultural commodities;" (2) the goods must be categorized as EAR99; (3) the export or re-export must be pursuant to a written contract; (4) the export or re-export must be made within 12 months of signing the contract or within 12 months of notification of no objections; and (5) BIS must be notified prior to exporting or re-exporting the eligible products.¹³⁹⁸

OFAC has substantial influence over both trade and travel between the United States and Cuba, because virtually all financial transactions between U.S. residents and entities and Cuba and its citizens are subject to OFAC regulations. While travel to Cuba is not explicitly prohibited by the CACR, nearly all expenditures required to physically travel to Cuba are subject to these regulations.

Specific licenses may be issued for a variety of express purposes on a case-by-case basis with the exception of tourism; section 7209 of TSRA specifically authorizes travel related to commercial agricultural sales, while specifically prohibiting tourist travel.¹³⁹⁹ Section 515.560 of title 31 in the

¹³⁹¹ Ibid.

¹³⁹² Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA), 22 U.S.C. 7201–7211.

¹³⁹³ Executive Order 12981, Administration of Export Controls, 60 Fed. Reg. 62981 (December 8, 1995).

¹³⁹⁴ USDOC, BIS, "Sanctioned Destinations: Cuba" (accessed September 29, 2015).

¹³⁹⁵ Ibid. For a more detailed description of BIS AGR regulations and processes, see chapter 3 in USITC, *U.S. Agricultural Sales to Cuba*, July 2007.

¹³⁹⁶ USDOC, BIS, "Sanctioned Destinations: Cuba" (accessed September 29, 2015).

¹³⁹⁷ Ibid.

¹³⁹⁸ 15 C.F.R. § 740.18.

¹³⁹⁹ 22 U.S.C. § 7209. For a complete list of purposes for which specific licenses may be issued, see U.S. Treasury, "Frequently Asked Question Related to Cuba," January 26, 2016.

Code of Federal Regulations defines the categories for which travel to Cuba may be authorized. These categories, however, have been subject to changing eligibility criteria over time. During the George W. Bush administration, these criteria became more restrictive. In 2001, the President directed OFAC to prevent “excessive travel.”¹⁴⁰⁰ In 2003, people-to-people travel unrelated to coursework was prohibited.¹⁴⁰¹ In 2004, a previous relaxation of the definition of close family to include three degrees of relationship was reversed; family visits were limited to one trip in any three-year period, and “fully-hosted travel” was eliminated.¹⁴⁰² Travel by religious organizations was limited to 25 members once per year.¹⁴⁰³

Before TSRA, U.S. exports to Cuba consisted primarily of donated goods, mainly medical supplies, because BXA as a matter of practice denied license applications for commercial exports. If BXA had approved any commercial exports to Cuba, the CACR provided for general licensing of financial transactions and other activities, such as shipping, so additional authorization from OFAC would not have been required.¹⁴⁰⁴ After TSRA, exports authorized by BIS under AGR were still subject to general licensing; however, TSRA added extra conditions, most notably that payment be made in the form of “cash in advance” or financed through a third-country bank.¹⁴⁰⁵

Recent Changes in Policy toward Cuba and the Regulatory Response

As noted above, U.S. policies related to travel and remittances have changed periodically, reflecting both changes in administrations and changes in U.S.-Cuba relations. During various periods in the bilateral relationship, travel and remittances have been tightened or even essentially prohibited. At other times, restrictions on travel and remittances have been the first to be eased.¹⁴⁰⁶ Most recently, a period of relaxation of restrictions on travel and remittances, both by Congress and the Obama administration, began in 2009. This trend culminated in President Obama’s December 2014 announcement of a substantial shift in U.S. policy toward Cuba, moving away from sanctions toward engagement and normalization of relations. OFAC and BIS regulations were modified three times during 2015 in response to President Obama’s initiative.¹⁴⁰⁷

In March 2009, Congress added provisions to the Omnibus Appropriations Act to block expenditures enforcing the July 2004 changes to the CACR (see above) that subjected family travel to strict specific licensing provisions.¹⁴⁰⁸ Thus, after March 2009, family travel was again allowed

¹⁴⁰⁰ CRS, *Cuba: U.S. Restrictions on Travel and Remittances*, April 10, 2015, 22.

¹⁴⁰¹ 68 Fed. Reg. 14141 (March 24, 2003).

¹⁴⁰² 69 Fed. Reg. 33768 (June 16, 2004) and 69 Fed. Reg. 33775 (June 16, 2004).

¹⁴⁰³ U.S. Treasury, OFAC, *Comprehensive Guidelines for License Applications* (revised September 30, 2004), 40.

¹⁴⁰⁴ 31 C.F.R. § 515.

¹⁴⁰⁵ Trade Sanctions Reform and Export Enhancement Act of 2000 (TSRA), 22 U.S.C. § 7201–7211.

¹⁴⁰⁶ CRS, *Cuba: U.S. Restrictions on Travel and Remittances*, April 10, 2015, 20.

¹⁴⁰⁷ USDOC, BIS, “Sanctioned Destinations, Cuba” (accessed September 29, 2015); U.S. Treasury, Resource Center, “Cuba Sanctions” (accessed January 8, 2016).

¹⁴⁰⁸ Public Law No. 111–8–March 11, 2009, 123 Stat. 678 Section 621.

under general licensing for up to one visit every 12 months for an unlimited length of time. OFAC amended the CACR in September 2009 to implement these and other congressional actions to ease travel related to sales of agricultural and medical goods.¹⁴⁰⁹

In response to President Obama’s directives to promote greater contact among separated family members, the CACR were amended in 2009 to eliminate all restrictions on the frequency and duration of family visits.¹⁴¹⁰ In addition, the amended CACR increased expenditure limits for family travel to the same level as those for other travelers: the State Department’s maximum per diem rate for Havana.¹⁴¹¹ The amended regulations redefined a close family relative to include any individual related to the traveler by blood, marriage, or adoption within three generations.¹⁴¹² The amended regulations also removed the 44-pound weight limit on accompanied baggage, as well as limits on the amount and frequency of family remittances.¹⁴¹³ Currency limits on authorized travelers were increased from \$500 to \$3,000 of remittances per traveler by the 2009 amendments to the CACR.¹⁴¹⁴

Restrictions on non-family travel and remittances were again eased in 2011. Changes to the CACR increased travel opportunities related to religious, educational, and journalistic activities.¹⁴¹⁵ The limit on non-family remittances was increased from \$300 to \$500 per quarter, and all U.S. international airports were allowed to apply to provide licensed charter flights to and from Cuba. However, OFAC issued an advisory statement that all travelers must certify a full-time schedule of educational exchange activities and stated that these changes did not allow unrestricted travel (i.e., tourist activities) to Cuba.¹⁴¹⁶

Since President Obama’s December 2014 announcement of the shift in U.S. policy toward Cuba, the Commerce and Treasury Departments have amended EAR and CACR regulations governing travel and trade with Cuba on four separate occasions—in January, July, and September of 2015, and again in January 2016.¹⁴¹⁷ The January 2015 amendments created license exceptions for items to improve the living conditions of the Cuban people, consumer communications devices, gift parcels, and items for environmental protection.¹⁴¹⁸ The July 2015 amendments implemented changes related to Cuba’s removal from the list of state sponsors of terrorism.¹⁴¹⁹ The September 2015 amendments expanded the scope of license exceptions, including license exceptions for temporary

¹⁴⁰⁹ 74 Fed. Reg. 46000–46003 (September 8, 2009).

¹⁴¹⁰ *Ibid.*

¹⁴¹¹ *Ibid.*

¹⁴¹² *Ibid.*

¹⁴¹³ *Ibid.*

¹⁴¹⁴ *Ibid.*

¹⁴¹⁵ 76 Fed. Reg. 5072–5078 (January 28, 2011).

¹⁴¹⁶ *Ibid.*

¹⁴¹⁷ 80 Fed. Reg. 2286 (January 16, 2015, hereafter “January 2015 rules”); 80 Fed. Reg. 43314 (July 22, 2015, hereafter “July 2015 rules”); 80 Fed. Reg. 56898 (September 21, 2015; hereafter “September 2015 rules”) and 81 Fed. Reg. 4583 (January 27, 2016, hereafter “January 2016 rules”).

¹⁴¹⁸ 80 Fed. Reg. 2286 (January 16, 2015).

¹⁴¹⁹ 80 Fed. Reg. 43314 (July 22, 2015); and 31 C.F.R. § 515.

sojourns by most vessels and items to ensure the safety of civilian and commercial aircraft.¹⁴²⁰ The January 2016 amendments lifted limitations on payment and financing terms for exports and re-exports licensed or authorized by the Department of Commerce, except exports and re-exports subject to TSRA.¹⁴²¹

Under the January 2015 amendments, all travel under the 12 authorized categories was made subject to general licensing, and authorized U.S. travelers were permitted to use credit and debit cards.¹⁴²² Expenditure limits were removed, and authorized travelers were permitted to return from Cuba with up to \$400 worth of goods, of which no more than \$100 may consist of tobacco and alcohol combined.¹⁴²³ Non-family remittance limits were increased from \$500 to \$2,000 per quarter, with unlimited remittances for humanitarian projects, support for the Cuban people, and development of private businesses.¹⁴²⁴ The amount of remittances that an individual traveler can carry was increased to \$10,000 per trip.¹⁴²⁵

In addition to changes in travel and remittances, the amendments to the CACR allowed depository institutions to open correspondent accounts at Cuban financial institutions to facilitate authorized transactions.¹⁴²⁶ For agricultural exports under TSRA, the regulatory interpretation of “cash in advance” was changed from “cash before shipment” to “cash before transfer of title and control,” returning to the practice in use before OFAC’s 2005 change in interpretation.¹⁴²⁷ Commercial exports of certain goods to the Cuban private sector and imports of specific goods and services produced by independent Cuban entrepreneurs were authorized, as were certain microfinancing and business training activities.¹⁴²⁸

On May 29, 2015, Cuba was officially removed from the list of state sponsors of terrorism. Designation as a state sponsor of terrorism imposes four main sets of restrictions: (1) a ban on arms-related exports and sales; (2) controls on exports of dual-use items; (3) prohibitions on economic assistance; and (4) imposition of various other restrictions.¹⁴²⁹ Other restrictions include:

¹⁴²⁰ 80 Fed. Reg. 56898 (September 21, 2015); U.S. Treasury, “Treasury and Commerce Announce Further Amendments,” September 18, 2015.

¹⁴²¹ 81 Fed. Reg. 4583 (January 27, 2016).

¹⁴²² 80 Fed. Reg. 2291 (January 16, 2015); 31 CFR § 515. Reports suggest that as of March 1, 2015, MasterCard had unblocked its U.S.-issued credit cards for use in Cuba. Whitefield, “MasterCard Gives OK for Credit Card Use,” January 23, 2015.

¹⁴²³ 80 Fed. Reg. 2291 (January 16, 2015); 31 CFR § 515.

¹⁴²⁴ *Ibid.*

¹⁴²⁵ *Ibid.*

¹⁴²⁶ A correspondent account is an account maintained by a U.S. financial institution in a Cuban bank to take advantage of services and products that are not available to the U.S. bank in the United States. These services, including facilitation of international trade, are performed more economically by the Cuban bank. Drawn from FFIEC, “Correspondent Accounts (Foreign)—Overview,” Bank Secrecy Act/Anti-Money Laundering Infobase, http://www.ffiec.gov/bsa_aml_infobase/pages_manual/olm_047.htm (accessed January 4, 2016).

¹⁴²⁷ The “cash before shipment” definition required the U.S. seller to be paid and title and control to pass to Alimport before the shipment could leave the U.S. port. The “cash before transfer of title and control” definition allows the U.S. seller to be paid and title and control to pass to Alimport after the shipment has left the U.S. port but before it enters a Cuban port. 80 Fed. Reg. 2291 (January 16, 2015); 31 CFR § 515).

¹⁴²⁸ 80 Fed. Reg. 2291 (January 16, 2015); 31 CFR § 515.

¹⁴²⁹ USDOS, “State Sponsors of Terrorism” (accessed October 16, 2015).

(a) opposition to loans by the World Bank and other international financial institutions; (b) denying various tax credits for income earned in listed countries; (c) denial of duty-free treatment of goods exported to the United States; and (d) prohibition on U.S. citizens engaging in financial transactions with listed governments without a Treasury Department license.¹⁴³⁰

The July 2015 rules lifted these restrictions to implement Cuba’s removal from the State Sponsors of Terrorism list.¹⁴³¹ To facilitate reestablishment of diplomatic relations with Cuba, the CACR were amended to authorize transactions with Cuban official missions and their employees in the United States.¹⁴³² On July 20, 2015, full diplomatic relations were restored.¹⁴³³

In the September 2015 rules, OFAC issued additional regulations and guidance concerning trade with and travel to Cuba.¹⁴³⁴ These measures further facilitate travel to Cuba for authorized purposes; expand the telecommunications and Internet-based services general licenses, including authorizing certain persons to establish a business presence in Cuba; allow certain persons to establish a physical presence in Cuba to facilitate authorized transactions, such as an office or other facility; allow certain persons to open and maintain bank accounts in Cuba to use for authorized purposes; authorize additional financial transactions, including those related to remittances; authorize all persons subject to U.S. jurisdiction to provide goods and services to Cuban nationals located outside of Cuba; and allow a number of other activities, including those related to legal services, imports of gifts, and educational activities.¹⁴³⁵ These amendments also made certain technical and conforming changes.

On January 27, 2016, BIS amended the EAR regulations to provide a general policy of approval for license applications for exports and re-exports of several items. These include certain telecommunications items to improve communications to, from, and among the Cuban people; certain commodities and software to human rights organizations, individuals, and nongovernmental organizations that promote independent activity among the Cuban people; agricultural items outside the scope of Exception AGR and other licensing exceptions; and items to ensure the safety of civil aviation.

Also on January 27, 2016, OFAC amended the CACR to remove limitations on payments and financing of exports authorized by the U.S. Department of Commerce from the United States or re-export of 100 percent U.S.-origin items from a third country, other than exports of agricultural items or commodities subject to TSRA. OFAC also amended regulations affecting air carrier services; temporary sojourns by aircraft and vessels; and transactions related to information, information services, professional meetings, public performances, clinics, workshops, athletic and other competitions, exhibitions, and humanitarian projects.

¹⁴³⁰ USDOS, “State Sponsors of Terrorism” (accessed October 16, 2015).

¹⁴³¹ 80 Fed. Reg. 43314 (July 22, 2015).

¹⁴³² *Ibid.*

¹⁴³³ USDOS, “Re-Establishment of Diplomatic Relations with Cuba,” July 6, 2015.

¹⁴³⁴ 80 Fed. Reg. 56898 (September 21, 2015).

¹⁴³⁵ *Ibid.*

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Appendix G

Cuban Intellectual Property Laws

Table G.I sets forth information provided by Cuba on its intellectual property (IP) laws, and citations to relevant laws. According to Cuba, recent laws enacted in the areas of trademarks, geographical indications (GIs), patents (including compulsory licensing), industrial designs, plant varieties, and layout designs of integrated circuits comply with the requirements of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement).¹⁴³⁶

Table G.1: Description of selected Cuban IP laws

Type of IP	Cuba's description of elements of the laws	Cuban law
Trademarks	<ul style="list-style-type: none"> • Trademarks include any sign that serves to distinguish products or services from others of the same kind. Trade names, three-dimensional shapes, smells, and sounds may also be protectable as trademarks. • Trademarks are awarded to the first to file; trademark use is not required for registration. • The initial term of protection is 10 years, but marks are indefinitely renewable. • Competent authorities may issue measures requiring the immediate cessation of infringement; seizure and destruction of infringing goods, labels, and other materials; and the suspension of imports or exports. • Courts also may award damages and injunctive relief. 	Decree-Law 203 (1999) and Decree-Laws 290 and 291 (2011)
Geographical indications (GIs)	<ul style="list-style-type: none"> • GIs identify a good as originating in a country, region, or locality when a given quality, reputation, or other characteristic of the good is essentially attributable to its geographic origin. • Cuba grants all GI products the additional protections for wines and spirits required by TRIPS. Thus, a GI may be precluded where the product does not originate in a particular geographic location, even when the true origin is indicated or it is accompanied by modifiers such as "kind," "style," or the like. 	Decree-Law 228 (2002)
Invention patents	<ul style="list-style-type: none"> • Patent protection is available for inventions in any technological field that are novel, inventive, and industrially applicable, subject to exclusions for non-patentable objects. • Non-patentable objects include animals and breeds; plants and varieties; treatment methods for humans or animals; diagnostic, therapeutic, and surgical methods for humans or animals; solutions necessary to protect human, animal, or plant life or health or to avoid serious environmental prejudice; solutions necessary to protect social interests, public policy, and morality; and processes for modifying germinal genetic identity. • Non-inventions include methods for performing intellectual, sporting, recreational, economic, and commercial activities; construction plans; discoveries recognizing laws or phenomena; materials existing in nature, whether discovered or isolated, and including biological and genetic material; scientific principles; mathematical methods; methods of presenting information; integrated circuit designs (covered under separate legislation); computer programs; and essentially biological processes. 	Decree-Laws 290 and 291 (2011)

¹⁴³⁶ WTO, "Review of Legislation, Cuba, Addendum," February 18, 2013, 1.

Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

Type of IP	Cuba's description of elements of the laws	Cuban law
	<ul style="list-style-type: none"> The patent term is 20 years. Remedy provisions are similar to those in the trademark law. 	
Industrial designs	<ul style="list-style-type: none"> Industrial designs are protected based on aesthetic or ornamental characteristics that are unrelated to technical or functional considerations. The term of protection is 10 years. 	Decree-Law 290 (2011)
Compulsory licensing	<ul style="list-style-type: none"> Compulsory licenses will be available to the full extent permitted by TRIPS. They may be granted under a range of circumstances, including insufficient commercialization; high or discriminatory prices; when pre-commercialization activities have not been serious; when a later patent cannot be commercialized without infringing an earlier patent, under certain conditions; for any practice determined to be anticompetitive; and when the patent owner refuses to negotiate a voluntary license. Compulsory licenses also may be available in exceptional circumstances and in the event of public noncommercial use, without the need to seek a license. 	Decree-Law 290 (2011)
Trade secrets and other undisclosed information	<ul style="list-style-type: none"> A draft law prohibiting unfair industrial and trade practices and protecting undisclosed information used to support the approval of pharmaceutical and agricultural chemical products is under consideration. 	None
Copyrights and related rights	<ul style="list-style-type: none"> Copyright protection applies to original works of authorship and is available for literary and audiovisual works, consistent with the interests, objectives, and principles of the Revolution. The term of protection is the life of the author plus 50 years. Cuba has not enacted TRIPs-consistent legislation in the area of copyrights and related rights. Cuba is not a member of the WIPO Copyright or Performances and Phonograms Treaty (the "Internet Treaties"), which address copyrights and related rights in the digital economy. 	Decree-Law 14 (1977)
Criminal measures	<ul style="list-style-type: none"> Criminal sanctions appear to be available for the infringement of Cuban inventions only. Cuba has not identified criminal measures available to constitute effective deterrents to infringement. 	Law No. 62 (1987), as amended by Law No. 97 (1999)

Sources: WTO, "Review of legislation, Cuba," November 2, 2012; WIPO, "Cuba: IP Laws and Treaties," n.d. (accessed October 13, 2015).

Appendix H

HS Codes Contained in Each Sector

The following table lists the subheadings that comprise the sectors listed in tables 5.1 and 5.3 or profiled in chapters 5 and 6 according to the Harmonized System (HS) of tariff nomenclature. The HS is an internationally standardized system of numbers used to classify traded products.

Table H.1: 6-digit HS codes by sector.

Sector	HS6
Alcoholic beverages	2203.00, 2204.10, 2204.21, 2204.29, 2204.30, 2205.10, 2205.90, 2206.00, 2208.20, 2208.30, 2208.40, 2208.50, 2208.60, 2208.70, 2208.90
Beef	0201.10, 0201.20, 0201.30, 0202.10, 0202.20, 0202.30, 0206.10, 0206.21, 0206.22, 0206.29, 0210.20, 1602.50
Corn	1005.10, 1005.90
Eggs	0407.00, 0407.11, 0407.21, 0408.11, 0408.19, 0408.91, 0408.99, 3502.11, 3502.19, 3502.90
Milk powder (dairy)	0402.10, 0402.21, 0402.29, 0402.91, 0402.99
Other animal feed	2301.10, 2302.30, 2302.40, 2303.10, 2303.20, 2303.30, 2306.10, 2306.30, 2306.49, 2306.50, 2306.60, 2306.90, 2308.00, 2309.10, 2309.90
Other dairy	0401.10, 0401.20, 0401.30, 0401.40, 0401.50, 0403.10, 0403.90, 0404.10, 0404.90, 0405.10, 0405.20, 0405.90, 0406.10, 0406.20, 0406.30, 0406.40, 0406.90, 1702.11, 1702.19, 1901.10, 2105.00, 3501.10, 3501.90, 3502.20
Pork	0203.12, 0203.19, 0203.21, 0203.22, 0203.29, 0206.30, 0206.41, 0206.49, 0210.11, 0210.12, 0210.19, 1602.41, 1602.42, 1602.49
Poultry	0207.11, 0207.12, 0207.13, 0207.14, 0207.24, 0207.25, 0207.26, 0207.27, 0207.32, 0207.33, 0207.34, 0207.35, 0207.36, 0207.41, 0207.42, 0207.43, 0207.44, 0207.45, 1602.31, 1602.32, 1602.39
Processed foods	1901.20, 1901.90, 1902.11, 1902.19, 1902.20, 1902.30, 1902.40, 1903.00, 1904.10, 1904.20, 1904.30, 1904.90, 1905.10, 1905.20, 1905.31, 1905.32, 1905.40, 1905.90, 2001.10, 2001.90, 2002.10, 2002.90, 2003.10, 2003.20, 2003.90, 2004.10, 2004.90, 2005.10, 2005.20, 2005.40, 2005.51, 2005.59, 2005.60, 2005.70, 2005.80, 2005.90, 2005.91, 2005.99, 2006.00, 2007.10, 2007.91, 2007.99, 2008.11, 2008.19, 2008.20, 2008.30, 2008.40, 2008.50, 2008.60, 2008.70, 2008.80, 2008.91, 2008.92, 2008.93, 2008.97, 2008.99, 2009.11, 2009.12, 2009.19, 2009.21, 2009.29, 2009.31, 2009.39, 2009.41, 2009.49, 2009.50, 2009.61, 2009.69, 2009.71, 2009.79, 2009.80, 2009.81, 2009.89, 2009.90, 2101.11, 2101.12, 2101.20, 2101.30, 2102.10, 2102.20, 2102.30, 2103.10, 2103.20, 2103.30, 2103.90, 2104.10, 2104.20, 2106.10, 2106.90, 2202.10, 2202.90
Processed meats	1601.00, 1602.10, 1602.20, 1602.90, 1603.00
Pulses (dry beans)	0713.10, 0713.20, 0713.31, 0713.32, 0713.33, 0713.39, 0713.40, 0713.50, 0713.90
Rice	1006.10, 1006.20, 1006.30, 1006.40
Seafood	0301.10, 0301.11, 0301.19, 0301.99, 0302.11, 0302.12, 0302.19, 0302.23, 0302.29, 0302.31, 0302.32, 0302.36, 0302.45, 0302.50, 0302.51, 0302.61, 0302.69, 0302.70, 0302.89, 0303.11, 0303.12, 0303.13, 0303.14, 0303.19, 0303.21, 0303.22, 0303.29, 0303.31, 0303.33, 0303.34, 0303.39, 0303.41, 0303.42, 0303.43, 0303.45, 0303.49, 0303.52, 0303.53, 0303.54, 0303.55, 0303.57, 0303.60, 0303.61, 0303.63, 0303.65, 0303.66, 0303.71, 0303.73, 0303.74, 0303.75, 0303.77, 0303.78, 0303.79, 0303.80, 0303.83, 0303.84, 0303.89, 0304.10, 0304.11, 0304.19, 0304.20, 0304.21, 0304.29, 0304.41, 0304.44, 0304.49, 0304.51, 0304.59, 0304.61, 0304.62, 0304.63, 0304.69, 0304.71, 0304.73, 0304.74, 0304.75, 0304.79, 0304.81, 0304.82, 0304.83, 0304.84, 0304.87, 0304.89, 0304.90, 0304.91, 0304.93, 0304.95, 0304.99, 0305.10, 0305.20, 0305.30, 0305.32, 0305.41, 0305.42, 0305.43, 0305.49, 0305.51, 0305.59, 0305.61, 0305.62, 0305.63, 0305.69, 0305.79, 0306.11, 0306.12, 0306.13, 0306.14, 0306.15, 0306.16, 0306.17, 0306.19, 0306.22, 0306.23, 0306.24, 0306.29, 0307.10, 0307.19, 0307.21, 0307.29, 0307.31, 0307.39, 0307.41, 0307.49, 0307.51, 0307.59, 0307.60,

Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

Sector	HS6
	0307.71, 0307.79, 0307.91, 0307.99, 1604.11, 1604.12, 1604.13, 1604.14, 1604.15, 1604.16, 1604.19, 1604.20, 1604.30, 1604.32, 1605.10, 1605.20, 1605.29, 1605.30, 1605.40, 1605.53, 1605.54, 1605.55, 1605.56, 1605.59, 1605.69, 1605.90
Soybean meal	1208.10, 2304.00
Soybean oil	1507.10, 1507.90
Soybeans	1201.00, 1201.10, 1201.90
Wheat	1001.10, 1001.19, 1001.90, 1001.99
Wheat flour	1101.00
Wood and paper	4401.10, 4401.21, 4401.22, 4401.30, 4401.39, 4402.00, 4402.90, 4403.10, 4403.20, 4403.49, 4403.92, 4403.99, 4404.10, 4404.20, 4405.00, 4406.10, 4406.90, 4407.10, 4407.22, 4407.24, 4407.25, 4407.26, 4407.29, 4407.91, 4407.92, 4407.93, 4407.94, 4407.95, 4407.99, 4408.10, 4408.31, 4408.39, 4408.90, 4409.10, 4409.20, 4409.21, 4409.29, 4410.11, 4410.12, 4410.19, 4410.21, 4410.29, 4410.31, 4410.32, 4410.33, 4410.39, 4410.90, 4411.11, 4411.12, 4411.13, 4411.14, 4411.19, 4411.21, 4411.29, 4411.31, 4411.39, 4411.92, 4411.93, 4411.94, 4411.99, 4412.10, 4412.13, 4412.14, 4412.19, 4412.22, 4412.23, 4412.29, 4412.31, 4412.32, 4412.39, 4412.92, 4412.93, 4412.94, 4412.99, 4413.00, 4414.00, 4415.10, 4415.20, 4416.00, 4417.00, 4418.10, 4418.20, 4418.30, 4418.40, 4418.50, 4418.60, 4418.71, 4418.72, 4418.79, 4418.90, 4419.00, 4420.10, 4420.90, 4421.10, 4421.90, 4701.00, 4702.00, 4703.11, 4703.21, 4703.29, 4704.21, 4704.29, 4705.00, 4706.20, 4706.91, 4706.92, 4801.00, 4802.10, 4802.20, 4802.30, 4802.40, 4802.54, 4802.55, 4802.56, 4802.57, 4802.58, 4802.61, 4802.62, 4802.69, 4803.00, 4804.11, 4804.19, 4804.21, 4804.29, 4804.31, 4804.39, 4804.41, 4804.42, 4804.49, 4804.51, 4804.52, 4804.59, 4805.11, 4805.19, 4805.24, 4805.25, 4805.30, 4805.40, 4805.50, 4805.91, 4805.92, 4805.93
Agricultural machinery	8424.81, 8432.10, 8432.21, 8432.29, 8432.30, 8432.40, 8432.80, 8432.90, 8433.11, 8433.19, 8433.20, 8433.30, 8433.40, 8433.51, 8433.52, 8433.53, 8433.59, 8433.90, 8701.10, 8701.30, 8701.90, 8716.90
Building materials	2505.10, 2505.90, 2508.10, 2514.00, 2515.11, 2515.12, 2515.20, 2516.11, 2516.12, 2516.20, 2516.90, 2517.10, 2517.20, 2517.30, 2517.41, 2517.49, 2518.10, 2520.10, 2520.20, 2523.21, 2523.29, 2523.30, 2523.90, 3208.10, 3208.20, 3208.90, 3209.10, 3209.90, 3210.00, 3214.10, 3214.90, 3505.20, 3506.10, 3506.91, 3506.99, 3916.20, 3917.21, 3917.22, 3917.23, 3917.29, 3917.31, 3917.32, 3917.33, 3917.39, 3917.40, 3918.10, 3918.90, 3925.10, 3925.20, 3925.30, 4009.11, 4009.12, 4009.21, 4009.22, 4009.31, 4009.32, 4009.41, 4009.42, 4016.10, 4016.91, 4016.93, 4403.10, 4406.10, 4406.90, 4407.10, 4407.21, 4407.22, 4407.25, 4407.26, 4407.27, 4407.28, 4407.29, 4407.91, 4407.92, 4407.93, 4407.94, 4407.95, 4407.99, 4408.10, 4408.31, 4408.39, 4409.10, 4409.21, 4409.29, 4410.11, 4410.12, 4410.19, 4410.90, 4411.12, 4411.13, 4411.14, 4411.92, 4411.93, 4411.94, 4412.10, 4412.31, 4412.32, 4412.39, 4412.94, 4412.99, 4413.00, 4418.10, 4418.20, 4418.40, 4418.50, 4418.60, 4418.71, 4418.72, 4418.79, 4418.90, 6801.00, 6802.10, 6802.21, 6802.23, 6802.29, 6802.91, 6802.93, 6802.99, 6803.00, 6805.10, 6805.20, 6805.30, 6806.10, 6806.20, 6806.90, 6807.10, 6807.90, 6808.00, 6809.11, 6809.19, 6809.90, 6810.11, 6810.19, 6810.91, 6810.99, 6811.40, 6811.81, 6811.82, 6811.89, 6904.10, 6904.90, 6905.10, 6905.90, 6906.00, 6907.10, 6907.90, 6908.10, 6908.90, 7003.12, 7003.19, 7003.20, 7004.20, 7004.90, 7005.10, 7005.21, 7005.29, 7005.30, 7006.00, 7007.19, 7007.29, 7008.00, 7016.10, 7016.90, 7019.31, 7019.32, 7019.39, 7208.10, 7208.25, 7208.26, 7208.27, 7208.36, 7208.37, 7208.38, 7208.39, 7208.40, 7208.51, 7208.52, 7208.53, 7208.54, 7208.90, 7209.15, 7209.16, 7209.17, 7209.18, 7209.25, 7209.26, 7209.27, 7209.28, 7209.90, 7210.11, 7210.12, 7210.20, 7210.30, 7210.41, 7210.49, 7210.50, 7210.61, 7210.69, 7210.70, 7210.90, 7211.13, 7211.14, 7211.19, 7211.23, 7211.29, 7211.90, 7212.10, 7212.20, 7212.30, 7212.40, 7212.50, 7212.60, 7213.10, 7213.20, 7213.91, 7213.99, 7214.10, 7214.20, 7214.30, 7214.91, 7214.99, 7215.10, 7215.50, 7215.90, 7216.10,

Sector	HS6
	7216.21, 7216.22, 7216.31, 7216.32, 7216.33, 7216.40, 7216.50, 7216.61, 7216.69, 7216.91, 7216.99, 7217.10, 7217.20, 7217.30, 7217.90, 7219.11, 7219.12, 7219.13, 7219.14, 7219.21, 7219.22, 7219.23, 7219.24, 7219.31, 7219.32, 7219.33, 7219.34, 7219.35, 7219.90, 7220.11, 7220.12, 7220.20, 7221.00, 7222.11, 7222.19, 7222.20, 7222.30, 7222.40, 7223.00, 7225.11, 7225.19, 7225.30, 7225.40, 7225.50, 7225.91, 7225.92, 7225.99, 7226.11, 7226.19, 7226.20, 7226.91, 7226.92, 7226.99, 7227.10, 7227.20, 7227.90, 7228.10, 7228.20, 7228.40, 7228.50, 7228.60, 7228.70, 7228.80, 7229.20, 7229.90, 7301.10, 7301.20, 7302.10, 7302.30, 7302.40, 7302.90, 7303.00, 7304.11, 7304.19, 7304.22, 7304.23, 7304.24, 7304.29, 7304.31, 7304.39, 7304.41, 7304.49, 7304.51, 7304.59, 7304.90, 7305.11, 7305.12, 7305.19, 7305.20, 7305.31, 7305.39, 7305.90, 7306.11, 7306.19, 7306.21, 7306.29, 7306.30, 7306.40, 7306.50, 7306.61, 7306.69, 7306.90, 7307.11, 7307.19, 7307.21, 7307.22, 7307.23, 7307.29, 7307.91, 7307.92, 7307.93, 7307.99, 7308.10, 7308.20, 7308.30, 7308.90, 7309.00, 7312.10, 7312.90, 7313.00, 7314.14, 7314.19, 7314.20, 7314.31, 7314.39, 7314.41, 7314.42, 7314.49, 7314.50, 7315.81, 7315.82, 7315.89, 7315.90, 7317.00, 7318.11, 7318.12, 7318.13, 7318.14, 7318.15, 7318.16, 7318.19, 7318.21, 7318.22, 7318.23, 7318.24, 7318.29, 7407.10, 7407.21, 7407.29, 7408.11, 7408.19, 7408.21, 7408.22, 7408.29, 7409.11, 7409.19, 7409.21, 7409.29, 7409.31, 7409.39, 7409.40, 7409.90, 7410.11, 7410.12, 7410.21, 7410.22, 7411.10, 7411.21, 7411.22, 7411.29, 7412.10, 7412.20, 7413.00, 7415.10, 7415.21, 7415.29, 7415.33, 7415.39, 7604.10, 7604.21, 7604.29, 7605.11, 7605.19, 7605.21, 7605.29, 7606.11, 7606.12, 7606.91, 7606.92, 7607.11, 7607.19, 7607.20, 7608.10, 7608.20, 7609.00, 7610.10, 7610.90, 7611.00, 7614.10, 7614.90, 7616.10, 7616.91, 8301.40, 8301.50, 8301.60, 8301.70, 8302.10, 8302.41, 8302.60, 8307.10, 8307.90, 8308.20, 8310.00, 8311.10, 8311.20, 8311.30, 8544.20, 8544.42, 8544.49, 8544.60, 8544.70, 8546.10, 8546.20, 8546.90, 9406.00
Construction machinery	8426.20, 8426.30, 8426.41, 8426.49, 8426.91, 8426.99, 8429.11, 8429.19, 8429.20, 8429.30, 8429.40, 8429.51, 8429.52, 8429.59, 8430.10, 8430.20, 8430.50, 8430.61, 8430.69, 8431.41, 8431.42, 8431.49, 8479.10, 8704.10, 8705.10, 8705.20
Fertilizers and pesticides	2503.00, 2802.00, 2807.00, 2809.20, 2814.10, 2814.20, 2835.22, 2835.24, 2835.25, 2835.26, 2903.69, 2903.99, 2908.11, 2908.19, 2909.30, 2916.20, 2918.99, 2920.90, 2924.21, 2924.29, 2926.90, 2930.20, 2930.50, 2930.90, 2931.00, 2931.90, 2932.20, 2932.29, 2932.99, 2933.19, 2933.39, 2933.49, 2933.59, 2933.99, 2934.20, 2934.99, 2935.00, 3101.00, 3102.10, 3102.21, 3102.29, 3102.30, 3102.40, 3102.50, 3102.60, 3102.80, 3102.90, 3103.10, 3103.90, 3104.20, 3104.30, 3104.90, 3105.10, 3105.20, 3105.30, 3105.40, 3105.51, 3105.59, 3105.60, 3105.90, 3808.10, 3808.20, 3808.30, 3808.50, 3808.90, 3808.91, 3808.92, 3808.93, 3808.94, 3808.99
Medical devices	9018.11, 9018.12, 9018.13, 9018.14, 9018.19, 9018.20, 9018.31, 9018.32, 9018.39, 9018.41, 9018.49, 9018.50, 9018.90, 9019.10, 9019.20, 9020.00, 9021.10, 9021.21, 9021.29, 9021.31, 9021.39, 9021.40, 9021.50, 9021.90, 9022.12, 9022.13, 9022.14, 9022.19, 9022.21, 9022.30, 9022.90
Motor vehicle parts	8708.10, 8708.21, 8708.29, 8708.30, 8708.31, 8708.39, 8708.40, 8708.50, 8708.60, 8708.70, 8708.80, 8708.91, 8708.92, 8708.93, 8708.94, 8708.95, 8708.99
Refined petroleum products	2710.11, 2710.12, 2710.19, 2710.20, 2710.91, 2710.99, 2712.10, 2712.20, 2712.90, 2713.11, 2713.12, 2713.20, 2713.90, 2714.10, 2714.90, 2715.00
Telecommunications equipment	8517.11, 8517.12, 8517.18, 8517.19, 8517.21, 8517.22, 8517.30, 8517.50, 8517.61, 8517.62, 8517.69, 8517.70, 8517.80, 8517.90, 8518.90, 8519.50, 8520.20, 8522.90, 8525.10, 8525.20, 8525.50, 8525.60, 8529.10, 8529.90, 8544.70, 9001.10

Source: U.S. International Trade Commission.

Appendix I

Description of Empirical Methodology

For an accessible version of Appendix I, [click here](#).

Introduction

This appendix describes the methodology used to estimate the level of U.S. exports to Cuba in selected sectors in the event that U.S. restrictions are removed and Cuban barriers are lowered. The main approach used in the empirical analysis is an enhanced gravity model.¹⁴³⁷

The basic gravity model is a widely used economic model that relates trade between two countries to various country characteristics that are accepted to be common determinants of trade, such as distance, having a common language or border, and size (output) of the economies. For example, the basic gravity model predicts, correctly, that larger countries trade more than smaller ones and that countries located closer together trade with each other more than those further apart.¹⁴³⁸ The enhanced gravity model implemented here adds important general equilibrium effects of trade policy to the basic structural gravity model.¹⁴³⁹ This enhanced gravity model is better suited than the basic model to estimate how the trade restrictions investigated in this study affect U.S. trade flows.

Estimating U.S. exports to Cuba in the event that U.S. restrictions are removed and Cuban barriers are lowered presents a number of challenges that preclude the use of some common types of economic models, including computable general equilibrium (CGE) and partial equilibrium models.¹⁴⁴⁰ First, existing U.S. exports to Cuba are zero in many industries. Second, a tariff equivalent for current U.S. restrictions is not known. Third, it is important to account for the competition that U.S. producers will face from other countries, such as China, when entering the Cuban market.¹⁴⁴¹ The enhanced gravity model used in this study is able to address these challenges: it allows for increased competition and lower prices in the Cuban market and allows productivity and wages to play a role in determining trade. The key determinants of

¹⁴³⁷ Head and Mayer, “Gravity Equations: Workhorse, Toolkit, and Cookbook,” 2014.

¹⁴³⁸ There are different types of gravity models, some of which are grounded in theory and called structural gravity models. While the majority of the gravity models in use before the mid-2000s were ad hoc models not based on theory, most of those are now considered misspecified.

¹⁴³⁹ Gravity models without general equilibrium features ignore the effects of increased competition in Cuba on U.S. exports. They hold country fixed effects (or multilateral resistance indices) constant even though trade policy would change them. When U.S. sanctions are removed, competition in Cuba becomes fiercer. When faced with the entry of U.S. firms into the Cuban market, some foreign firms would exit the Cuban market, but other, more efficient, foreign firms would drop their prices to remain competitive. This decrease in prices offered by competitors (captured by changing multilateral resistance terms) would decrease the potential U.S. exports to Cuba.

¹⁴⁴⁰ The Commission regularly uses the Global Trade Analysis Project (GTAP) CGE model and partial equilibrium analysis to estimate the effects of trade policy. These models cannot be used here because, as noted here and in chapter 8, they require positive trade flows and tariff equivalents. Moreover, GTAP does not include Cuba, and incorporating Cuba into the model would require a Cuban input-output table, which is not available.

¹⁴⁴¹ The removal of U.S. restrictions would reverse the trade diversion that occurred when restrictions were imposed. Without the U.S. restriction, U.S. firms would be able to compete in Cuba on a level playing field with firms from other countries. Therefore, Cuban consumers would be able to buy from the most efficient suppliers. The entry of U.S. firms into Cuban market would make competition there more fierce and result in lower product prices in the Cuban market.

trade in the model are trade cost, productivity (which determines comparative advantage), and wages.

The model uses trade costs to estimate the value of U.S. exports to Cuba in the event that U.S. restrictions are removed and also in the event that Cuban tariff and nontariff measures are lowered. Trade cost is defined as the difference between the cost of a good at a production source and in its destination market. It is estimated as the equivalent of an ad valorem tariff (a tariff calculated as a percentage of a good’s value) that is measured relative to domestic trade cost.¹⁴⁴²

Total trade costs have been divided into two components: bilateral and importer-specific. Bilateral trade costs include freight, insurance, translation, preferential tariffs, and trade restrictions, such as the U.S. restrictions on trade with and travel to Cuba (table I.1). Importer-specific trade costs are costs specific to the importing country that apply equally to all exporters, including normal trade relations (NTR) tariffs¹⁴⁴³ and nontariff barriers such as costs due to poor infrastructure, corruption, customs procedures, and sanitary and phytosanitary measures. There are no data to directly measure all of these trade costs. However, aggregate bilateral and importer-specific trade costs can be estimated based on observed trade flows.

The other two determinants of trade in the model are productivities and wages. Relative productivities across industries determine comparative advantages. For example, the United States has comparative advantages in medical equipment, wheat, and poultry (among other industries). Wages affect trade because lower wages benefit the production of labor-intensive goods. These are held constant in this model.

Aggregate bilateral and importer-specific trade costs for each pair of countries in each industry are estimated using data on current trade between all countries as well as data on domestic trade (i.e., purchases of domestically made goods). Bilateral trade costs are related to observable country characteristics, making it possible to estimate what trade costs would be in the absence of U.S. restrictions.¹⁴⁴⁴

Table I.1: Relationships between selected unobservable trade costs and observable country characteristics

Cost (unobservable)	Observable characteristic
Freight	Distance, shared border
Insurance	Distance, shared border
Translation	Commonality of language
Preferential tariffs	Trade agreements
U.S. restrictions	Residual

Source: U.S. International Trade Commission.

¹⁴⁴² Anderson and van Wincoop, “Trade Costs,” 2004, 691–751, explains the nature and typical magnitudes of trade costs.

¹⁴⁴³ NTR tariffs (called Most-Favored Nation (MFN) tariffs outside the U.S.) are what countries promise to impose on imports from other members of the WTO, unless the country is part of a preferential trade agreement.

¹⁴⁴⁴ Anderson and van Wincoop, “Trade Costs,” 2004; Head and Mayer, “Gravity Equations: Workhorse, Toolkit, and Cookbook,” 2014.

To respond to the original request letter, the Commission’s analysis first calculates U.S.-Cuba trade costs in the absence of U.S. restrictions using current trade flows. It then uses an extended gravity model to estimate trade between all countries in the absence of U.S. restrictions. To answer the expanded request letter, the Commission’s analysis lowers Cuba-specific trade costs to the calculated average of the developing countries. It then uses an extended gravity model to estimate trade between all pairs of countries in the absence of U.S. restrictions and with lower Cuban tariff and nontariff barriers. An alternative scenario estimates the effects of reducing Cuban barriers to the level of the developing country with the lowest barrier in each sector.

Methodology

Estimation of U.S. exports to Cuba in the selected sectors in the absence of U.S. restrictions proceeds in several steps. In the first step, parameters of the gravity model, including trade costs, are estimated. In the second step, the potential value of U.S. exports to Cuba in each selected sector is estimated. Both steps use the extended gravity model—a basic gravity model supplemented with elements of a general equilibrium model. This model is based on the model developed by Eaton and Kortum (2002), extended to the industry dimension in Shikher (2012).¹⁴⁴⁵

The industry-level Eaton-Kortum model has been used in a large number of studies, including publications in leading academic journals. The model has been used to study the effects of various determinants of trade and to estimate the effects of past and future trade policies. For example, Chor (2010) and Shikher (2011) use the model to study the effects of various determinants of trade, such as capital and institutions.¹⁴⁴⁶ Caliendo and Parro (2015) use this model to estimate the effects of the North American Free Trade Agreement (NAFTA) on the U.S. economy; Shikher (2012), to evaluate how accurately this model could predict the effects of NAFTA from the point of view of 1989; and Levchenko and Zhang (2012), to estimate the effects of European integration.¹⁴⁴⁷ Major papers that use this model have been recently reviewed in Eaton and Kortum (2014).¹⁴⁴⁸

Estimation of the Parameters of the Gravity Model

The approach used in estimating the parameters of the gravity model recognizes that bilateral trade costs are not necessarily symmetric. Rather, the cost of exporting from country A to country B can be different from the cost of exporting goods from country B to country A.

¹⁴⁴⁵ Eaton and Kortum, “Technology, Geography, and Trade,” 2002, 1741–79; Shikher, “Putting Industries into the Eaton-Kortum Model,” 2012, 807–37.

¹⁴⁴⁶ Chor, “Unpacking Sources of Comparative Advantage,” 2010, 152–67; Shikher, “Capital, Technology, and Specialization in the Neoclassical Model,” 2011, 229–42.

¹⁴⁴⁷ Shikher, “Predicting the Effects of NAFTA,” 2012, 32–59; Caliendo and Parro, “Estimates of the Trade and Welfare Effects of NAFTA,” 2015, 1–44; Levchenko and Zhang, “Comparative Advantage and the Welfare Impact,” 2012, 567–602.

¹⁴⁴⁸ Eaton and Kortum, “Putting Ricardo to Work,” 2014, 65–90.

Following the standard methodology of the gravity literature, trade costs are given by the trade cost function (equation 1).

International trade costs are denoted by d_{nij} where j is the industry, i is the country of origin, and n is the country of destination.

$$\log d_{nij} = d_{knij}^{phys} + b_{nij} + l_{nij} + f_{nij} + m_{nj} + \delta_{nij} \quad (1)$$

The right-hand side of equation (1) consists of the variables that affect international trade costs. The first variable is the physical distance, d_{knij}^{phys} . Given evidence in the literature that the effects of distance are nonlinear, the cost of moving goods an additional kilometer depends on the total distance traveled. Each d_{knij}^{phys} is the effect of the physical distance lying in the k th interval. Here, distance is divided into 6 ($k = 1, \dots, 6$) intervals (in km): [0,599], [600,1199], [1200,2399], [2400,4799], [4800,9599], and [9600,maximum]. The distance between the U.S. and Cuba is in the second interval.¹⁴⁴⁹

The second, third, and fourth variables on the right-hand side of (1) are the effects of having a shared border, common language, and common free trade agreement (FTA). Sharing any of these things reduces trade costs. Subscript j on these variables indicates that they are industry-specific because the effects on trade costs of a shared border, common language, or FTA can be different across industries.

The fifth variable on the right-hand side of (1), m_{nj} , is the international trade cost that is specific to the importer n and common to all sources i . This trade cost includes non-preferential tariffs, nontariff measures, and costs due to corruption, security, and poor infrastructure in country n . All exporting countries selling in destination n face these costs equally.

The last variable on the right-hand side of (1) includes all the bilateral determinants of trade costs not accounted for by the other variables on the right-hand side and differs according to country pair and direction of trade.

As is common in the gravity literature, trade costs are measured relative to domestic trade costs. Therefore, domestic trade costs d_{nnj} are equal to 1 and $\log d_{nnj} = 0$. If country n has high domestic trade costs (as many developing countries do), then international trade costs for that country may be relatively low.

¹⁴⁴⁹ Physical distance between countries is based on bilateral distances between the biggest cities of the two countries, those intercity distances being weighted by the share of the city in the overall country's population. This measure, *distw*, is provided by the Centre d'Études Prospectives et d'Informations Internationales (CEPII). The measure accounts for the fact that goods have to be sent from various parts of the country in order to be exported. Therefore, the distance between the United States and Cuba is greater than the distance between Miami and Cuba.

A gravity equation is used to estimate international trade costs. This gravity equation is derived from theory, with the full derivation presented in Eaton and Kortum (2002) and Shikher (2012). The basic form of the gravity equation is

$$X_{nij} = \frac{S_{nj}^{imp} S_{ij}^{exp}}{d_{nij}^{\theta}} \quad (2)$$

where X_{nij} is the spending by country n on goods of industry j from country i (i.e., the volume of trade in industry j from country i to country n). S_{nj}^{imp} includes all determinants of trade that are specific to the importer, while S_{ij}^{exp} includes all determinants of trade that are specific to the exporter. In older gravity literature, S_{nj}^{imp} and S_{ij}^{exp} were often importer and exporter GDPs. However, recent literature, such as Anderson and van Wincoop (2003) and Head and Mayer (2014), explains that exporter- and importer-specific variables also include other determinants of trade, such as output and spending.¹⁴⁵⁰

The denominator of (2) includes the trade cost d_{nij} raised to the power $-\theta$. The parameter θ is usually called the elasticity of trade with respect to trade cost.¹⁴⁵¹ Taking logs of equation (2) gives the log-linear form of the gravity equation

$$\log X_{nij} = \log S_{nj}^{imp} + \log S_{ij}^{exp} - \theta \log d_{nij} \quad (3)$$

The above equation can also be used to describe the domestic trade in country n , i.e., the amount of goods that n buys from itself. The domestic trade is noted by X_{nnj} and calculated from output and export data as $X_{nnj} = Q_{nj} - EX_{nj}$, where Q_{nj} is the total output in industry j of country n and EX_{nj} are total exports of industry j in country n .

Some manipulation of equation (3) yields the estimating equation:¹⁴⁵²

$$\log X_{nij} = \varphi_{nj}^{imp} D_{nj}^{imp} + \varphi_{ij}^{exp} D_{ij}^{exp} + \gamma_{dkj} d_{kj}^{phys} + \gamma_{bj} b_j + \gamma_{lj} l_j + \gamma_{fj} f_j + \varepsilon_{nij} \quad (4)$$

using the definitions $\varphi_{ij}^{exp} D_{ij}^{exp} = \log S_{ij}^{exp}$, $\varphi_{nj}^{imp} D_{nj}^{imp} = -\log S_{nj}^{exp} + \log X_{nnj} - \theta m_{nj}$, and $\varepsilon_{nij} = -\theta \delta_{nij}$. In equation (4), φ 's and γ 's are the coefficients to be estimated. All the variables on the right-hand side of (4) are fixed effects (dummy variables). D_{nj}^{imp} is equal to 1 if the importer is n and zero otherwise. D_{ij}^{exp} is equal to 1 if the exporter is i and zero otherwise.

¹⁴⁵⁰ Anderson and van Wincoop, "Gravity with Gravitas," 2003, 170–92; Head and Mayer, "Gravity Equations: Workhorse, Toolkit, and Cookbook," 2014.

¹⁴⁵¹ The model presented by Eaton and Kortum in "Technology, Geography, and Trade," 2002, has a more micro-founded interpretation of θ . In their model it is a parameter of the distribution of productivities of producers within an industry.

¹⁴⁵² Set $i = n$ in equation (3) and subtract the resulting equation from (3); then move $-\log X_{nnj}$ to the right-hand side, plug in the expression for trade costs (1), and add coefficients. The details of this derivation can be seen in Eaton and Kortum, "Technology, Geography, and Trade," 2002, and Shikher, "Putting Industries into the Eaton-Kortum Model," 2012.

Country fixed effects D_{nj}^{imp} and D_{ij}^{exp} are measured relative to the United States. In other words, $D_{us,j}^{imp} = D_{us,j}^{exp} = 0$.

Variable d_{kj}^{phys} is equal to 1 if the physical distance between n and i lies in the interval k . Similarly, b_j , l_j , and f_j indicate if n and i share a common border, language, or FTA, as discussed above. Equation (4) is estimated for each industry j using data on bilateral trade, distance, shared borders, language, and FTAs. Estimating (4) will produce estimated coefficients γ and φ and error terms ε_{nij} .¹⁴⁵³

Equation (4) is estimated using ordinary least squares. When estimating (4), missing and zero trade values are excluded, since the log of zero is not defined.¹⁴⁵⁴

With equation (4) estimated, the next step is to calculate importer-specific trade costs m_{nj} .

They are calculated as follows. Rearranging the definition of D_{nj}^{imp} yields $m_{nj} = (1/\theta)(\log X_{nnj} - D_{nj}^{imp} - \log S_{nj}^{exp})$. Using the definition of D_{ij}^{exp} and adding coefficients gives the result

$$m_{nj} = (1/\theta)(\log X_{nnj} - \varphi_{nj}^{imp} D_{nj}^{imp} - \varphi_{nj}^{exp} D_{nj}^{exp}) \quad (5)$$

Variable X_{nnj} is obtained from data as explained above. Coefficients φ_{nj}^{imp} and φ_{nj}^{exp} are estimated using equation (4). The value of parameter θ is taken from Eaton and Kortum (2002), where it is estimated to be 8.28. Sensitivity analysis for a range of plausible values for this parameter shows that this choice has only a small effect on the results.¹⁴⁵⁵

Now it is possible to calculate international trade costs d_{nij} for each pair of countries as follows:

$$\log d_{nij} = -(1/\theta)(\gamma_{dkj} d_{kj}^{phys} + \gamma_{bj} b_j + \gamma_{lj} l_j + \gamma_{fj} f_j) + m_{nj} + \delta_{nij} \quad (6)$$

where $\delta_{nij} = -(1/\theta)\varepsilon_{nij}$. Current trade costs d_{nij} can be calculated using (6) for all n , i , and j for which there are current trade data. In the absence of current trade, the term δ_{nij} cannot be estimated. This term includes all trade costs not accounted for by physical distance, shared

¹⁴⁵³ For notational simplicity, “hat” symbols are omitted from the estimated coefficients.

¹⁴⁵⁴ This is a common approach in gravity literature. It produces consistent estimates if missing and zero trade values are randomly distributed across observations. See UNCTAD and WTO, “A Practical Guide to Trade Policy Analysis,” 2012, and Head and Mayer, “Gravity Equations: Workhorse, Toolkit, and Cookbook,” 2014, for more discussion.

¹⁴⁵⁵ Counterfactuals are estimated and simulated using a range of parameters θ between 3 and 13. The choice of θ has only a small effect on the results presented in chapter 8. Changing θ affects the value of trade costs d_{nij} shown in tables I.10 and I.11. Using a lower θ results in higher estimates of d_{nij} for all country pairs, including Cuba-U.S. trade costs. However, trade costs between the U.S. and Cuba relative to the trade costs between other country pairs are not affected.

border, language, and FTA. For most pairs of countries, this term is small.¹⁴⁵⁶ For current U.S.-Cuba trade, in the sectors where trade occurs, this term is high because it includes the effects of U.S. restrictions. The next section will lay out the steps for estimating trade costs in the absence of U.S. restrictions.

Producing Counterfactuals

The second step produces estimates for U.S. exports to Cuba under two counterfactual scenarios: (1) no U.S. restrictions and (2) no U.S. restrictions and lower Cuban import barriers. To obtain trade values under the counterfactuals, it is first necessary to estimate trade costs between the United States and Cuba under the two scenarios. These trade costs can then be used to estimate trade between the United States and Cuba under the two scenarios, assuming trade will be determined by normal market forces.

Estimating Trade Costs in the Absence of U.S. Restrictions

The estimation of trade costs between the United States and Cuba in the absence of U.S. restrictions is based on equation (6). It is assumed that in the absence of U.S. restrictions, the cost of international trade between the United States and Cuba is equal to the typical cost of international trade between countries whose relation to Cuba in terms of physical distance, commonality of language, and border is similar to that of the United States to Cuba, and that do not have an FTA with Cuba. In addition, it is assumed that importer-specific barriers m_{nj} remain the same with or without U.S. restrictions. As noted above, these barriers include tariffs, nontariff measures, costs due to corruption, weak institutions, security issues, and poor infrastructure in country n , which for convenience are referred to here as country-specific “import barriers.” The international trade cost for U.S. exports to Cuba includes the Cuba-specific trade cost $m_{\text{Cuba},j}$. This cost is imposed on exports from all countries to Cuba, and it is assumed that they are constant and do not change when U.S. restrictions are removed.

Trade costs between the United States and Cuba in the absence of U.S. restrictions, $d_{\text{Cuba,US},j}$ and $d_{\text{US,Cuba},j}$, are calculated using the following equation:

$$\log d_{nij} = -(1/\theta)(\gamma_{dkj}d_{kj}^{\text{phys}} + \gamma_{bj}b_j + \gamma_{lj}l_j + \gamma_{fj}f_j) + m_{nj} \quad (7)$$

Estimating Trade Costs in the Absence of U.S. Restrictions and with Lower Cuban Import Barriers

Cuban import barriers are measured by $m_{\text{Cuba},j}$. These barriers may be different in different industries j . Any country exporting to Cuba has to pay this cost to get its product to the Cuban market. These trade costs include Cuban tariffs, nontariff measures, and other country-specific trade impediments.

¹⁴⁵⁶ When estimating (9), the R^2 's are high (see tables I.6 and I.7).

Cuban barriers to imports are relatively high, as shown below (tables I.8 and I.9). The first step here is to reduce Cuban trade barriers in each industry to an average of all developing countries in the dataset. That is, $m_{Cuba,j}$ is set equal to $\bar{m}_{Dev,j} = \frac{1}{N_{Dev}} \sum_{n=1}^{N_{Dev}} m_{nj}$, where the summation is over the countries classified as low-income or middle-income by the World Bank and N_{Dev} is the number of such countries in the dataset.¹⁴⁵⁷

At this point, $\log d_{Cuba,i,j}$ is recalculated for all sources of Cuban imports i . For all exporters except the United States, equation (6) is used. For the United States, equation (7) is used.

In addition, a sensitivity analysis is performed to examine the effects of reducing Cuban import barriers to other levels. As an alternative to setting $m_{Cuba,j}$ equal to the average of developing countries $\bar{m}_{Dev,j}$, Cuba's importer-specific costs are set equal to the minimum across developing countries in each industry, $m_{Dev,j}^{\min} = \min_{n \in Dev} m_{nj}$. The results of this simulation, presented later in this appendix, should be taken with caution, because these results set Cuba-specific trade costs $m_{Cuba,j}$ to very low values. It would take many years for Cuba to achieve such low trade costs, at which point many parameters that are held constant in the model, especially Cuban productivity, would probably be different from their current values.

U.S. Exports to Cuba with New Trade Costs

Having obtained trade costs in the absence of U.S. restrictions, or in the absence of U.S. restrictions and with lower Cuban import barriers, U.S. exports to Cuba could have been estimated under these trade costs using equation (3). However, doing so would assume that country-specific variables S will remain constant when U.S. restrictions are removed. The gravity literature indicates that these variables include information on prices, which will change when U.S. restrictions are removed.¹⁴⁵⁸ Therefore, to more accurately estimate U.S.-Cuba trade, the model needs to be extended in order to explain how variables S are determined.¹⁴⁵⁹ To do that, the multicountry Ricardian model of Eaton and Kortum (2002) is used and extended to the industry dimension, as in Shikher (2012).

Starting with equation (3), the following expression is derived by setting $i = n$ and subtracting the resulting equation from (3):

$$\log X_{nij} = \log S_{ij}^{exp} - \log S_{nj}^{exp} + \log X_{nnj} - \theta \log d_{nij} \quad (8)$$

¹⁴⁵⁷ These are countries with GDP per capita of less than 23 percent of the U.S. GDP per capita.

¹⁴⁵⁸ See Anderson and van Wincoop, "Gravity with Gravitas," 2003; Head and Mayer "Gravity Equations: Workhorse, Toolkit, and Cookbook," 2014.

¹⁴⁵⁹ It is also necessary to assume that Cuban sourcing decisions are driven by prices and product characteristics.

Eaton and Kortum (2002) derive the expression for S_{ij}^{exp} as a function of the costs of production in industry j of country i , c_{ij} , and the productivity of industry j of country i , A_{ij} : $S_{ij}^{exp} = (c_{ij}/A_{ij})^{-\theta}$.¹⁴⁶⁰ Plugging the expression for S_{ij}^{exp} into equation (8) gives

$$\log X_{nij} = -\theta \log d_{nij} + \log \left(\frac{c_{ij}}{A_{ij}} \right)^{-\theta} - \log \left(\frac{c_{nj}}{A_{nj}} \right)^{-\theta} + \log X_{nnj} \quad (9)$$

The cost of production is given by the Cobb-Douglas cost function: $c_{ij} = w_i^\beta \rho_{ij}^{1-\beta}$, where w_i is the wage in country i , ρ_{ij} is the cost of intermediate goods in industry j of country i , and β is the share of labor in output. The cost of intermediate goods is a Cobb-Douglas composite of goods from all industries: $\rho_{ij} = \prod_m p_{im}^{\eta_{jm}}$, where η_{jm} is the share of industry m in costs of industry j .

Costs of production are obtained by solving the following equation:

$$\log c_{ij} = \beta_j \log w_i - \frac{1-\beta_j}{\theta} \sum_{m=1}^{J-1} \left(\eta_{jm} \log \left(\sum_{n=1}^N d_{inm}^{-\theta} \left(\frac{c_{ij}}{A_{ij}} \right)^{-\theta} \right) \right) \quad (10)$$

where J is the number of industries and N is the number of countries. This expression is derived in Eaton and Kortum (2002) and extended to multiple industries in Shikher (2012). Solving for costs requires simultaneously solving $N \times J$ equations. Note that costs of production depend on trade costs d .

Once costs of production in the absence of U.S. restrictions are obtained, the next step is to calculate the new $\log X_{nnj}$. First, the following must be calculated:

$$\log X_{nij} - \log X_{nnj} = -\theta \log d_{nij} + \log \left(\frac{c_{ij}}{A_{ij}} \right)^{-\theta} - \log \left(\frac{c_{nj}}{A_{nj}} \right)^{-\theta} \quad (11)$$

From X_{nij}/X_{nnj} , the term IM_{nj}/X_{nnj} can be calculated, where IM are imports. From IM_{nj}/X_{nnj} , the term X_{nj}/X_{nnj} can be calculated, where X_{nj} is total spending on good j in n . X_{nj} is calculated as labor income plus spending on intermediate goods. Once new $\log X_{nnj}$ is calculated, new trade is calculated using (9).

Data

The model requires data on trade and production in each industry for a broad set of countries. The base year for the analysis uses the average of data from 2010–13 in order to maximize data availability and minimize data measurement errors. One challenge that needed to be overcome was obtaining reliable Cuban production data by industry.

¹⁴⁶⁰ Eaton and Kortum in "Technology, Geography, and Trade," 2002, denote the productivity parameter by T . The relationship between T and A is $A_{ij} = T_{ij}^{1/\theta}$.

Data on bilateral trade come from the UN’s Comtrade database. Data on agricultural production come from the FAO database, while data on manufacturing production come from the IndStat2 database maintained by UNIDO. All data use the same industrial classification and currency units for consistency. The data sources are summarized in table I.2.

Table I.2: Data sources

Data source	Description of data
Comtrade	Bilateral trade flows by industry
IndStat2	Manufacturing output by industry
FAOSTAT	Value of agricultural production by industry
Cuban statistical series - industry	Index of Cuban manufacturing output
CEPII gravity database	Gravity variables: distance, language, border

The analysis of the agricultural data was at the level of FAO’s industrial classification. The analysis of the manufacturing sector was done at the ISIC rev.3 two-digit industry level. Table I.3 describes ISIC rev. 3 industries. The Comtrade data on agricultural goods were concorded to the FAO industrial classification, while FAO’s production data are already reported using this classification.¹⁴⁶¹ The Comtrade data on manufactured goods were concorded to the ISIC rev.3 classification, while IndStat’s production data are already reported in the database using this classification.¹⁴⁶²

Table I.3: ISIC sector descriptions

ISIC	Sector name	Contains
15	Food and beverages	Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats, Manufacture of dairy products, Manufacture of grain mill products, starches and starch products, and prepared animal feeds, Manufacture of other food products, Manufacture of beverages
16	Tobacco products	Manufacture of tobacco products
17	Textiles	Spinning, weaving and finishing of textiles; Manufacture of other textiles; Manufacture of knitted and crocheted fabrics and articles
18	Wearing apparel, fur	Manufacture of wearing apparel, except fur apparel; Dressing and dyeing of fur, manufacture of articles of fur

¹⁴⁶¹ The concordance used for the agricultural trade data was taken from the FAO.

¹⁴⁶² The concordance used for the manufacturing trade data was created by the Commission’s economists and verified by the Commission’s industry experts.

Appendix I: Description of Empirical Methodology

ISIC	Sector name	Contains
19	Leather products	Tanning and dressing of leather; manufacture of luggage, handbags, saddlery and harness; Manufacture of footwear
20	Wood products (excl. furniture)	Sawmilling and planing of wood; Manufacture of products of wood, cork, straw and plaiting materials
21	Paper and paper products	Manufacture of paper and paper products
22	Printing and publishing	Publishing; Printing and service activities related to printing; Reproduction of recorded media
23	Petroleum products	Manufacture of coke oven products; Manufacture of refined petroleum products; Processing of nuclear fuel
24	Chemicals and chemical products	Manufacture of basic chemicals; Manufacture of other chemical products; Manufacture of man-made fibres
25	Rubber and plastics products	Manufacture of rubber products; Manufacture of plastics products
26	Non-metallic mineral products	Manufacture of glass and glass products; Manufacture of non-metallic mineral products n.e.c.
27	Basic metals	Manufacture of basic iron and steel; Manufacture of basic precious and non-ferrous metals; Casting of metals
28	Fabricated metal products	Manufacture of structural metal products, tanks, reservoirs and steam generators; Manufacture of other fabricated metal products, metal working service activities
29	Other machinery and equipment	Manufacture of general purpose machinery; Manufacture of special purpose machinery; Manufacture of domestic appliances n.e.c.
30	Office and computing machinery	Manufacture of office, accounting and computing machinery
31	Electrical machinery and apparatus	Manufacture of electric motors, generators and transformers; Manufacture of electricity distribution and control apparatus;

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ISIC	Sector name	Contains
		Manufacture of insulated wire and cable; Manufacture of accumulators, primary cells and primary batteries; Manufacture of electric lamps and lighting equipment; Manufacture of other electrical equipment n.e.c.
32	Communication equipment	Manufacture of electronic valves and tubes and other electronic components; Manufacture of television and radio transmitters and apparatus for line telephony and line telegraphy; Manufacture of television and radio receivers, sound or video recording or reproducing apparatus, and associated goods
33	Medical and precision instruments	Manufacture of medical appliances and instruments and appliances for measuring, checking, testing, navigating and other purposes, except optical instruments; Manufacture of optical instruments and photographic equipment; Manufacture of watches and clocks
34	Motor vehicles, trailers	Manufacture of motor vehicles; Manufacture of bodies (coachwork) for motor vehicles; manufacture of trailers and semi-trailers; Manufacture of parts and accessories for motor vehicles and their engines
35	Other transport equipment	Building and repairing of ships and boats; Manufacture of railway and tramway locomotives and rolling stock; Manufacture of aircraft and spacecraft; Manufacture of transport equipment n.e.c.
36	Furniture; other manufacturing	Manufacture of furniture; Manufacturing n.e.c.

Source: United Nations Statistics Division, Detailed structure and explanatory notes (accessed February 9, 2016).

<http://unstats.un.org/unsd/cr/registry/regcst.asp?Cl=2>.

Note: "N.e.c." stands for "not elsewhere classified."

The IndStat database does not contain recent production data for Cuba. For this study, Cuban production values for all manufacturing industries were obtained by combining 1989 production values from IndStat2 with the 1989–2012 index of industrial production from the Oficina Nacional de Estadísticas e Información (ONEI), Cuba’s statistical agency.¹⁴⁶³

ONEI does not report current values of output for all Cuban manufacturing industries. However, it reports output for several industries, which was used to cross-check the output values obtained from the production index. Cuban production values were also checked by industry analysts.

Cuban data can be reported in one of the two currencies: the Cuban national peso or the Cuban convertible peso. Great care was taken to use the correct exchange rate to USD for each Cuban currency.¹⁴⁶⁴ Cuban output data in agriculture were taken from FAO (table I.4). Industry experts verified the value of Cuban output in agriculture by industry. Cuban manufacturing production data used in the Commission’s analysis are reported in table I.5.

Table I.4: Cuban output in selected agricultural sectors, base year (million U.S. dollars)

Sector name	Output
Wheat	0.0
Rice	171.9
Corn	51.6
Pulses	54.6
Other oilseeds	11.9
Soybeans	0.0
Beef	192.5
Poultry	53.7
Pork	297.1
Total	833.0

Source: FAO, Value of Agricultural Production database; USITC estimates.

¹⁴⁶³ Using the 1989 values of production, the 1989–2012 index time series were converted into values. The resulting output values were in 1989 USD, which were converted to 2010–12 USD using a U.S. GDP deflator.

¹⁴⁶⁴ ONEI usually does not specify which peso is being used in the reported data. However, as a rule, trade data are reported in convertible pesos, while production data are reported in national pesos. Note that the Commission’s procedure for obtaining Cuban data does not use any data reported in pesos, except as an external source for cross-checking.

Table I.5: Cuban output in manufacturing sectors, base year (million dollars)

ISIC	Sector name	Output
15	Food and beverages	3,910.0
16	Tobacco products	542.3
17	Textiles	37.1
18	Wearing apparel, fur	76.1
19	Leather products	29.9
20	Wood products (excl. furniture)	15.3
21	Paper and paper products	16.5
22	Printing and publishing	46.9
23	Petroleum products	442.1
24	Chemicals and chemical products	1,327.8
25	Rubber and plastics products	107.7
26	Non-metallic mineral products	99.1
27	Basic metals	722.0
28	Fabricated metal products	61.5
29	Other machinery and equipment	327.6
30	Office and computing machinery	12.7
31	Electrical machinery and apparatus	63.4
32	Communication equipment	21.3
33	Medical and precision instruments	70.0
34	Motor vehicles, trailers	48.2
35	Other transport equipment	153.1
36	Furniture; other manufacturing	1,469.5
Total		9,600.0

Sources: UNIDO; ONEI, *Anuario Estadístico de Cuba 2013* [Statistical Yearbook of Cuba 2013], 2014; USITC estimates.

Output values in some industries and countries were missing in IndStat2 and FAO databases. Missing output values were estimated.¹⁴⁶⁵ Note that the values of output are not used in estimating gravity equation (4). In fact, only U.S. and Cuban output values affect estimated U.S. exports to Cuba in the event that U.S. restrictions are removed.¹⁴⁶⁶ Values of output of countries other than the U.S. and Cuba are used when calculating lower Cuban trade barriers $m_{Cuba,j}$. Two different estimates of lower Cuban trade barriers are provided for robustness, as previously described.

In addition to trade and output, the model required standard gravity variables, such as distance between countries, commonality of border and language, etc. These variables were obtained from the database maintained by CEPII. However, because this dataset only contains information through 2006, information was incorporated on more recent trade agreements to

¹⁴⁶⁵ About 15 percent of industry output values were missing in each of the IndStat2 and FAO databases. Missing values were estimated using output values in years neighboring 2010–13 (using linear interpolation), or values of trade and total output (in which case the share of industry output in total output is assumed to be equal to the share of industry exports in total exports). None of the U.S. or Cuban industry output values were obtained using this procedure. Also note that output values are not needed to estimate the gravity equation (4).

¹⁴⁶⁶ The values of outputs of other countries do not affect estimates of $\log X_{nij}$ in (9) because values of $\log X_{nmj}$, which are calculated using data on output, are cancelled out by values of $\log X_{nmj}$, which are part of $\log d_{nij}$ and which can be seen in equations (5) and (6).

update it through 2010.¹⁴⁶⁷ This update was carried out using the World Trade Organization’s list of regional trade agreements.¹⁴⁶⁸

Twenty-two manufacturing industries and 9 agricultural industries are analyzed in the model. The level of industry detail and the number of industries used in the analysis are determined by data availability. As mentioned before, data required to analyze the services and mining sectors are unavailable, so those sectors are omitted from the analysis. The list of manufacturing industries covers the whole manufacturing sector, while the nine agricultural industries represent a subset of all agricultural products. The agricultural sectors include all agricultural products that the United States is expected to export to Cuba in significant quantities, based on overall U.S. export patterns and analyst projections.

Note that the manufactured (processed at a plant) food products are classified in the ISIC 15 industry (“food products”). For example, powdered milk is included in that industry. ISIC 15 also includes meats, since they are processed at plants. However, it proved possible to obtain data on trade and production of meat products separately, so meat industries are also analyzed separately as agricultural industries. However, given that there is some overlap between agricultural and manufacturing industries (specifically ISIC 15), total agricultural exports should not be added to total manufacturing exports because that would result in double-counting.¹⁴⁶⁹ There are 47 countries in the dataset, shown in table I.6.

Table I.6: Countries included in the model

Country Name		
Algeria	Germany	Portugal
Argentina	Greece	Romania
Australia	Hungary	Russia
Austria	India	Slovakia
Belgium	Indonesia	Spain
Brazil	Ireland	Sweden
Bulgaria	Italy	Switzerland
Canada	Japan	Taiwan
China	Korea, South	Thailand
Cuba	Lithuania	Turkey
Czech Republic	Malaysia	Ukraine
Denmark	Mexico	United Kingdom
Dominican Republic	Netherlands	United States
Egypt	Norway	Venezuela
Finland	Philippines	Vietnam
France	Poland	

¹⁴⁶⁷ CEPII’s gravity data set is available at http://www.cepii.fr/CEPII/en/bdd_modele/presentation.asp?id=8.

¹⁴⁶⁸ The list is available at <http://rtais.wto.org/UI/PublicAIIRTAList.aspx>.

¹⁴⁶⁹ In addition to meats, some oil products may be double-counted as well, but that amount is small relative to the total.

Results

First, the gravity equation (4) is estimated. The results are presented in tables I.7 and I.8. It is clear that most of the coefficients are statistically significant. Distance has a negative effect on trade, as anticipated. Greater distance has a greater negative effect on trade. The effects of distance are measured relative to the first distance interval (0–600 km) and are nonlinear, as the cost of transporting goods an additional kilometer declines with distance.

The effects of distance are measured in ad valorem terms (i.e., as a percentage of value), so goods that are most expensive relative to their size and weight have lower ad valorem costs related to distance. For example, medical equipment is very expensive and has low ad valorem costs related to distance.

The effects of sharing a common border, sharing a common language, and belonging to the same FTA are generally positive, as expected, although having a common language is not a significant determinant of trade in agricultural sectors.

Table I.7: Gravity regression results for selected agricultural sectors

	Distance (600– 1,199 km)	Distance (1,200–2,399 km)	Distance (2,400–4,799 km)	Distance (4,800–9,599 km)	Distance (9,600+ km)	Contiguity	Common official or primary language	Trade agreement in force	Observations	R-squared
Wheat	-2.273*** (0.377)	-3.663*** (0.422)	-3.749*** (0.533)	-4.664*** (0.551)	-4.631*** (0.619)	1.042*** (0.319)	-0.186 (0.333)	1.548*** (0.316)	852	0.640
Rice	-1.506*** (0.317)	-2.411*** (0.349)	-3.979*** (0.408)	-4.782*** (0.421)	-5.455*** (0.462)	0.896*** (0.260)	0.141 (0.250)	0.380* (0.225)	1,074	0.611
Corn	-1.927*** (0.347)	-3.165*** (0.386)	-3.307*** (0.464)	-5.042*** (0.479)	-5.757*** (0.518)	0.911*** (0.278)	-0.0855 (0.289)	0.837*** (0.261)	959	0.654
Beans and pulses	-1.079*** (0.266)	-2.260*** (0.287)	-2.677*** (0.329)	-4.128*** (0.330)	-4.280*** (0.362)	0.905*** (0.214)	0.870*** (0.198)	0.0728 (0.169)	1,315	0.646
Other oilseeds	-1.512*** (0.286)	-2.713*** (0.303)	-3.466*** (0.345)	-5.346*** (0.342)	-5.631*** (0.370)	0.864*** (0.226)	0.180 (0.204)	0.00116 (0.164)	1,623	0.669
Soybeans	-1.899*** (0.393)	-3.545*** (0.447)	-4.743*** (0.561)	-4.763*** (0.557)	-4.216*** (0.614)	1.092*** (0.328)	-0.179 (0.333)	-0.192 (0.326)	751	0.625
Beef	-1.204*** (0.350)	-1.958*** (0.384)	-3.044*** (0.466)	-3.762*** (0.522)	-3.496*** (0.575)	1.314*** (0.302)	0.209 (0.309)	2.464*** (0.321)	900	0.631
Poultry	-1.539*** (0.319)	-2.384*** (0.347)	-3.688*** (0.409)	-4.098*** (0.434)	-3.755*** (0.475)	1.276*** (0.262)	0.154 (0.271)	0.751*** (0.257)	1,107	0.592
Pork	-0.940*** (0.326)	-1.492*** (0.357)	-2.244*** 0.440)	-2.211*** (0.478)	-1.751*** (0.544)	1.854*** (0.278)	-0.459 (0.286)	1.794*** (0.306)	922	0.674

Source: USITC estimates.

Note: *** p<0.01, ** p<0.05, * p<0.1; standard errors in parentheses.

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Table I.8: Gravity regression results for manufactured goods sectors

	Distance (600– 1,199 km)	Distance (1,200– 2,399 km)	Distance (2,400– 4,799 km)	Distance (4,800–9,599 km)	Distance (9,600+ km)	Contiguity	Common official or primary language	Trade agreement in force	Observations	R-squared
Food and beverages	-1.147*** (0.194)	-2.068*** (0.202)	-2.662*** (0.223)	-3.916*** (0.221)	-4.355*** (0.236)	0.619*** (0.151)	0.636*** (0.125)	0.290*** (0.0953)	2,132	0.810
Tobacco products	-1.389*** (0.343)	-2.111*** (0.363)	-2.769*** (0.411)	-4.136*** (0.406)	-4.553*** (0.440)	0.545** (0.272)	0.0347 (0.237)	1.314*** (0.197)	1,499	0.539
Textiles	-0.640*** (0.178)	-1.405*** (0.186)	-2.024*** (0.206)	-3.822*** (0.204)	-4.021*** (0.219)	0.704*** (0.139)	0.636*** (0.117)	0.127 (0.0896)	2,060	0.854
Wearing apparel, fur	-0.871*** (0.201)	-1.636*** (0.210)	-2.277*** (0.232)	-3.839*** (0.230)	-3.822*** (0.246)	0.761*** (0.157)	0.527*** (0.131)	0.113 (0.100)	2,077	0.856
Leather products	-1.048*** (0.227)	-1.957*** (0.237)	-2.710*** (0.263)	-3.942*** (0.261)	-3.955*** (0.279)	0.866*** (0.177)	0.197 (0.150)	0.198* (0.115)	2,036	0.800
Wood products (excl. furniture)	-0.855*** (0.223)	-2.036*** (0.232)	-2.864*** (0.258)	-4.237*** (0.256)	-4.766*** (0.274)	1.014*** (0.174)	0.694*** (0.146)	0.0466 (0.113)	2,018	0.782
Paper and paper products	-0.878*** (0.220)	-2.185*** (0.229)	-3.122*** (0.254)	-4.702*** (0.252)	-5.003*** (0.270)	0.648*** (0.171)	0.608*** (0.145)	0.475*** (0.111)	2,017	0.814
Printing and publishing	-0.804*** (0.203)	-1.658*** (0.212)	-2.401*** (0.234)	-3.639*** (0.232)	-4.054*** (0.249)	0.827*** (0.158)	0.931*** (0.132)	0.314*** (0.102)	2,057	0.828
Petroleum products	-2.101*** (0.355)	-3.899*** (0.375)	-5.001*** (0.425)	-6.548*** (0.422)	-7.491*** (0.455)	1.487*** (0.277)	-0.0964 (0.240)	0.531*** (0.198)	1,660	0.627
Chemicals and chemical products	-0.625*** (0.170)	-1.430*** (0.177)	-2.213*** (0.195)	-3.332*** (0.194)	-3.867*** (0.207)	0.530*** (0.132)	0.674*** (0.109)	0.243*** (0.0836)	2,135	0.852
Rubber and plastics products	-0.510*** (0.170)	-1.216*** (0.177)	-2.116*** (0.196)	-3.117*** (0.194)	-3.392*** (0.208)	0.911*** (0.132)	0.610*** (0.110)	0.394*** (0.0845)	2,101	0.862
Non-metallic mineral products	-0.631*** (0.184)	-1.603*** (0.191)	-2.537*** (0.212)	-3.896*** (0.210)	-4.543*** (0.225)	0.905*** (0.143)	0.543*** (0.119)	-0.0178 (0.0923)	2,071	0.842
Basic metals	-0.891*** (0.228)	-2.062*** (0.237)	-2.977*** (0.263)	-4.421*** (0.261)	-4.975*** (0.279)	0.577*** (0.177)	0.462*** (0.148)	0.485*** (0.114)	2,071	0.783
Fabricated metal products	-0.524*** (0.177)	-1.322*** (0.184)	-2.185*** (0.203)	-3.292*** (0.201)	-3.637*** (0.215)	0.722*** (0.137)	0.797*** (0.114)	0.202** (0.0874)	2,112	0.860

	Distance (600– 1,199 km)	Distance (1,200– 2,399 km)	Distance (2,400– 4,799 km)	Distance (4,800–9,599 km)	Distance (9,600+ km)	Contiguity	Common official or primary language	Trade agreement in force	Observations	R-squared
Other machinery and equipment	-0.295** (0.149)	-0.912*** (0.154)	-1.468*** (0.171)	-2.419*** (0.169)	-2.883*** (0.181)	0.566*** (0.116)	0.601*** (0.0955)	0.295*** (0.0731)	2,135	0.906
Office and computing machinery	-0.487** (0.193)	-1.312*** (0.201)	-1.862*** (0.222)	-2.981*** (0.221)	-3.255*** (0.236)	0.601*** (0.150)	0.502*** (0.126)	0.287*** (.0965)	2,067	0.870
Electrical machinery and apparatus	-0.112 (0.175)	-0.758*** (0.182)	-1.223*** (0.201)	-2.597*** (0.200)	-2.813*** (0.214)	0.742*** (0.136)	0.686*** (0.113)	0.235*** (0.0864)	2,121	0.868
Communication equipment	-0.549** (0.213)	-1.068*** (0.222)	-1.634*** (0.246)	-2.964*** (0.244)	-3.035*** (0.261)	0.507*** (0.166)	0.549*** (0.138)	0.363*** (0.106)	2,084	0.850
Medical and precision instruments	-0.192 (0.164)	-0.708*** (0.170)	-1.128*** (0.188)	-1.995*** (0.186)	-2.272*** (0.199)	0.516*** (0.127)	0.557*** (0.106)	0.279*** (0.0808)	2,115	0.880
Motor vehicles, trailers, and parts	-0.384* (0.219)	-0.941*** (0.227)	-1.780*** (0.251)	-3.102*** (0.249)	-3.433*** (0.267)	0.712*** (0.170)	0.622*** (0.141)	0.688*** (0.109)	2,088	0.852
Other transport equipment	-0.249 (0.254)	-0.936*** (0.265)	-1.510*** (0.294)	-2.153*** (0.292)	-2.723*** (0.312)	0.796*** (0.198)	0.696*** (0.166)	0.264** (0.129)	2,011	0.753
Furniture; other manufacturing	-0.601*** (0.200)	-1.315*** (0.208)	-1.679*** (0.230)	-2.959*** (0.228)	-3.426*** (0.244)	0.629*** (0.156)	0.619*** (0.129)	0.249** (0.0987)	2,123	0.841

Source: USITC estimates.

Note: *** p<0.01, ** p<0.05, * p<0.1; standard errors in parentheses.

The next step is to calculate importer-specific trade costs m_{nj} for each industry and country using equation (10). The United States has low trade barriers, as do most of the developed countries. Developing countries have higher barriers. Cuba has some of the highest trade barriers of all the countries in the dataset. Tables I.9 and I.10 show the rankings of the countries in the dataset according to their m_{nj} . Lower-numbered rankings mean lower trade barriers. The first column of numbers shows the average (across industries) rank of each country. Note that m_{nj} is measured relative to domestic costs.

Table I.9: Ranking of countries according to their importer-specific trade cost m_{nj} for selected agricultural sectors

	Average	Wheat	Rice	Corn	Beans and pulses	Other oilseeds	Soybeans	Beef	Poultry	Pork
Canada	5.11	3	18	8	1	5	3	3	4	1
United States	6.00	6	2	4	3	2	4	2	21	10
Australia	11.44	5	1	9	16	11	7	12	34	8
Italy	12.44	9	4	22	9	29	8	13	1	17
Spain	12.44	8	6	14	13	7	40	6	12	6
Germany	13.33	11	19	10	15	9	36	11	7	2
Russia	13.89	21	13	3	8	18	6	15	28	13
United Kingdom	13.89	16	12	31	4	15	28	8	6	5
France	16.56	29	23	5	21	12	17	22	5	15
Venezuela	18.00	1	17	6	22	27	1	21	45	22
Romania	18.22	10	9	13	40	13	10	39	9	21
Brazil	18.89	2	11	12	35	23	25	9	14	39
Argentina	19.11	38	8	2	2	8	38	1	30	45
Portugal	19.56	4	10	24	5	44	32	20	8	29
Denmark	19.89	27	39	38	10	16	39	4	3	3
Netherlands	20.00	7	31	18	33	1	16	28	26	20
Hungary	22.11	35	35	17	26	36	13	18	10	9
Bulgaria	22.22	13	3	16	39	19	43	32	11	24
Thailand	22.33	36	7	30	7	31	11	23	16	40
Lithuania	23.11	25	16	27	28	30	34	14	15	19
Malaysia	23.33	41	29	1	18	6	30	10	37	38
South Korea	23.67	39	33	7	29	32	31	19	19	4
Sweden	24.00	24	25	23	34	22	26	27	17	18
Mexico	24.56	14	14	45	25	10	33	5	40	35
Ireland	25.33	22	30	37	43	45	35	7	2	7
India	25.44	43	21	26	11	3	42	33	18	32
Ukraine	25.78	15	36	11	24	21	23	29	36	37
Belgium	25.89	17	28	34	23	28	14	43	35	11
Japan	26.11	12	44	43	41	4	24	24	29	14
Turkey	26.11	26	15	25	20	25	5	44	42	33
Cuba	26.22	18	32	21	17	41	18	37	24	28
Egypt	26.44	33	20	41	12	26	12	40	38	16
Slovakia	26.56	30	24	15	19	39	19	42	20	31
Austria	26.67	28	40	20	37	24	9	25	31	26
Poland	26.67	32	26	19	32	33	46	17	23	12
Philippines	26.78	23	37	36	30	40	2	26	22	25

	Average	Wheat	Rice	Corn	Beans and pulses	Other oilseeds	Soybeans	Beef	Poultry	Pork
Vietnam	28.89	34	22	29	27	42	20	31	13	42
China	29.67	42	42	44	6	14	22	30	33	34
Greece	29.67	20	5	35	36	43	45	35	25	23
Finland	30.22	19	27	39	31	37	27	38	27	27
Indonesia	30.56	31	43	28	14	17	15	41	43	43
Dominican Republic	35.56	45	45	32	38	20	21	34	44	41
Czech Republic	37.11	40	46	42	45	34	29	36	32	30
Taiwan	37.11	37	38	33	46	46	41	16	41	36
Switzerland	41.67	46	41	40	42	38	37	46	39	46
Norway	42.44	44	34	46	44	35	44	45	46	44

Source: USITC estimates.

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Table I.10: Ranking of countries according to their importer-specific trade cost m_{nj} for manufactured goods sectors

	Average	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	37
United States	2.14	2	6	4	1	3	1	1	2	1	2	1	1	1	1	1	1	3	6	4	2	2	1
China	7.00	16	37	6	2	2	2	2	4	6	9	3	2	6	2	6	3	5	5	6	15	9	6
Germany	7.36	11	7	3	16	21	7	7	8	24	1	5	3	9	4	3	13	4	1	3	5	4	3
Netherlands	8.95	1	1	2	13	11	13	5	10	10	33	2	18	4	10	2	4	2	7	7	4	8	30
France	11.27	12	11	17	5	17	15	15	12	11	6	8	7	20	12	15	18	9	13	9	13	1	2
Canada	11.32	8	20	35	10	8	8	10	3	7	5	20	21	5	19	8	10	10	16	10	6	6	4
United Kingdom	11.55	14	30	12	3	25	22	11	6	16	4	10	11	7	17	11	14	6	3	1	9	10	12
Thailand	12.27	3	24	13	19	9	5	13	15	23	11	4	15	8	3	12	9	14	14	24	7	12	13
Malaysia	12.73	7	3	10	22	14	6	19	9	4	15	7	16	11	7	22	2	20	4	23	30	20	9
Taiwan	12.95	18	27	19	28	16	11	6	5	26	31	11	8	2	9	5	7	1	11	15	19	5	5
Belgium	14.14	15	10	5	17	31	12	8	23	32	21	6	13	12	25	4	22	13	17	12	3	3	7
Spain	14.86	10	17	22	4	6	17	16	22	22	7	14	9	18	16	16	25	19	19	8	12	13	15
South Korea	15.18	22	16	9	26	18	26	20	11	5	8	15	17	3	6	7	24	12	10	21	8	21	29
Italy	16.27	13	32	11	9	4	18	18	21	27	12	17	12	13	20	13	5	24	21	17	16	18	17
Japan	17.41	33	23	14	23	26	34	25	16	8	16	9	5	16	13	18	26	17	23	5	10	15	8
Indonesia	17.50	5	26	23	27	1	4	3	20	17	19	30	4	14	18	30	19	16	12	36	28	23	10
Mexico	18.18	28	39	27	7	28	20	30	7	30	25	16	10	21	5	19	12	8	9	14	1	26	18
India	18.50	27	28	18	14	7	19	17	14	18	10	21	14	15	8	25	15	28	20	22	21	19	27
Australia	19.32	6	5	25	31	15	21	12	13	3	18	27	22	25	28	26	17	23	34	16	20	24	14
Vietnam	19.41	4	8	8	20	5	3	28	30	13	35	12	20	22	11	29	8	27	18	31	34	37	24
Brazil	22.00	9	35	37	41	24	9	4	34	12	17	18	6	10	14	21	35	30	36	25	25	7	35
Czech Republic	22.36	39	21	7	6	30	36	26	18	37	3	26	23	32	23	14	16	11	24	30	24	25	21
Poland	23.00	23	18	30	15	20	29	27	25	33	24	24	24	17	24	20	23	22	15	29	22	22	20
Sweden	23.09	21	46	15	33	38	24	14	17	20	23	13	26	29	15	17	31	15	25	18	17	32	19
Philippines	23.68	19	13	28	18	34	10	22	26	34	36	19	33	41	22	36	6	18	8	19	38	30	11
Turkey	24.95	32	29	16	11	29	33	24	35	28	29	22	19	24	21	9	29	32	26	27	14	27	33
Russia	26.45	24	22	41	38	32	14	9	32	9	20	34	36	19	29	35	21	38	38	33	31	11	16
Portugal	26.55	26	14	26	12	10	16	23	39	38	32	25	25	35	36	31	39	35	2	26	26	34	34
Austria	26.77	30	45	24	32	12	23	29	19	46	26	29	28	30	26	24	28	26	27	28	18	16	23
Denmark	28.23	17	34	1	25	33	30	35	27	35	30	32	30	38	27	33	30	36	29	20	36	17	26
Hungary	29.18	41	38	40	24	23	35	33	29	43	22	23	29	42	32	27	20	7	22	13	23	38	38
Switzerland	29.64	31	15	32	8	37	43	34	28	39	13	35	32	37	35	23	43	34	35	11	41	14	32
Finland	30.14	42	42	34	21	27	27	21	24	41	14	36	31	26	38	34	40	25	37	2	35	35	31

	Average	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	37
Norway	30.77	20	47	39	34	13	40	31	38	21	34	37	40	23	31	40	34	31	31	32	11	28	22
Romania	31.41	44	4	21	30	35	31	46	40	36	38	28	42	33	30	32	27	21	33	34	27	31	28
Bulgaria	34.27	38	40	20	36	19	39	39	44	44	28	42	37	34	44	10	37	37	40	35	37	29	25
Argentina	34.82	34	9	42	40	41	38	41	31	2	41	39	27	36	33	38	32	40	41	37	39	42	43
Ireland	35.45	25	41	36	43	44	37	38	1	45	42	33	44	44	39	28	11	39	28	41	40	39	42
Ukraine	36.09	36	36	38	37	22	28	42	43	29	27	43	45	31	41	39	38	33	43	39	32	36	36
Slovakia	36.18	43	44	31	29	36	44	36	33	40	44	31	34	28	37	41	42	29	32	43	29	33	37
Egypt	36.64	37	19	29	42	39	25	40	36	14	39	38	35	39	34	37	44	44	46	45	43	41	40
Lithuania	38.18	35	12	33	39	42	32	43	37	47	37	40	38	46	40	44	33	43	30	38	44	46	41
Greece	39.27	29	25	43	35	40	46	37	41	42	40	41	39	40	45	43	45	42	39	40	33	40	39
Venezuela	40.23	46	2	46	45	46	45	47	42	25	43	45	43	27	43	42	36	41	42	42	47	44	46
Cuba	42.64	40	31	44	46	47	41	32	45	31	46	46	46	43	46	46	41	45	44	46	42	43	47
Dominican Republic	43.36	45	33	45	44	45	42	45	46	15	47	44	41	47	47	45	46	46	47	47	45	47	45
Algeria	44.32	47	43	47	47	43	47	44	47	19	45	47	47	45	42	47	47	47	45	44	46	45	44

Source: USITC estimates.

Note: See table I.3 for industry names corresponding to ISIC codes 15-36.

Having calculated importer-specific trade costs, the next step is to calculate total international trade costs d_{nij} using equation (11). Tables I.11 and I.12 show the international trade costs that countries face when selling in Cuba. These international trade costs include Cuba-specific costs $m_{Cuba,j}$ as well as bilateral trade costs, such as those related to distance. The international trade costs are expressed in tariff-equivalent terms and are measured relative to domestic trade costs, meaning that they only include trade costs beyond domestic trade costs. For example, costs of selling goods through a retail store are domestic trade costs, since they are also paid by domestic producers. These costs are not part of d_{nij} .

In some rare cases international trade costs can be negative, as illustrated by the negative cost of importing Canadian wheat to Cuba (table I.11). This indicates that the cost of importing Canadian products to Cuba in that industry is lower than the cost of trading these products within Cuba.¹⁴⁷⁰

The costs suppliers face in exporting manufactured goods to Cuba are fairly high for all sources except for Venezuela and the Dominican Republic.¹⁴⁷¹ Food products (ISIC 15) imports generally face lower trade costs than other industries. Trade costs for U.S. food exports to Cuba are relatively low, at a 157.4 percent tariff equivalent. This reflects the fact that there are fewer U.S. restrictions on the export of agricultural products to Cuba and that there may be preferential treatment by Cuba of U.S. food imports.

U.S. exports to Cuba in some industries are presently nonexistent, in which case the trade costs are effectively infinite. Other sectors have very low trade, implying high, but finite, trade costs. For example, since the data show a small volume of U.S. exports to Cuba in medical devices and motor vehicles (ISIC 33 and 34), the data can be used to estimate trade costs in those industries to be approximately 500 percent.

For comparison, trade costs for imports in the United States and Brazil are presented in tables I.13 and I.14. Brazil serves as an example of a developing country, while the United States is an example of a developed country.

In general, developing countries have higher trade costs than the developed ones. However, there are differences in international trade costs among developing countries. For example, Brazil has lower trade costs for its imports than Cuba. And trade costs between developed countries can be extremely low, as illustrated by the trade costs for the U.S. imports from Canada. As first noted, international trade costs can be negative in rare cases: for example, the cost of importing Canadian vehicle industry products to the United States is negative. This means that in that industry, it costs less to import these Canadian products into the United States than it does to trade them within the United States.

¹⁴⁷⁰ Negative values for trade costs are common for imports of wheat and soybeans to Cuba.

¹⁴⁷¹ Mexico and Canada also face low costs in several sectors, such as tobacco, leather, and petroleum.

Table I.11: Trade costs for Cuba's imports from various countries, $d_{Cuba,ij}$, in tariff equivalents in selected agricultural sectors

	Beans and								
	Wheat	Rice	Corn	pulses	Other oilseeds	Soybeans	Beef	Poultry	Pork
Argentina	-44.2	150.6	72.8	86.5	632.6	-41.1	277.3	146.3	393.0
Australia	115.5	567.6	280.6	500.4	381.5	36.1	727.7	512.1	557.4
Austria	38.0	237.8	282.4	225.8	341.0	17.0	363.3	378.0	536.1
Belgium	31.7	344.5	176.7	273.6	387.4	17.6	388.0	531.2	705.3
Brazil	112.9	72.3	72.6	348.6	445.1	-18.4	241.2	151.0	270.7
Bulgaria	68.4	279.2	311.9	214.8	515.7	-18.1	232.8	399.9	365.5
Canada	-36.3	184.5	46.2	100.3	303.1	89.5	119.0	104.3	220.8
China	32.5	497.7	227.2	95.4	695.4	58.0	402.1	531.4	580.3
Cuba	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Czech Republic	-55.7	238.4	211.3	262.9	352.1	1.7	256.5	383.3	406.3
Denmark	48.4	236.7	191.3	264.2	389.6	-4.6	390.8	497.3	771.4
Dominican Republic	-22.3	162.0	97.0	232.6	314.6	-0.8	295.8	297.7	307.8
Egypt	-7.8	474.3	154.9	339.5	374.4	-3.3	249.7	388.5	391.7
Finland	43.8	225.8	127.9	185.3	256.6	-3.7	234.6	382.9	500.2
France	-59.8	357.0	443.3	218.4	199.5	13.1	397.0	622.3	674.7
Germany	-49.3	343.6	299.3	324.4	487.7	14.2	481.6	592.2	830.3
Greece	33.9	402.9	195.7	218.6	348.1	-8.7	223.1	362.0	395.3
Hungary	58.9	226.8	342.5	308.5	398.7	13.9	302.4	554.7	587.5
India	36.3	337.2	333.5	404.5	240.3	50.6	548.1	375.1	457.9
Indonesia	21.2	348.4	241.4	310.8	440.4	22.7	264.5	426.8	338.4
Ireland	18.7	247.8	181.0	176.8	265.8	-12.1	459.7	465.7	626.7
Italy	41.6	238.7	272.4	196.0	166.0	29.9	405.0	518.9	562.1
Japan	30.5	370.4	135.7	233.3	410.6	6.3	335.0	416.3	429.3
Korea, South	-10.8	366.2	152.5	229.2	309.7	4.3	361.3	406.2	485.3
Lithuania	57.8	246.5	171.8	242.5	319.3	0.1	320.8	409.8	384.0
Malaysia	-17.0	300.7	163.4	306.7	382.2	7.2	294.2	363.0	335.8
Mexico	-46.9	91.9	81.9	109.8	289.4	-6.5	557.4	430.5	449.9
Netherlands	33.6	374.6	242.4	303.8	255.4	34.3	451.5	321.9	800.9
Norway	-25.7	221.8	101.6	189.0	191.1	4.0	205.7	287.5	344.1
Philippines	19.5	359.9	176.2	219.2	429.4	8.2	356.6	470.0	488.4
Poland	-52.0	272.1	259.3	250.6	358.6	-14.1	440.5	604.9	635.3
Portugal	14.1	329.4	174.4	277.6	282.7	1.4	301.5	513.4	523.4

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	Wheat	Rice	Corn	Beans and pulses	Other oilseeds	Soybeans	Beef	Poultry	Pork
Romania	91.2	317.9	394.3	225.9	449.0	28.6	276.3	488.6	463.3
Russia	-43.2	382.5	401.8	394.4	466.8	64.6	349.4	397.7	454.8
Slovakia	30.8	229.4	277.9	229.3	344.8	8.9	218.6	379.3	362.7
Spain	48.7	169.8	273.3	120.7	169.5	10.7	157.2	137.3	265.5
Sweden	32.1	232.2	167.5	244.8	359.2	-15.9	260.2	413.1	472.1
Switzerland	-15.5	217.9	166.5	192.7	261.3	-4.9	176.1	267.0	318.0
Taiwan	7.2	402.0	149.6	252.4	371.7	13.8	296.1	456.6	430.2
Thailand	4.0	318.8	242.8	368.6	509.4	12.3	311.8	535.8	391.1
Turkey	38.0	327.2	256.5	373.7	439.7	38.7	252.5	427.1	363.0
Ukraine	109.9	221.1	81.6	340.3	521.7	88.0	229.9	312.3	312.1
United Kingdom	51.4	353.0	192.2	357.3	421.7	6.4	401.4	563.9	602.8
United States	-28.9	455.2	62.1	126.5	(^a)	-37.3	267.5	84.9	160.9
Venezuela	41.9	360.7	296.1	300.8	425.7	41.9	367.0	366.8	392.1
Vietnam	6.8	61.5	205.4	302.4	405.5	4.9	243.7	421.2	358.4

Source: USITC estimates.

^a Absence of trade precludes estimating trade costs for this sector in the base year.

Table I.12: Trade costs for Cuba's imports from various countries, $d_{Cuba,ij}$, in tariff equivalents in manufactured goods sectors

	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Algeria	267.3	145.6	228.6	262.9	338.7	282.5	227.9	241.9	40.2	351.2	295.5	326.1	306.8	293.2	418.7	209.3	301.1	205.6	270.7	241.7	313.7	300.3
Argentina	187.3	256.0	247.2	424.4	457.7	238.4	71.8	249.9	222.8	181.9	166.4	192.7	199.9	172.6	246.4	256.7	166.9	129.3	173.3	194.7	108.2	365.3
Australia	232.0	249.1	395.5	636.2	564.8	532.1	532.3	468.0	412.5	621.1	483.7	199.6	567.5	336.3	306.4	576.9	267.2	227.3	356.2	684.6	264.9	599.8
Austria	212.3	212.2	395.2	691.2	548.7	619.6	355.9	417.9	179.2	254.5	291.2	410.3	359.1	381.7	341.0	352.9	389.9	362.0	307.3	431.3	203.4	362.8
Belgium	166.0	121.7	325.9	606.0	479.4	532.4	173.3	301.0	93.8	244.8	314.9	266.3	257.9	271.3	307.3	203.6	306.5	257.3	232.9	298.6	465.8	343.1
Brazil	154.0	101.0	199.5	278.0	190.5	153.9	159.2	163.3	166.9	203.9	199.1	229.4	242.0	177.6	209.9	182.8	184.1	257.3	188.7	194.4	363.2	254.4
Bulgaria	556.5	215.7	265.5	615.3	370.1	183.8	237.8	346.0	151.5	139.9	312.7	478.5	316.5	296.1	293.1	275.4	327.1	349.6	321.4	188.3	312.3	513.5
Canada	155.3	253.0	192.9	240.4	191.0	199.2	162.5	251.4	106.4	156.2	207.4	193.7	149.1	158.1	217.6	137.3	176.1	194.1	204.3	158.4	290.4	271.0
China	223.0	335.2	243.2	416.9	243.0	240.7	194.5	300.7	144.2	205.9	268.5	291.1	176.7	280.6	300.7	334.7	277.5	280.4	242.2	197.9	197.2	363.6
Cuba	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Czech Republic	111.4	307.3	401.9	690.3	538.7	265.2	391.1	484.3	149.6	308.9	270.2	288.4	178.8	229.4	281.3	281.4	198.2	335.3	211.4	313.0	176.3	668.3
Denmark	277.3	227.3	360.9	695.1	386.4	458.7	216.2	606.6	157.2	249.3	359.5	344.1	186.4	253.1	326.5	261.1	372.6	245.0	246.3	147.8	200.1	454.2
Dominican Republic	63.7	276.7	120.5	250.0	203.1	73.9	82.8	106.4	148.7	74.0	187.6	145.5	110.3	79.0	125.8	103.2	173.0	152.8	237.5	50.8	136.0	183.3
Egypt	278.0	221.0	336.4	454.4	427.4	305.4	279.2	443.2	409.7	171.9	235.0	411.4	480.3	546.3	324.4	132.7	174.9	273.3	403.4	186.1	347.2	646.2
Finland	245.7	126.6	549.9	615.9	440.3	402.5	201.9	552.2	197.9	787.3	464.1	536.9	262.8	423.0	399.1	389.7	233.8	653.8	321.4	371.8	587.7	812.1
France	197.5	334.8	360.1	477.1	390.9	207.4	259.3	346.1	241.3	218.1	295.2	252.4	261.1	290.8	317.3	212.3	278.3	261.7	260.5	191.3	320.3	430.6
Germany	192.0	173.4	364.7	372.5	331.7	357.7	180.9	360.9	72.0	223.0	271.2	273.5	260.2	254.1	309.3	281.9	295.6	323.8	241.0	267.9	549.4	393.1
Greece	249.4	222.1	378.3	685.7	381.7	355.7	360.8	270.2	210.6	372.1	620.2	616.2	567.3	597.3	734.0	356.0	408.5	373.5	468.0	273.7	528.0	536.5
Hungary	455.9	231.2	540.2	677.2	492.1	279.1	410.6	396.6	45.8	311.7	356.0	668.3	186.1	489.4	370.2	327.9	497.6	737.2	272.0	391.0	541.7	495.5
India	415.3	297.2	393.6	631.0	445.1	392.4	310.4	346.5	333.8	241.2	264.1	418.6	240.0	331.1	381.0	610.7	419.0	230.2	238.0	285.4	403.8	537.5
Indonesia	462.2	363.5	428.4	589.5	593.4	775.5	140.2	354.6	340.0	281.3	488.9	454.6	698.1	569.3	1025.4	664.6	365.1	798.9	375.7	716.2	728.8	651.6
Ireland	261.1	226.3	474.3	329.1	403.9	122.0	329.2	782.5	162.6	458.5	470.8	446.7	366.8	604.7	389.4	437.2	430.6	568.8	318.6	284.7	651.0	521.4
Italy	198.5	210.5	278.5	363.9	286.0	154.6	140.2	265.4	146.2	179.3	235.1	213.8	169.5	229.6	257.3	209.2	197.2	179.3	201.2	229.0	268.6	335.2
Japan	677.3	277.1	378.5	770.7	257.5	494.6	253.3	405.9	370.7	362.2	469.5	608.0	451.3	359.0	417.5	336.4	333.5	408.1	278.2	464.9	527.6	463.4
Korea, South	420.5	322.0	313.4	866.4	373.2	510.8	348.9	369.7	359.9	317.7	346.1	565.8	372.6	344.4	394.1	581.8	374.6	412.2	314.5	234.5	478.5	608.6
Lithuania	103.5	317.0	514.9	516.0	323.3	498.2	278.7	332.6	154.4	169.7	242.1	447.7	349.3	290.2	302.8	342.9	263.4	413.8	512.6	141.4	383.1	723.0
Malaysia	273.8	328.1	354.7	407.0	189.0	718.4	461.9	469.0	407.6	265.4	531.3	414.5	351.0	440.1	457.3	390.3	442.8	309.1	544.0	259.8	744.3	604.1
Mexico	121.3	245.1	137.4	252.0	130.2	72.7	84.6	174.2	14.9	128.5	146.2	161.6	132.3	117.4	225.1	216.7	201.8	232.8	199.9	271.2	178.7	265.3
Netherlands	217.3	148.7	241.1	350.5	210.3	227.2	174.9	419.0	33.6	201.4	247.9	282.8	170.9	205.0	284.8	352.5	258.9	359.1	250.5	185.3	274.2	371.0
Norway	738.1	121.5	196.5	466.9	330.8	165.0	191.9	376.9	411.2	400.2	250.1	431.8	639.2	219.2	306.4	265.0	319.6	287.6	313.4	283.3	431.7	341.4
Philippines	677.7	306.9	579.1	452.4	482.2	500.1	406.2	494.3	206.6	691.3	787.7	618.7	442.7	502.6	831.4	377.2	824.2	463.4	224.8	304.2	600.2	345.6
Poland	173.0	386.3	323.3	780.4	381.0	580.2	232.7	470.7	173.5	255.4	330.8	302.6	439.9	469.4	328.5	491.7	399.7	509.4	331.1	296.4	263.0	609.5
Portugal	201.3	266.7	286.0	657.7	462.5	264.0	167.4	165.7	218.6	127.9	241.2	215.7	110.7	220.5	234.0	279.2	218.1	342.8	225.1	247.4	289.6	372.9

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	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
Romania	498.2	323.5	559.2	839.8	570.3	228.4	288.8	367.8	213.3	639.7	323.9	563.0	570.0	330.3	500.7	484.0	750.2	554.8	574.0	392.8	174.9	641.6
Russia	348.7	292.9	174.4	322.9	252.6	334.6	112.9	248.3	105.0	235.4	146.2	211.0	236.4	165.2	153.3	150.8	120.7	93.3	135.1	72.6	167.2	305.0
Slovakia	425.4	142.5	275.3	644.1	504.9	188.8	396.9	173.9	188.4	326.0	262.3	187.9	172.5	167.4	271.2	164.9	199.0	352.0	196.5	683.4	470.6	482.4
Spain	146.9	207.6	149.9	268.7	165.0	118.3	98.7	157.1	136.8	147.5	181.4	176.9	110.5	143.8	173.5	129.6	142.7	128.6	135.1	158.6	184.0	235.3
Sweden	370.7	208.8	356.8	586.5	429.7	344.0	214.6	325.0	212.8	221.8	343.3	607.1	374.3	341.4	330.6	229.7	283.3	257.8	262.0	227.2	643.7	550.0
Switzerland	271.6	283.7	391.8	598.7	533.0	399.0	307.9	401.8	145.2	249.4	340.7	315.6	262.2	296.4	320.1	300.8	327.6	327.9	265.2	212.1	440.1	444.3
Taiwan	279.7	234.8	390.5	604.7	693.3	534.6	571.0	593.9	309.0	429.2	374.9	539.4	378.1	521.5	466.8	457.0	425.7	508.0	472.4	441.6	539.6	547.4
Thailand	325.9	258.3	716.2	757.4	561.3	624.4	314.3	698.8	278.1	484.5	429.5	774.7	396.8	550.0	411.2	889.6	652.6	885.0	527.3	574.9	783.7	619.9
Turkey	187.0	244.9	394.7	697.9	526.0	316.0	157.1	356.1	88.8	210.3	341.1	387.0	193.3	321.0	422.5	405.8	261.6	371.0	392.3	303.1	582.1	535.6
Ukraine	175.2	201.6	161.8	562.9	133.2	237.2	257.7	196.7	341.9	151.4	154.1	238.7	165.7	161.9	198.3	202.4	185.4	141.2	154.8	82.3	94.9	289.5
United Kingdom	245.9	210.9	405.5	522.4	525.7	294.9	199.9	378.3	402.0	269.7	456.8	330.6	194.0	277.6	328.6	348.4	368.3	386.1	281.9	334.3	482.0	424.6
United States	157.4	^(a)	485.5	583.3	^(a)	279.4	^(a)	702.8	^(a)	407.3	718.8	^(a)	^(a)	695.7	560.7	^(a)	751.5	439.1	470.5	510.3	594.8	501.0
Venezuela	109.0	392.9	133.7	197.4	306.9	190.4	186.9	140.4	41.1	99.1	58.5	107.3	82.7	94.2	147.1	109.4	89.6	84.6	167.0	169.9	140.9	239.1
Vietnam	129.5	308.8	294.9	474.1	294.4	480.5	110.7	565.1	211.3	135.2	285.8	195.7	302.7	432.2	429.5	741.1	315.9	823.6	256.1	556.9	453.2	352.6

Source: USITC estimates.

Note: See table I.3 for industry names corresponding to ISIC codes 15-36

^a Absence of trade precludes estimating trade costs for this sector in the base year.

Table I.13: Trade costs for U.S. imports from Canada and Germany, $d_{US,ij}$, in tariff equivalents, current

Exporter	Food	Apparel	Metals	Machinery, office	Medical	Vehicles
Canada	22.6	5.2	10.4	-3.2	8.9	-17.1
Germany	73.3	67.2	46.7	23.7	25.2	32.5

Source: USITC estimates.

Table I.14: Trade costs for Brazilian imports from the United States and Argentina, $d_{BR,ij}$, in tariff equivalents

Exporter	Food	Apparel	Metals	Machinery, office	Medical	Vehicles
United States	91.9	242.7	101.9	176.5	94.1	132.1
Argentina	63.5	100.7	35.4	102.0	36.4	14.1

Source: USITC estimates.

Trade costs for the U.S. exports to Cuba in the absence of U.S. restrictions are calculated using equation (7). The resulting trade costs are presented in the second column of table 8.1 in chapter 8.

To calculate trade costs for the U.S. exports when U.S. restrictions are removed and Cuban import barriers are lowered, it is necessary to calculate reduced Cuban import barriers. Cuban import barriers $m_{Cuba,j}$ in each industry are set equal to the average of all developing countries in the dataset. Cuba's ranking among the countries in the dataset according to the country-specific import barrier is shown in table I.15. The first column shows the base year values (also shown in tables I.8 and I.9). The second column shows the values of Cuban import barriers when they are set equal to $\bar{m}_{Dev,j}$. As an alternative, the third column of table I.15 shows the values of Cuban import barriers when they are set equal to $m_{Dev,j}^{\min}$, the minimum across developing countries in each industry.

Table I.15: Ranking of Cuba among all U.S. export destinations, for alternative scenarios of reduced Cuban trade barriers

	Base year	Average of developing countries	Lowest of developing countries
Agricultural goods average	26.22	21.01	2.67
Wheat	18	17	1
Rice	32	23	3
Corn	21	18	1
Beans and pulses	17	15	2
Other oilseeds	41	35	3
Soybeans	18	17	1
Beef	37	25	1
Poultry	24	18	3
Pork	28	21	9
Manufactured goods average	42.64	27.86	3.77
Food products and beverages	40	28	3
Tobacco products	31	24	2
Textiles	44	29	6
Wearing apparel; dressing and dyeing of fur	46	30	2
Leather, handbags, footwear	47	27	1

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	Base year	Average of developing countries	Lowest of developing countries
Wood and wood products	41	24	2
Paper and paper products	32	28	2
Publishing, printing and reproduction of recorded media	45	30	4
Coke, refined petroleum products, and nuclear fuel	31	22	2
Chemicals and chemical products	46	29	9
Rubber and plastics products	46	28	3
Other non-metallic mineral products	46	28	2
Basic metals	43	28	6
Fabricated metal products	46	26	2
Other machinery and equipment	46	30	6
Office, accounting and computing machinery	41	25	2
Electrical machinery and apparatus	45	29	5
Radio, television, and communications equipment	44	28	4
Medical, precision, and optical instruments, watches	46	31	6
Motor vehicles, trailers, and parts	42	30	1
Other transport equipment	43	30	7
Furniture; other manufacturing	47	29	6

Source: USITC estimates.

Using the new values of $m_{Cuba,j}$, new trade costs between U.S. and Cuba can be calculated. The trade costs for the U.S. export to Cuba without U.S. restrictions and with Cuban trade barriers set equal to the average of developing countries are presented in third column of table 8.1 in chapter 8. The trade costs for the U.S. exports to Cuba without U.S. restrictions and with Cuban trade barriers set equal to the minimum (lowest) of developing countries are presented in table I.16 below.

Table I.16: Estimated trade costs for U.S. exports to Cuba without U.S. restrictions and with Cuban import barriers set equal to the lowest developing-country level

Sector	Trade cost
Agriculture	
Wheat	-57.8
Rice	11.2
Corn	29.1
Pulses	49.0
Other oilseeds	48.6
Soybeans	-49.2
Beef	88.5
Poultry	43.3
Pork	102.1
Manufacturing	
Food products and beverages	24.8
Tobacco products	86.6
Textiles	44.5
Wearing apparel; dressing and dyeing of fur	71.5
Leather, handbags, footwear	1.6
Wood and Wood products	50.1
Paper and paper products	52.6
Publishing, printing and reproduction of recorded media	95.8
Coke, refined petroleum products and nuclear fuel	83.2
Chemicals and chemical products	52.4
Rubber and plastics products	61.9
Other non-metallic mineral products	84.7
Basic metals	60.2
Fabricated metal products	66.2
Other machinery and equipment	55.4
Office, accounting and computing machinery	53.9
Electrical machinery and apparatus	52.5
Radio, television and communication equipment	37.8
Medical, precision and optical instruments, watches	53.8
Motor vehicles, trailers, and parts	41.0
Other transport equipment	68.2
Furniture; other manufacturing	32.8

Source: USITC estimates.

Note: International trade costs in this table are measured relative to domestic trade costs in Cuba.

The effects of the two potential sets of policy changes on U.S. exports to Cuba are presented in chapter 8. That chapter shows the estimated U.S. exports to Cuba in the event that U.S. restrictions are removed. It also shows the estimated U.S. exports to Cuba if U.S. restrictions are removed and Cuba-specific trade costs, $m_{Cuba,j}$, are lowered to the average across developing countries. As an alternative, tables I.17 and I.18 below show estimates for U.S. exports to Cuba if Cuba-specific trade costs are lowered to the lowest of developing countries in the dataset. In this scenario, Cuba's proximity, combined with very low barriers, would make it a very attractive export destination for U.S. products. As noted above, estimates for this scenario should be taken with considerable caution, since the model assumes that no adjustments to Cuban productivity and wages would occur as barriers were lowered.

Table I.17: Estimated U.S. exports to Cuba in selected agricultural sectors, with U.S. restrictions removed and Cuban import barriers lowered to the lowest developing-country level

Industry name	U.S. exports to Cuba		Shares in Cuban spending		Shares in Cuban imports	
	Base year	Estimated	Base year	Estimated	Base year	Estimated
Wheat	18.0	187.8	6.1	58.2	6.1	58.2
Rice	^(a)	182.5	^(b)	43.8	^(b)	44.9
Corn	100.6	165.5	36.8	57.2	45.3	61.1
Beans, cowpeas, pulses	6.6	29.9	5.7	25.9	10.6	29.1
Other oilseeds	0.0	6.0	0.0	52.1	0.0	53.4
Soybeans	50.6	61.6	74.0	82.5	74.0	82.5
Beef	0.4	59.4	0.2	30.3	5.8	81.6
Poultry	125.4	189.3	56.4	81.6	74.3	87.4
Pork	11.3	69.9	3.6	21.9	78.7	89.8
Total	312.8	952.0	16.3	47.7	28.7	68.2

Source: USITC estimates.

^a Less than \$50,000.

^b Less than 0.05 percent.

Table I.18: Estimated U.S. exports to Cuba in manufacturing sectors, with U.S. restrictions removed and Cuban import barriers lowered to the lowest developing-country level

ISIC	Industry name	U.S. exports to Cuba		Shares in Cuban spending		Shares in Cuban imports	
		Base year	Estimated	Base year	Estimated	Base year	Estimated
15	Food and beverages	212.4	1,333.1	5.0	33.2	22.8	34.5
16	Tobacco products	0.0	2.5	0.0	0.7	0.0	25.6
17	Textiles	0.1	8.7	0.0	6.7	0.1	6.7
18	Wearing apparel, fur	^(a)	1.6	^(b)	1.6	0.1	1.6
19	Leather products	0.0	1.1	0.0	0.9	0.0	0.9
20	Wood products (excl. furniture)	1.3	10.8	2.1	18.1	2.6	18.2
21	Paper and paper products	0.0	40.4	0.0	40.8	0.0	41.0
22	Printing and publishing	^(a)	16.3	^(b)	28.8	0.1	29.4
23	Petroleum products	0.0	74.5	0.0	13.0	0.0	18.4
24	Chemicals and chemical products	3.2	378.2	0.2	22.9	0.4	23.2
25	Rubber and plastics products	^(a)	33.8	^(b)	10.8	^(b)	10.8
26	Non-metallic mineral products	0.0	25.9	0.0	12.7	0.0	12.8
27	Basic metals	0.0	44.7	0.0	9.3	0.0	9.5
28	Fabricated metal products	^(a)	26.4	0.0	8.3	0.0	8.3
29	Machinery and equipment n.e.c.	1.5	209.6	0.2	21.6	0.2	21.6
30	Office and computing machinery	0.0	17.3	0.0	36.2	0.0	36.3
31	Electrical machinery and apparatus	^(a)	46.8	^(b)	14.0	^(b)	14.0
32	Communication equipment	0.3	14.6	0.4	20.9	0.5	20.9
33	Medical and precision instruments	0.7	57.2	0.4	29.3	0.5	29.4
34	Motor vehicles, trailers	0.3	72.9	0.1	17.4	0.1	17.4
35	Other transport equipment	0.1	39.8	0.0	14.3	0.1	14.4
36	Furniture; manufacturing n.e.c.	5.0	464.2	0.5	30.8	4.0	30.8
	Total	224.8	2,920.3	1.8	19.7	4.3	19.7

Source: USITC estimates.

Note: "N.e.c." stands for "not elsewhere classified."

^a Less than \$50,000.^b Less than 0.05 percent.

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Appendix J

Tables to Support Figures

Table J.1: Cuban imports from the world by trading partner, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Venezuela	1,240.0	1,933.9	1,382.3	3,426.0	2,265.9	2,808.0	3,982.8	3,807.0	3,629.0	3,234.0
EU	1,566.6	2,114.5	2,022.8	2,413.1	1,466.2	1,712.8	2,107.9	2,221.8	2,416.3	2,140.8
Spain	599.9	793.6	919.9	1,135.4	646.8	779.6	898.8	949.2	1,061.2	918.1
Italy	244.7	353.3	309.8	431.6	257.0	244.0	317.1	317.0	355.1	304.1
Germany	312.6	516.0	291.5	303.5	218.5	221.4	216.0	232.7	244.4	252.6
China	635.9	1,264.1	1,170.0	1,353.6	972.1	1,067.1	1,043.6	1,173.4	1,374.1	1,063.0
Brazil	245.5	343.3	323.9	526.8	277.2	414.9	550.2	568.1	528.2	507.8
Canada	370.9	453.3	527.7	725.2	275.1	379.2	468.8	422.5	454.7	405.7
Mexico	221.5	194.4	189.6	308.9	250.9	307.3	356.7	387.1	372.6	362.3
United States	369.0	340.5	447.1	711.5	532.8	363.1	363.3	464.4	359.6	299.1
All other	1,101.5	1,239.6	1,787.3	2,212.0	1,282.2	1,264.1	1,551.3	1,259.8	1,556.1	1,284.3
Total	5,751.0	7,883.6	7,850.5	11,677.2	7,322.3	8,316.5	10,424.5	10,304.1	10,690.7	9,296.9

Source: Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

Note: Corresponds to [figure ES.1](#)

Table J.2: Shares of total Cuban imports by trading partner, 2005–14

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Venezuela	21.6	24.5	17.6	29.3	30.9	33.8	38.2	36.9	33.9	34.8
EU	27.2	26.8	25.8	20.7	20.0	20.6	20.2	21.6	22.6	23.0
China	11.1	16.0	14.9	11.6	13.3	12.8	10.0	11.4	12.9	11.4
Brazil	4.3	4.4	4.1	4.5	3.8	5.0	5.3	5.5	4.9	5.5
Canada	6.4	5.8	6.7	6.2	3.8	4.6	4.5	4.1	4.3	4.4
Mexico	3.9	2.5	2.4	2.6	3.4	3.7	3.4	3.8	3.5	3.9
United States	6.4	4.3	5.7	6.1	7.3	4.4	3.5	4.5	3.4	3.2

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

Note: Corresponds to [figure 2.2](#).

Table J.3: Cuban manufactured and agricultural goods imports from the world, 2005–14 (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Manufactured goods	4,500.6	6,701.1	6,272.9	9,310.4	5,903.5	6,702.2	8,523.1	8,472.7	8,694.3	7,318.8
Agricultural goods	1,250.4	1,182.6	1,577.6	2,366.8	1,418.7	1,614.3	1,901.4	1,831.4	1,996.5	1,978.2
Total	5,751.0	7,883.6	7,850.5	11,677.2	7,322.3	8,316.5	10,424.5	10,304.1	10,690.7	9,296.9

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC estimates.

Note: Corresponds to [figures ES.2](#) and [2.3](#).

Overview of Cuban Imports of Goods and Services and Effects of U.S. Restrictions

Table J.4: Top 15 U.S. exports to Cuba in 2005 and 2015

	2005	2015
Poultry	1	1
Soybean oilcake	8	2
Insecticides and similar products	62	3
Flours and meals of oilseeds or oleaginous fruits	13	4
Soybeans	5	5
Phosphates and similar products	14	6
Corn	2	7
Medical instruments	31	8
Donated articles	10	9
Printed matter	53	10
Blood products and vaccines	115	11
Fresh fruit, other	115	12
Heavy, self-propelled construction equipment	115	13
Certain medicaments	115	14
Orthopedic appliances	115	15
Wheat and meslin	3	35
Rice	4	35
Milk and cream	6	35
Soybean oil	7	35
Dried beans and peas	9	35
Pork	11	35
Wood in the rough	12	35
Prepared/preserved meat, nesoi	15	35
Poultry	1	1
Soybean oilcake	8	2

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC DataWeb/USDOC (accessed February 8, 2016).
 Note: Corresponds to [figure 2.4](#). "N.e.s.o.i." stands for "not elsewhere specified or included."

Table J.5: Cuban agricultural and manufactured goods imports from the United States (million dollars)

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Manufactured goods	16.8	10.4	7.6	10.5	8.3	14.3	10.7	8.3	11.9	14.1	31.9
Agricultural goods	352.2	330.0	439.5	701.0	524.5	348.8	352.6	456.1	347.7	285.0	148.5
Total	369.0	340.5	447.1	711.5	532.8	363.1	363.3	464.4	359.6	299.1	180.3

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC DataWeb/USDOC (accessed February 8, 2016).
 Note: Corresponds to [figure 2.5](#).

Table J.6: Timeline of U.S.-Cuba relationship

Year	Day	Event
1959	January 7	United States recognizes new Cuban government under Fidel Castro.
1960	July 6	President Eisenhower cuts Cuba's sugar quota.
	October 19	President Eisenhower prohibits all exports to Cuba, excluding food and medicine, and revokes Cuba's sugar quota.
1961	January 3	United States severs diplomatic relations with Cuba.
	September 4	The Foreign Assistance Act of 1961 is enacted, authorizing the President to establish and maintain a total embargo on Cuba.
1962	February 7	Proclamation 3447—"Embargo on All Trade with Cuba"—is made by President Kennedy.
	March 23	President Kennedy extends embargo to include imports of any goods that contain

Year	Day	Event
		Cuban materials, regardless of production location.
	May 24	President Kennedy suspends most-favored-nation status for Cuba.
1963	July 8	CACR implemented; all Cuban-owned assets in the United States are frozen.
1964	July 26	Organization of American States (OAS) imposes multilateral economic sanctions on Cuba and breaks diplomatic links.
1975	July 29	OAS members vote to lift multilateral sanctions against Cuba.
	August 21	United States permits U.S. foreign subsidiaries to trade with Cuba, cancels rule banning ships engaged in commerce with Cuba from refueling in the United States.
1977	March 18	President Carter does not renew the travel ban, effectively lifting the prohibition on travel to Cuba, and allows U.S. citizens to spend up to \$100 on Cuban goods while there.
1982	April 19	President Reagan prohibits U.S. citizen travel to Cuba, but allows some travel-related transactions by certain categories of travelers.
1989	November 20	U.S. Treasury Department's restrictions on travel-related expenses take effect; U.S. citizens are limited to spending no more than \$100-per-day.
1992	October 15	Cuban Democracy Act is implemented.
1996	March 12	Helms-Burton Act is implemented.
2000	October 28	Trade Sanctions Reform and Export Enhancement Act is signed into law.
2001	December 14	In the aftermath of Hurricane Michelle, first U.S. exports of food are sent to Cuba after a request from the Cuban government.
2003	October 10	President G.W. Bush imposes measures to tighten travel restrictions and crack down on illegal cash transfers.
2009	April 13	United States eases travel restrictions and limits on remittances to Cuba for Cuban family members in the United States.
2011	January 14	United States further eases travel restrictions for cultural, educational, journalistic, and religious travel, and allows non-family remittances to Cuba.
2014	December 17	Presidents Obama and Raúl Castro announce intentions to normalize relations between the United States and Cuba.
2015	January 16	OFAC and BIS publish major rule changes to the CACR and EAR
	January 21	U.S.-Cuba bilateral talks begin in Havana.
	March 17	Direct charter flights between New York City and Havana begin.
	May 29	Cuba is removed from the list of State Sponsors of Terrorism.
	July 20	Full diplomatic relations resume.
	July 22	BIS publishes changes to the EAR to implement Cuba's removal from the State Sponsors of Terrorism list.
	September 21	OFAC and BIS further modify the CACR and EAR to ease travel restrictions, expand license exceptions, and allow U.S. business presence in Cuba.
	October 7	First U.S.-Cuba Regulatory Dialogue held in Havana.
	December 8	U.S.-Cuba discussions on claims are held in Havana.
2016	January 27	OFAC and BIS further modify the CACR and EAR to ease restrictions related to payment and financing of some exports, and to authorize additional exports.

Source: Compiled by the Commission.

Note: Corresponds to the timeline in chapter 3.

Table J.7: Cuban production of agricultural products, 2008–14

	2009	2010	2011	2012	2013	2014
Rice (milled weight)	366	295	370	417	423	455
Corn	305	325	354	360	426	426
Beans	111	80	133	127	130	126
Poultry (carcass weight)	33	34	35	35	32	34
Pork (carcass weight)	113	100	98	100	98	100
Beef (live weight)	130	127	133	134.1	133.8	142.7

Source: USDA, PSD database (accessed September 24, 2015); ONEI, *Anuario Estadístico de Cuba 2014* [Statistical Yearbook of Cuba 2014]; ONEI, *Anuario Estadístico de Cuba 2013* [Statistical Yearbook of Cuba 2013].

Note: Table corresponds to figure in [box 5.2](#).

Table J.8: Cuban market for nine agricultural industries, with (base year) and without U.S. restrictions

	Base year	Without U.S. restrictions
Cuba	58.3	51.0
United States	16.3	33.5
Vietnam	5.6	3.7
Brazil	4.9	3.1
Canada	4.0	2.4
Other	11.0	6.4

Source: USITC estimates.

Note: Table corresponds to [figure 8.1](#).

Table J.9: Cuban market for manufactured goods, with (base year) and without U.S. restrictions

	Base year	Without U.S. restrictions
Cuba	44.3	41.6
China	13.9	12.2
United States	1.8	11.6
Spain	9.8	8.6
Algeria	3.6	3.2
Mexico	3.4	3.0
Canada	3.3	2.7
Other	20.0	17.3

Source: USITC estimates.

Note: Table corresponds to [figure 8.2](#).

Table J.10: FDI in Cuba by sector

Sector	
Tourism & Real Estate	52
Energy & Mining	11
Industry	10
Foods	5
Transportation	5
Agro-Sugar Industry	5
Construction	4
Other	8

Source: Government of Cuba, MINCEX, Portfolio of Opportunities for Foreign Investment, 2015, n.d., 12. (accessed December 9, 2015).

Note: Table corresponds to [figure 2.1](#).

Table J.11: Cuban imports of agricultural goods from the United States (2014 and 2015), percent

Sector	2014	2015
Poultry	51.9	52.4
Soybean oilcake	23.6	29.6
Soybeans	10.7	7.0
Corn	9.9	3.3
All other	3.9	7.8

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC DataWeb/USDOC (accessed February 8, 2016).

Note: Due to rounding, shares may not add to 100 percent. Table corresponds to [figure 2.6](#).

Table J.12: Cuban imports of nonagricultural goods from the United States (2014 and 2015), percent

Sector	2014
Donated articles	46.8
Insecticides and similar products	45.3
Orthopedic appliances	3.4
Printed matter	0.9
Medical instruments	0.8
All other	2.9
	2015
Insecticides and similar products	39.5
Phosphates and similar products	29.0
Medical instruments	13.7
Donated articles	13.3
Printed matter	1.2
All other	3.3

Source: GTIS, Global Trade Atlas database (accessed December 29, 2015); USITC DataWeb/USDOC (accessed February 8, 2016).

Note: Table corresponds to [figure 2.7](#).