



**HUNT INSTITUTE**  
**FOR GLOBAL COMPETITIVENESS**

**U.S. – CHINA MARITIME TRADE FLOWS  
THROUGH PACIFIC PORTS  
AND  
THE PASO DEL NORTE HINTERLAND CORRIDORS**

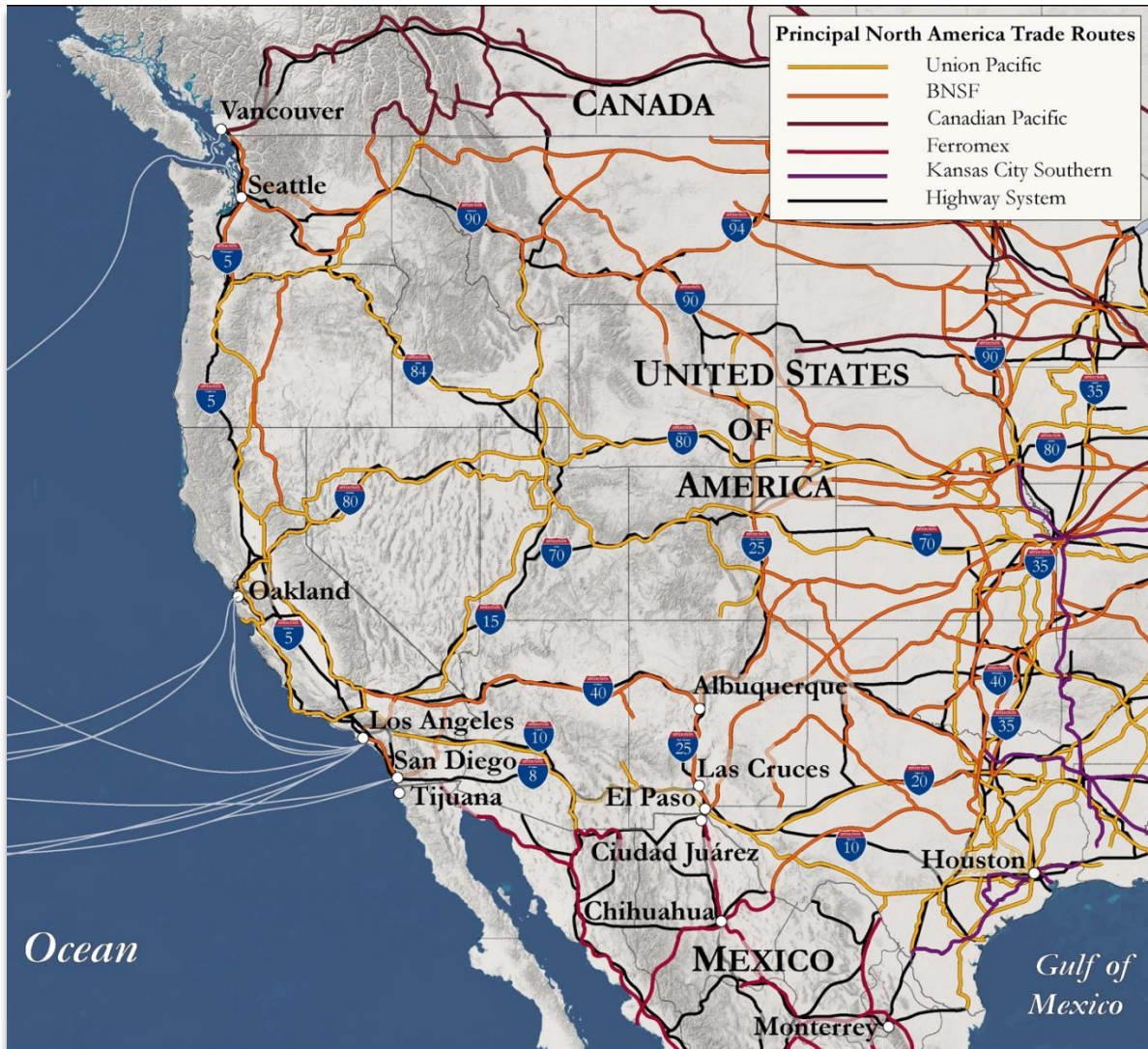
**JUNE 2018**



EAST ASIAN-NORTH AMERICAN MARITIME



## AND HINTERLAND TRADE ROUTES



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## I. Introduction

In recent years, maritime trade between the United States and China has grown significantly. Pacific coast ports, as the primary gateways for this trade, are handling greater volumes of trade with China more than ever and their overall trade with China now constitutes a large percentage of their total trade activity. For example, trade with China now accounts for almost 50% of total trade for the Los Angeles Customs Port District, which includes the Port of Los Angeles and the Port of Long Beach. The Seattle Customs Port District, including the ports of Seattle and Tacoma, is in a similar position with China now making up 40% of its overall trade.

### Principal U.S. Ports Trade with China and the World, 2017 (Million USD)

Customs Port District	China	World	Percentage of Total
Los Angeles	\$190,648.2	\$397,664.7	47.9%
Seattle	\$33,161.9	\$82,830.3	40.0%
San Francisco	\$17,328.0	\$69,316.0	25.0%
Houston - Galveston	\$16,314.3	\$177,209.0	9.2%
San Diego	\$28.6	\$7,060.9	0.4%
<b>Total</b>	<b>\$257,481.0</b>	<b>\$734,081.9</b>	<b>35.1%</b>

**Note:** Trade refers to total value of exports and imports.

**Source:** U.S. Census Bureau.

At the same time, these exports and imports that flow into and out of these Pacific ports pass through inland, hinterland trade routes, creating valuable supply chains throughout numerous communities in the United States, Canada, and Mexico, and North America in general. Consequently, these ports function as critical maritime-terrestrial interfaces that connect industrial and market activity deep within these countries to China and its hinterland industrial corridors.

Geographic conditions, though, exercise a determinative role in the nature and structure of these hinterland supply chains. The landscape of the United States and North America offers relatively few options for the efficient east-west transcontinental shipment of goods across the Rocky Mountains. Two of the most efficient hinterland trade routes extend from the Los Angeles Customs Port District, eastward through El Paso, Texas, and to the northeast through Albuquerque, New Mexico, to Gulf, Midwest, and Atlantic markets. Moreover, along both of these two routes, El Paso and Albuquerque occupy a midway point between two major maritime market regions, namely, the Gulf and the Midwest, that few other hinterland trade routes in the world can offer.

In order to better understand the potential and value that the hinterland trade routes passing through El Paso and Albuquerque can contribute to the commodity flows arising from US-China trade, and therefore to these Pacific ports, the present report provides a comparative and historical view of the nature of these trade flows within the port and hinterland rail and truck networks. The report describes the Pacific ports, their facilities, the historical growth of imports from and exports to China by commodity, and provides a detailed analysis of these same commodity flows across the hinterland rail and highway networks that connect these ports to El Paso and Albuquerque. Such an analysis strives to facilitate and foster improved linkages and mutual benefit, not only between Pacific ports and hinterland industrial activities in North America, but to the overall US-China trade relationship as well.

This report analyzes historical trends in import and export activity through major Pacific Customs Port Districts (i.e., Los Angeles, Seattle, San Francisco, San Diego, as well as the Gulf Port of Houston-Galveston) and the subsequent commodity flows by rail and interstate through the critical hinterland corridors passing through El Paso, Texas, and Albuquerque, New Mexico. The key findings of this report are the following:

### **U.S.-China Trade through Customs Port Districts**

- The Customs Port Districts analyzed in this report—Los Angeles, Seattle, San Francisco, San Diego, and Houston-Galveston—handled approximately \$734 billion in overall trade with the world in 2017. China accounted for 35.1% of this trade with \$257 billion.
- In 2017, Los Angeles Customs Port District traded a total of \$190 billion with China. This figure comprised the largest share of total trade activity with China compared to the other ports' total trade with China, at 47.9%.
- While the leading traded commodities by vessel across all these customs port districts with the world were “Motor Cars and Vehicles for Transporting Persons” and “Crude Oil from Petroleum and Bituminous Minerals,” the leading import and export commodities with China through these ports were “Automatic Data Process Machines,” “Video Monitors and Projectors,” “Toys,” and “Furniture.”

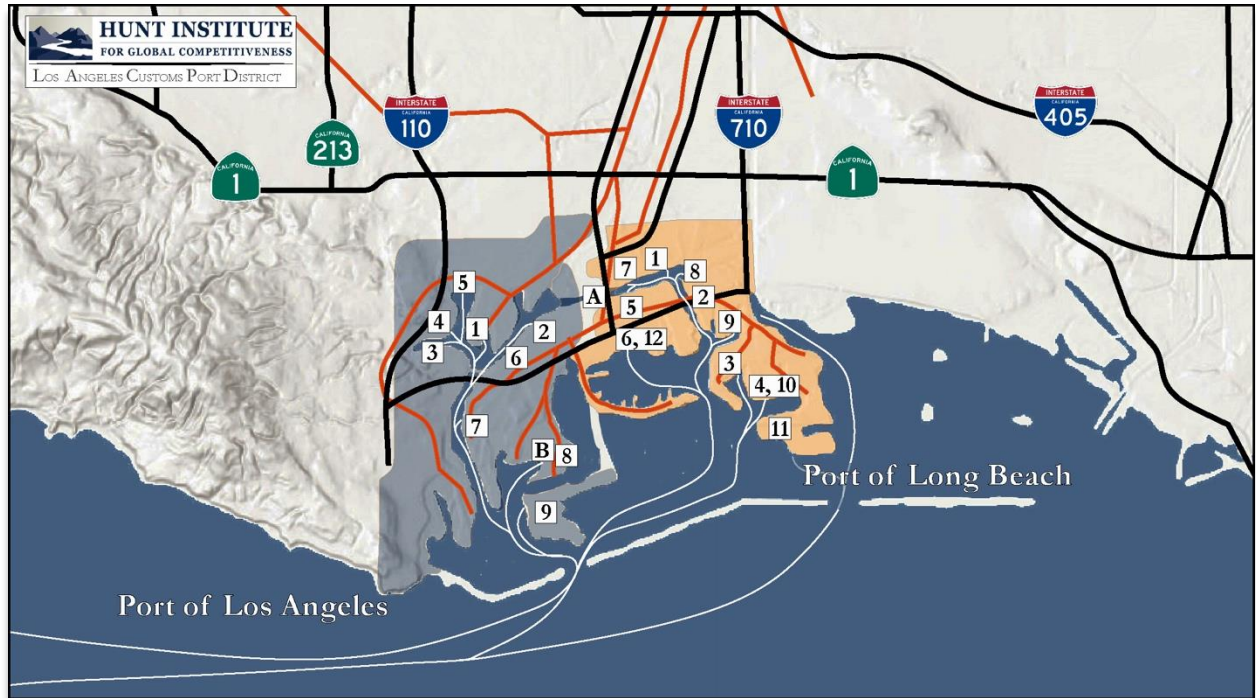
### **U.S.-East Asian Commodity Flows by Rail**

- The value of commodity exports to and imports from Eastern Asia through the port districts that are then connected to El Paso and Albuquerque by rail are much smaller than the value of shipments by truck to these cities.
- The top imported commodities from Eastern Asia by rail through these customs port districts that are then connected to the El Paso and Albuquerque hinterland trade corridors are “Electronics” and “Plastics/Rubber” (through the Los Angeles and Houston – Galveston Customs Port Districts), “Fertilizers” (through the San Francisco Customs Port District), and “Base Metals” (through the Los Angeles Customs Port District). The top exported commodities by rail are “Waste/Scrap” (through the Los Angeles Customs Port District), and “Fertilizers” (through the San Francisco Customs Port District).
- China uses the logistical infrastructure in the U.S. (both rail and interstate) to enrich its supply chains for manufacturing in North America. An example of this use is by exporting goods such as “Electronics” to the United States through the Los Angeles Customs Port District to its manufacturing operations in Ciudad Juárez through El Paso.

### **U.S.-East Asian Commodity Flows by Interstate Highway**

- The goods that are exported through these ports coming from New Mexico and El Paso involve mainly raw materials, such as “Animal Feed,” “Other Foodstuffs,” and “Machinery.”
- The top commodity imported from Eastern Asia through the major ports in California headed to New Mexico and El Paso by truck is “Electronics.”
- A large portion of the imports from Eastern Asia are “Electronics” through the major ports in California. These “Electronics” arrive in El Paso where they are exported to manufacturing base in Ciudad Juárez, Chihuahua. The processed goods are then imp through El Paso and shipped often as finished goods to distribution centers across the cou

## II. Los Angeles Customs Port District



The Ports of Los Angeles and Long Beach are the two principal maritime ports in the Los Angeles Customs Port District, and both ports are located in Los Angeles County, on the San Pedro Bay, twenty miles south of downtown Los Angeles. The Port of Los Angeles possesses 7,500 acres, with 43 miles of waterfront. The Port of Long Beach possesses 3,200 acres, with 31 miles of waterfront. Both ports have a variety of cargo terminals, including automobile, break-bulk, container, dry and liquid bulk, and warehouse facilities.

The Port of Los Angeles is an independent, self-supporting department of the City of Los Angeles. The Board of Harbor Commissioners oversees the management and operation of the Port of Los Angeles. Harbor Commissioners are appointed by the Mayor of Los Angeles and confirmed by the Los Angeles City Council and serve five-year terms. The Executive Director of the Harbor Commission administers all policies developed by the Commission's Board and provides leadership regarding the daily operation of the port.

The Port of Long Beach is a public agency managed and operated by the City of Long Beach Harbor Department. The port is governed by the Long Beach Board of Harbor Commissioners, whose five members oversee the management and operation of the port, are appointed by the Mayor of Long Beach and confirmed by the Long Beach City Council and serve six year terms. The Board of Harbor Commissioners is responsible for setting policy for the port and managing the Harbor Department.

## **Terminal Facilities:**

- The **Port of Los Angeles** complex includes over 15 cargo terminals, such as seven active public container terminals, three public break-bulk terminals, a roll-on/roll-off terminal, a scrap metal terminal, a dry bulk terminal, and seven liquid bulk terminals. According to the Port of Los Angeles, the break bulk and container terminals listed below are the principal terminals in the complex [See map above].
  - **Principal Break Bulk Terminals:**
    1. Pasha Stevedoring and Terminals
    2. Pasha Stevedoring and Terminals
  - **Principal Container Terminals:**
    3. West Basin Container Terminal (China Shipping)
    4. West Basin Container Terminal (Yang Ming)
    5. TraPac, Inc.
    6. Yusen Terminals, LLC.
    7. Everport Terminal Services
    8. Eagle Marine Services, Ltd.
    9. APM Terminals Pacific, Ltd.
  
- The **Port of Long Beach** complex includes over 20 cargo terminals that handles all cargo types including containerized, break-bulk, dry bulk, liquid bulk, and roll-on/roll-off. The principal terminals are listed below [See map above].
  - **Principal Break Bulk Terminals:**
    1. National Gypsum Co.
    2. Cemex USA, G-P Gypsum
    3. Koch Carbon Inc., Mitsubishi Cement, Mortons Salt, Chemoil Marine Terminal, Cooper/T. Smith Stevedoring, SSA/Crecent, and POLB Standby Berth
    4. International Transportation Service, Metro Ports
    5. Vopak Terminal
    6. Total Terminals International, SA Recycling LLC, Tesoro Fremont Forest, and Weyerhaeuser Co.
  - **Principal Container Terminals:**
    7. SSA Terminals
    8. SSA Terminals
    9. LB Container Terminal (LBCT)
    10. International Transportation Service (ITS)
    11. Pacific Container Terminal (PCT)
    12. Total Terminals International (TTI), SA Recycling LLC, Tesoro Fremont Forest, and Weyerhaeuser Company



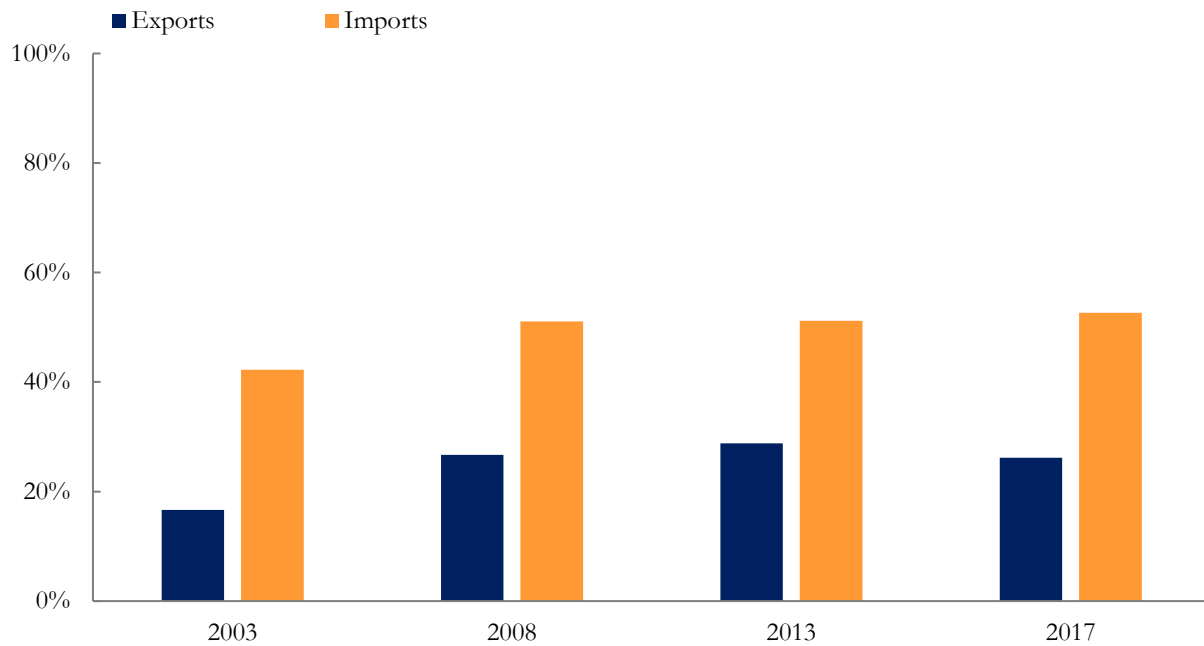
### **Freight Rail and Interstate Highway Access:**

- The Ports of Los Angeles and Long Beach contain two principal intermodal facilities, such as the Southern California International Gateway (SCIG), and the Intermodal Container Transfer Facility (ICTF) [See map above].
  - **Ports of Los Angeles and Long Beach Intermodal Facilities:**
    - A. Intermodal Container Transfer Facility (ICTF)
    - B. Southern California International Gateway (SCIG)
- The Alameda Corridor, a 20 mile freight expressway, also connects the Ports of Los Angeles and Long Beach to the transcontinental rail yard in downtown Los Angeles.
- Major State and Interstate Highway System Access: I-5, I-10, I-15, US 101, SR 47, SR 60, SR 57, SR 91, and SR 138.

### **Major Trading Partners and Distances to Paso del Norte Hinterland Corridors:**

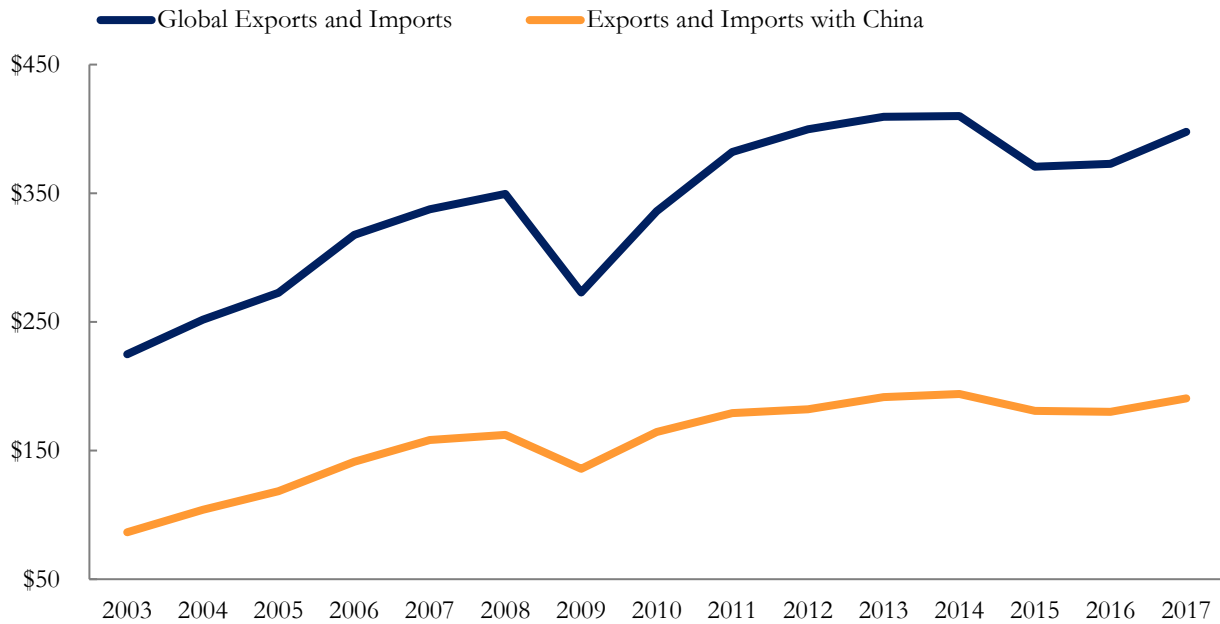
- China, Hong Kong, Japan, and South Korea.
- Distance to Asian Ports: 5,700 – 6,500 nautical miles.
- Distance to El Paso, Texas: 815 miles.
- Distance to Albuquerque, New Mexico: 805 miles.

Los Angeles Customs Port District (All Ports):  
Maritime Vessel Exports and Imports with China (Percentage of Total Trade)



Source: U.S. Census Bureau.

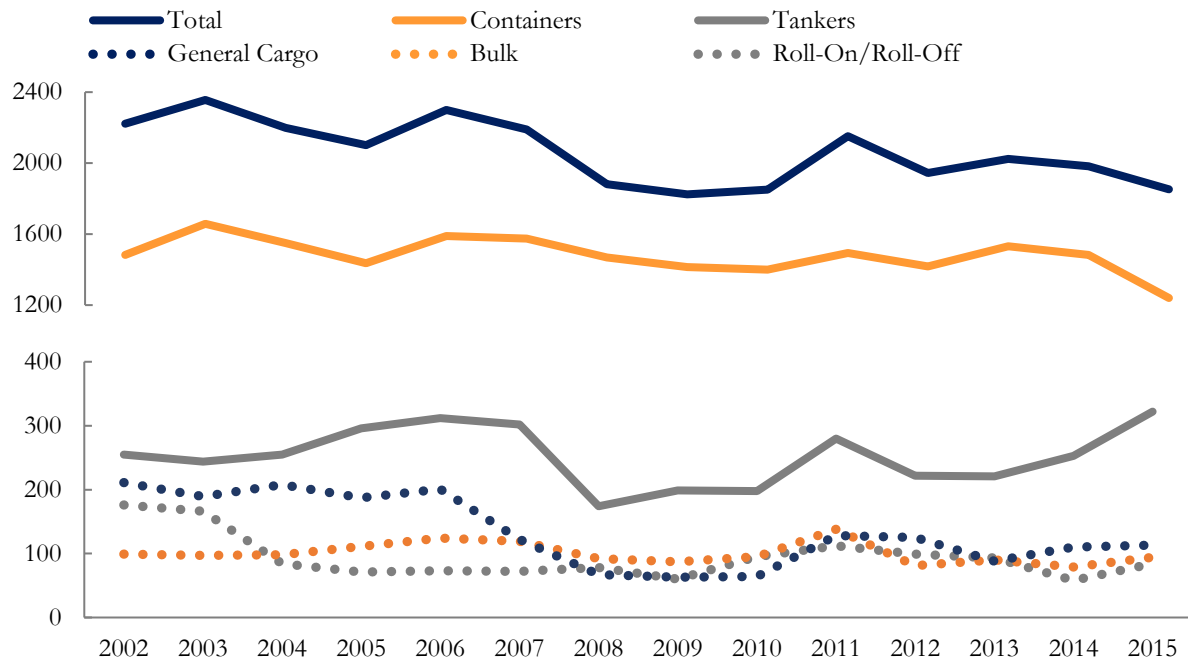
Los Angeles Customs Port District (All Ports):  
Maritime Vessel Exports and Imports (Billion USD)



Source: U.S. Census Bureau.

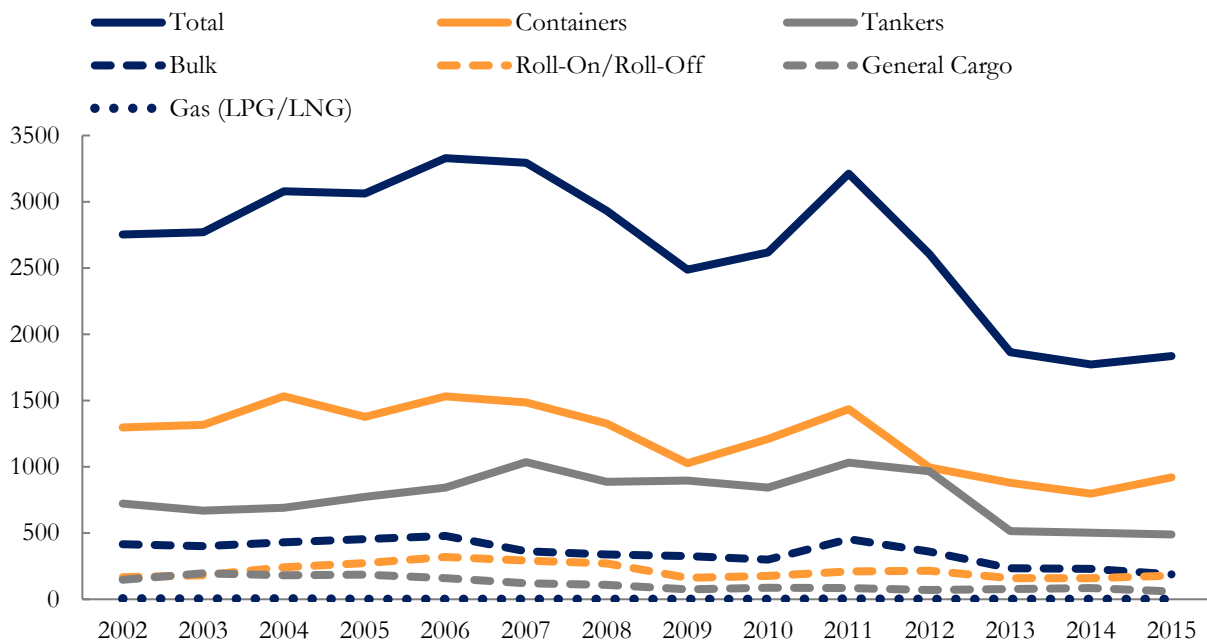
## A. Port Cargo Profile

Port of Los Angeles Vessel Calls



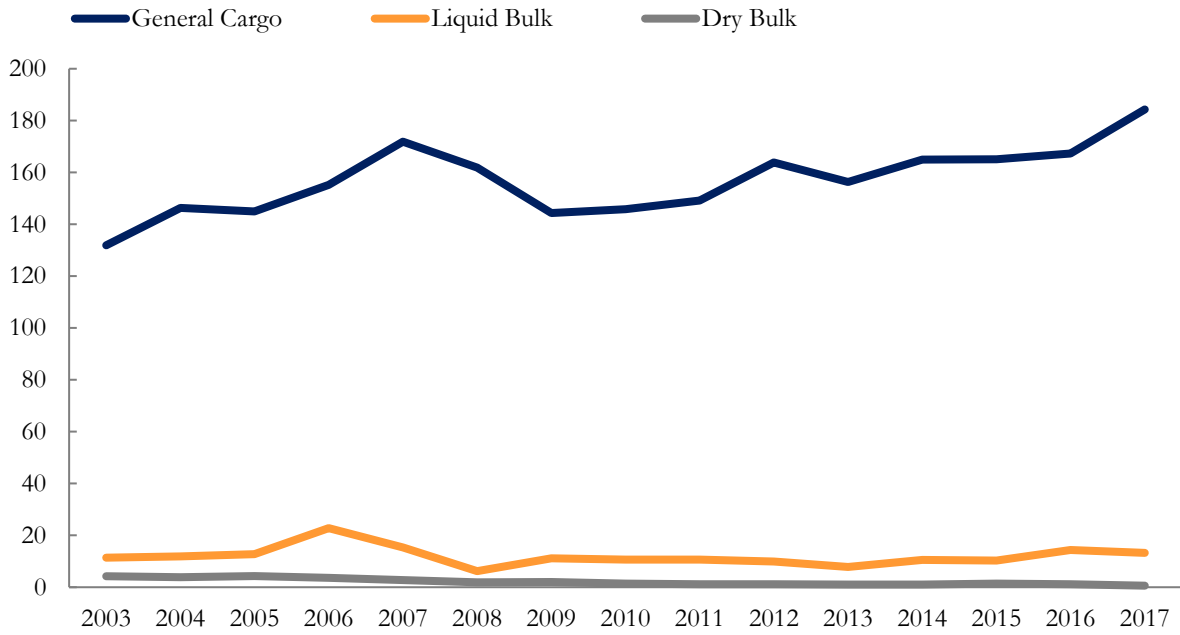
Source: The U.S. Maritime Administration.

Port of Long Beach Vessel Calls



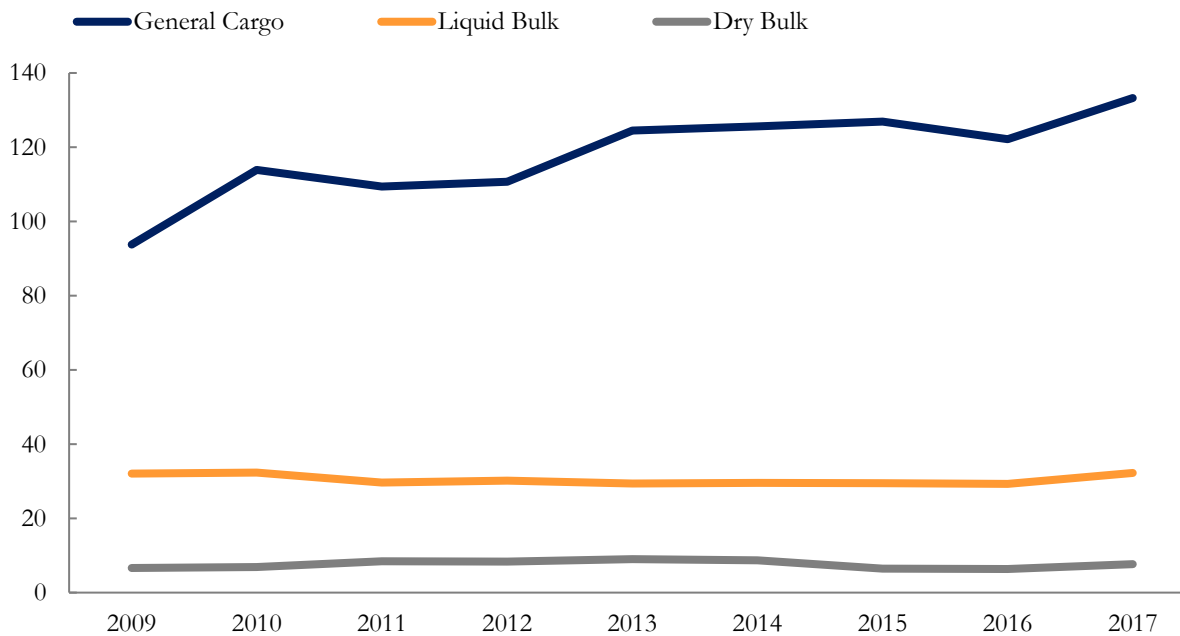
Source: The U.S. Maritime Administration.

Port of Los Angeles Cargo Breakdown (Million Metric Tons)



Source: Port of Los Angeles.

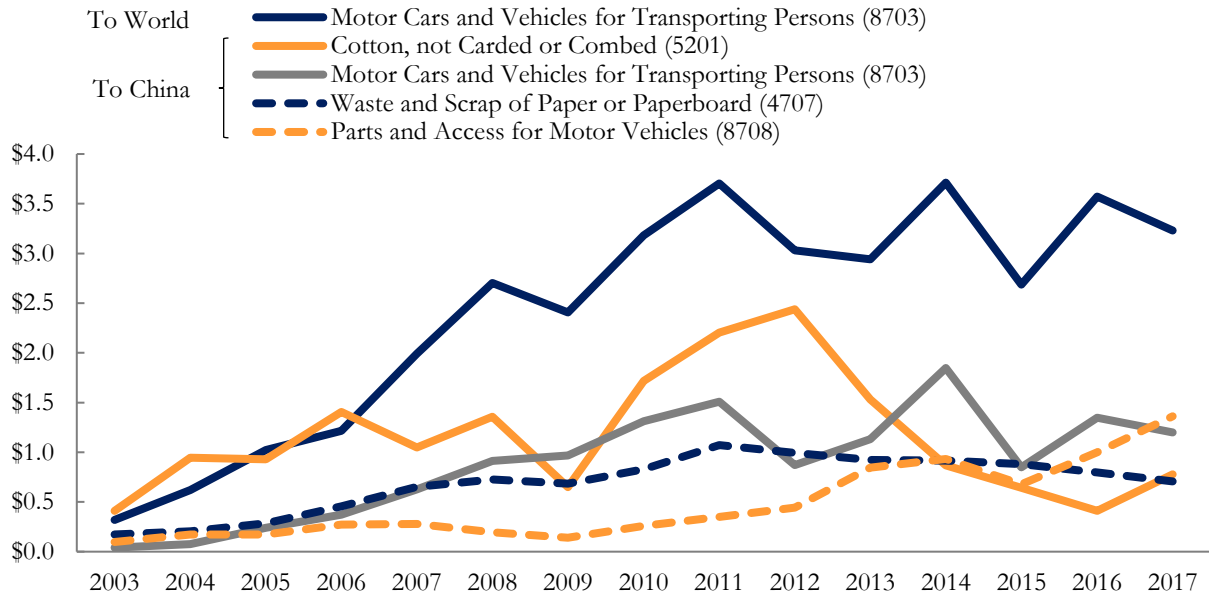
Port of Long Beach Cargo Breakdown (Million Metric Tons)



Source: Port of Long Beach.

## B. China Exports to and Imports from the Los Angeles Port District by Vessel

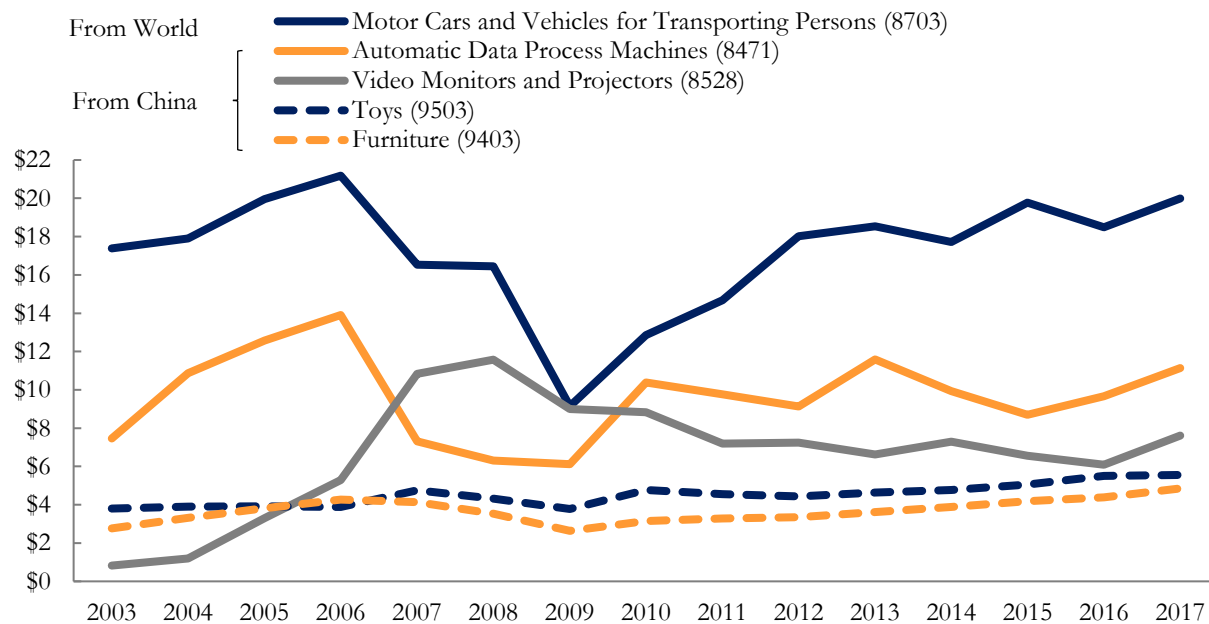
Los Angeles Port District: Leading Export Commodities to the World and China (Billion USD)



**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

Los Angeles Port District: Leading Import Commodities from the World and China (Billion USD)

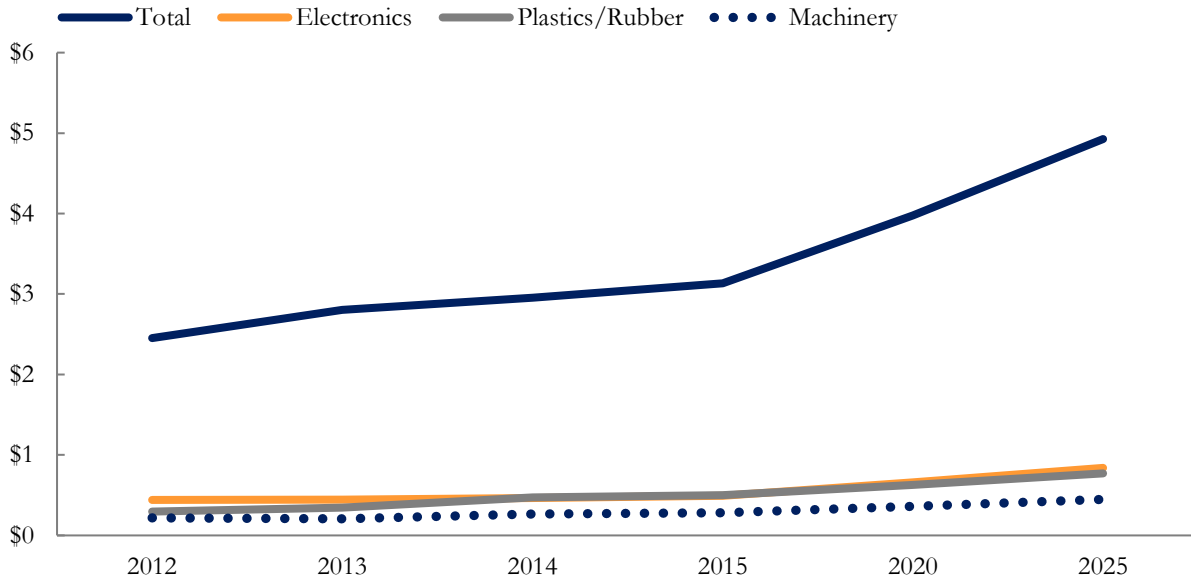


**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

C. Imports from and Exports to Eastern Asia by Water through the Los Angeles Customs Port District connected to El Paso and New Mexico by Rail

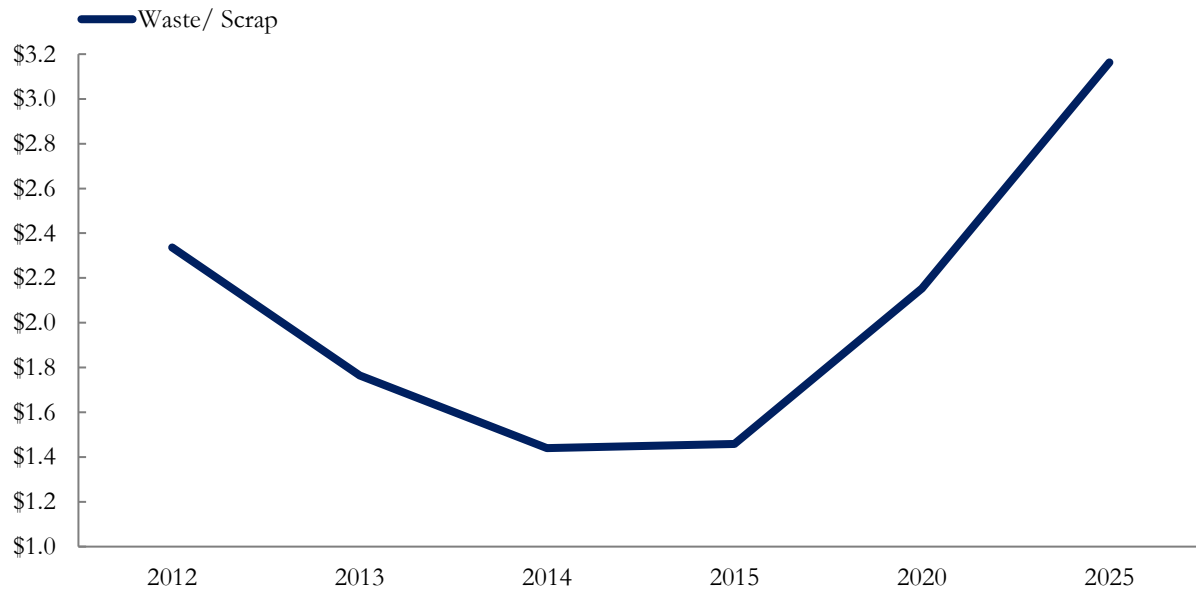
Leading Rail Import Commodities from Eastern Asia to El Paso (Million USD)



**Note:** Eastern Asia includes China (Mainland China, Hong Kong, Macao, Taiwan) Mongolia, North Korea, and South Korea.

**Source:** Freight Analysis Framework.

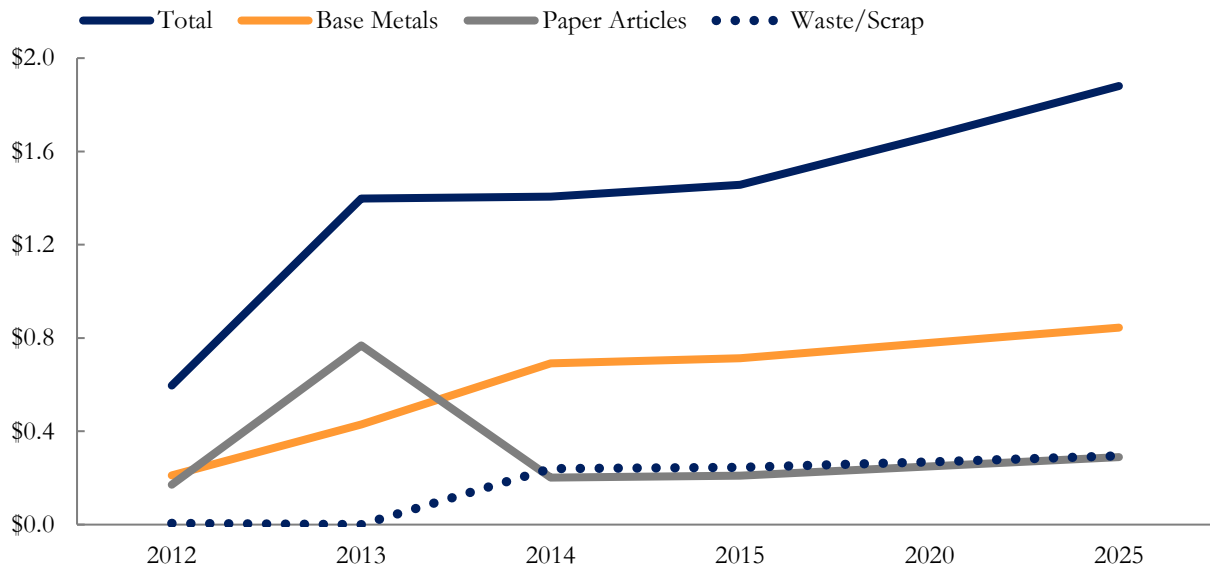
Leading Rail Export Commodities from El Paso to Eastern Asia (Million USD)



**Note:** Eastern Asia includes China (Mainland China, Hong Kong, Macao, Taiwan) Mongolia, North Korea, and South Korea.

**Source:** Freight Analysis Framework.

Leading Rail Import Commodities from Eastern Asia to New Mexico (Million USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

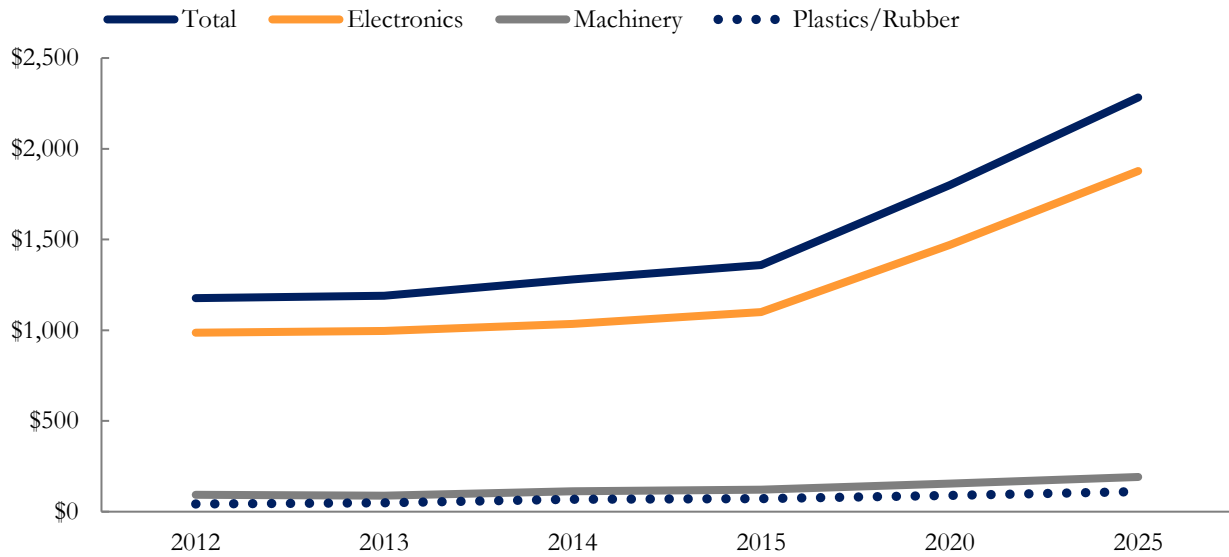
**Source:** Freight Analysis Framework.

Leading Rail Export Commodities from New Mexico to Eastern Asia (Million USD)

*Data not available*

D. Imports from and Exports to Eastern Asia by Water through the Los Angeles Customs Port District connected to El Paso and New Mexico by Truck

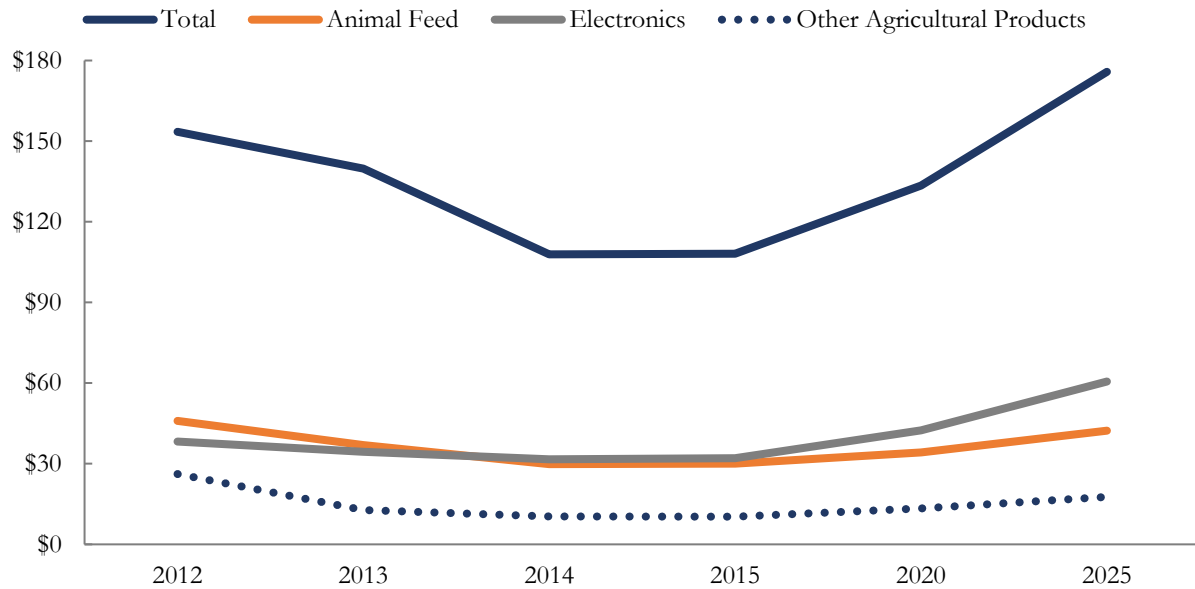
Leading Truck Import Commodities from Eastern Asia to El Paso (Million USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

**Source:** Freight Analysis Framework.

Leading Truck Export Commodities from El Paso to Eastern Asia (Million USD)

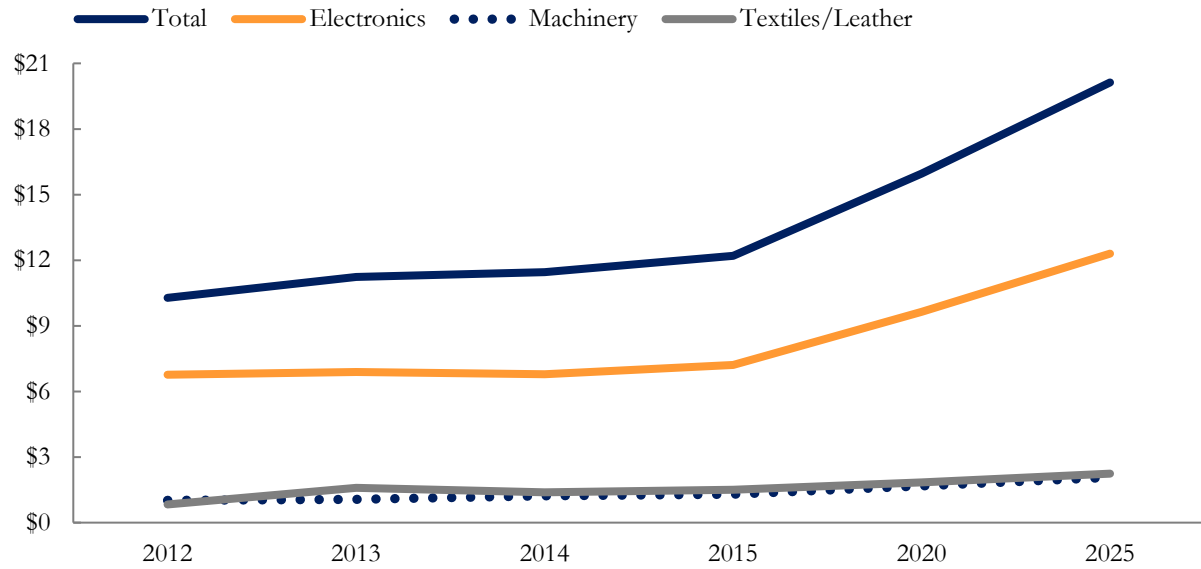


**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

**Source:** Freight Analysis Framework.

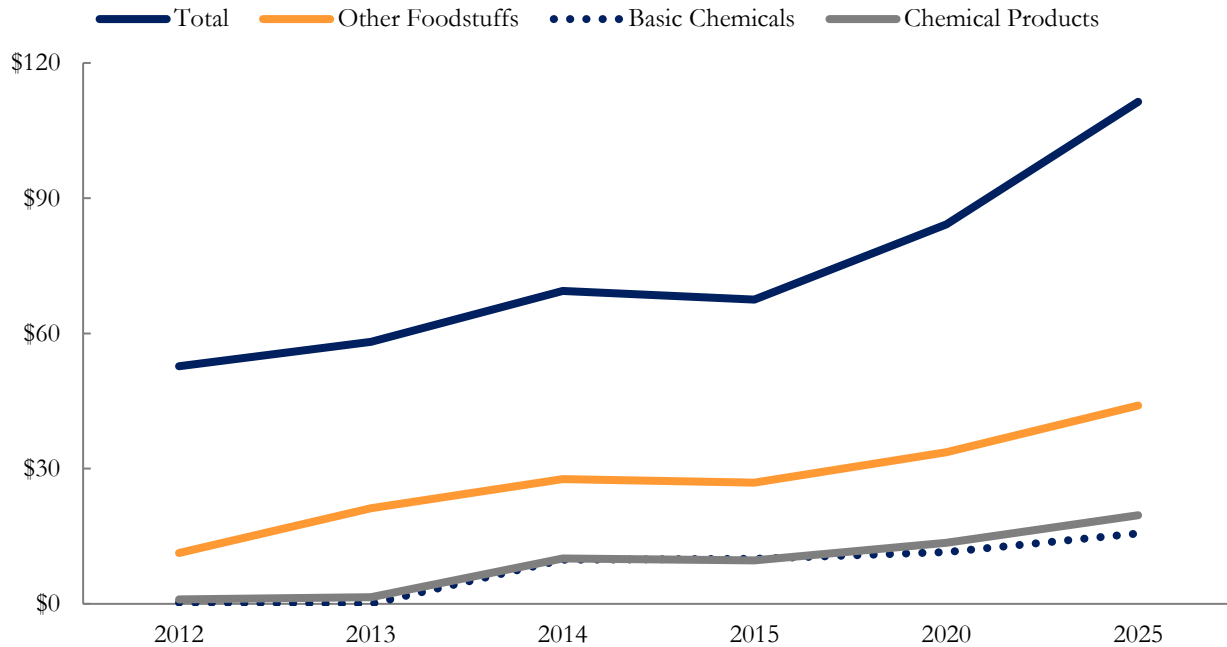


Leading Truck Import Commodities from Eastern Asia to New Mexico (Million USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** Freight Analysis Framework.

Leading Truck Export Commodities from New Mexico to Eastern Asia (Million USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** Freight Analysis Framework.

### III. San Francisco Customs Port District



The Port of Oakland is the major maritime port in the San Francisco Customs Port District. The port is located in Alameda County, Northern California, on the eastern shore of the San Francisco Bay. The Port of Oakland possesses 900 acres, with 19 miles of waterfront and is equipped to handle a variety of cargo terminals, such as containers, bulk, break-bulk, and roll-on/roll-off.

The Port of Oakland is an independent department of the City of Oakland, and is governed by a seven member Board of Port Commissioners, nominated by the Mayor of the City of Oakland and appointed by the City Council for four-year terms, with no term limits.

### **Terminal Facilities:**

- The **Port of Oakland** has a variety of cargo terminals, such as container, bulk, break-bulk, and roll-on/roll-off. The principal terminals in this port handle container cargo, such as the TraPac Terminal, Oakland International Container Terminal (OICT), the Ben E. Nutter Terminal, and the Matson Terminal.
  - **Principal Container Terminals:**
    1. Trapac Terminal
    2. Matson Terminal
    3. Oakland International Container Terminal (OICT)
    4. Ben E. Nutter Terminal
    5. Charles P. Howard Terminal

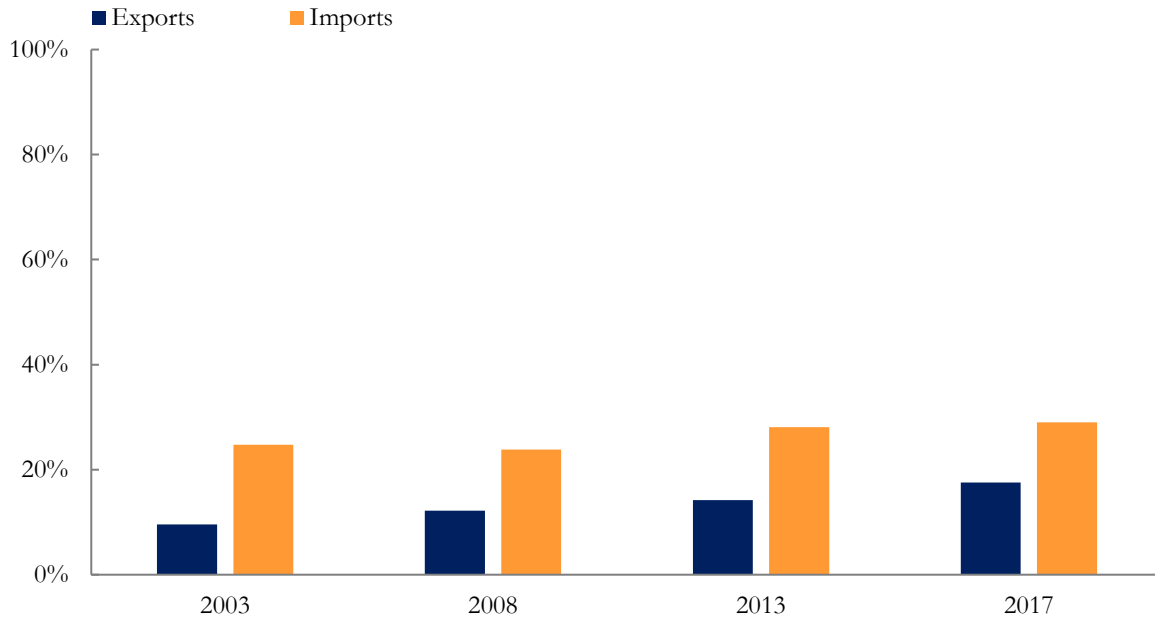
### **Freight Rail and Interstate Highway Access:**

- The Port of Oakland contains three principal intermodal facilities, such as the Union Pacific (UP) and Burlington Northern Santa Fe (BNSF), which provide double stack intermodal container service for maritime cargo eastward over the Donner Route into and beyond Nevada.
  - **Port of Oakland Intermodal Facilities:**
    - A. Union Pacific and BNSF Intermodal Rail Facilities
    - B. Seaport Logistic Complex and Outer Harbor Intermodal Terminal (OHIT)
    - C. BSNF Oakland International Gateway
- Major State and Interstate Highway System Access: I-80, I-580, I-238, I-980, and I-880.

### **Major Trading Partners and Distances to the Paso del Norte Hinterland Corridors:**

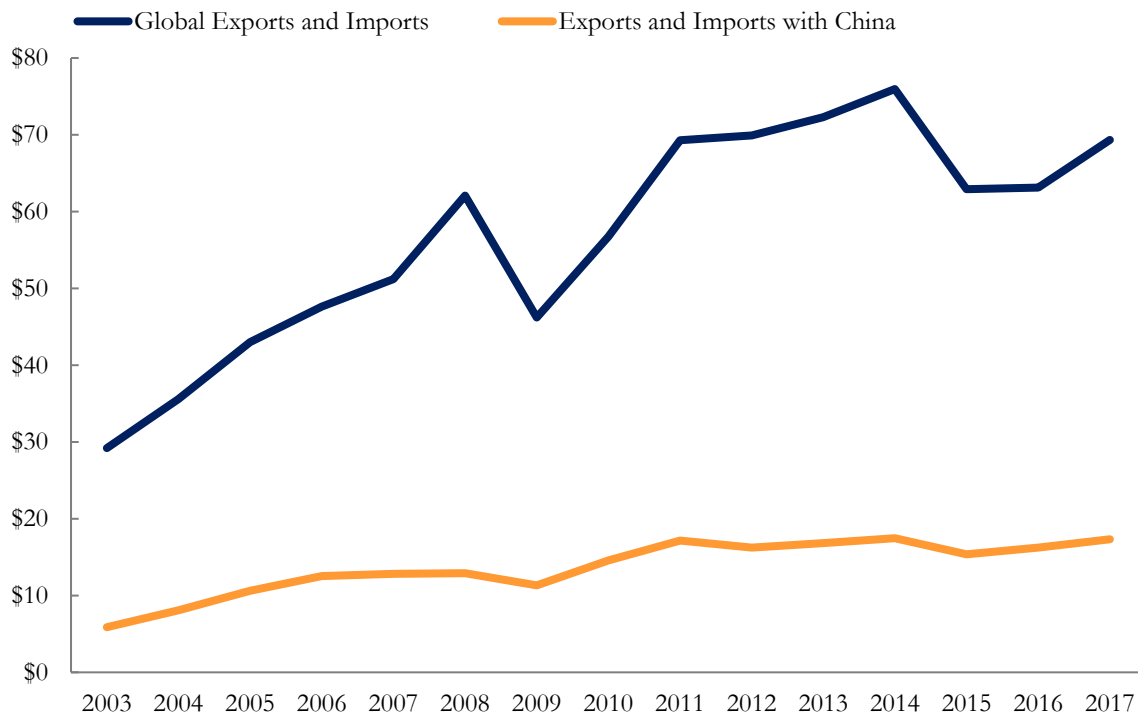
- China, Japan, South Korea, and Taiwan.
- Distance to Asian Ports: 5,300 – 6,200 nautical miles.
- Distance to El Paso, Texas: 1,200 miles.
- Distance to Albuquerque, New Mexico: 1,075 miles.

San Francisco Customs Port District (All Ports):  
Maritime Vessel Exports and Imports with China (Percentage of Total Trade)



Source: U.S. Census Bureau.

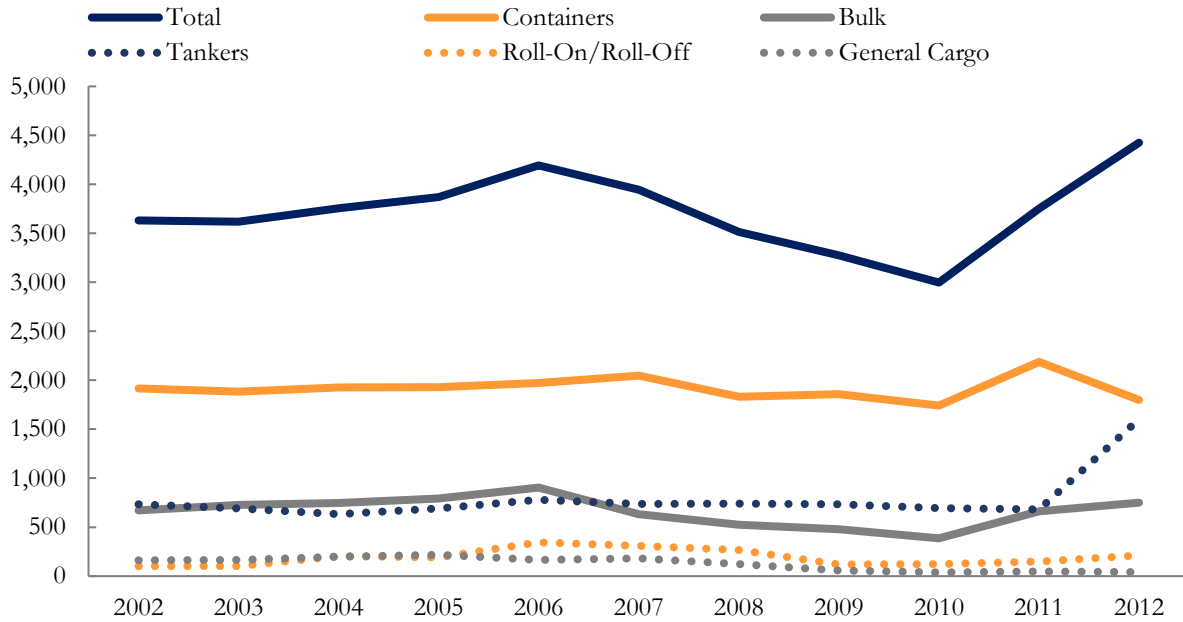
San Francisco Customs Port District (All Ports):  
Maritime Vessel Exports and Imports (Billion USD)



Source: U.S. Census Bureau.

## A. Port Cargo Profile

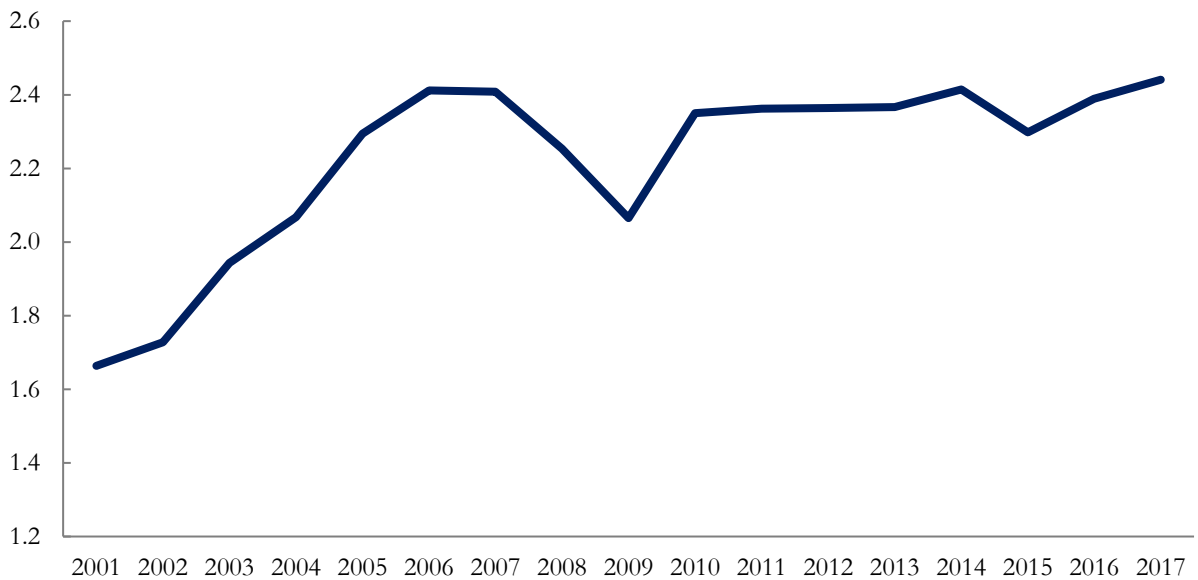
San Francisco Bay Area Ports Vessel Calls



**Note:** The Port of Oakland is a container port and reports trade volume in Twenty-foot Equivalent Units (TEUs).

**Source:** U.S. Department of Transportation, Maritime Administration.

Port of Oakland Containerized Cargo (Million TEUs)

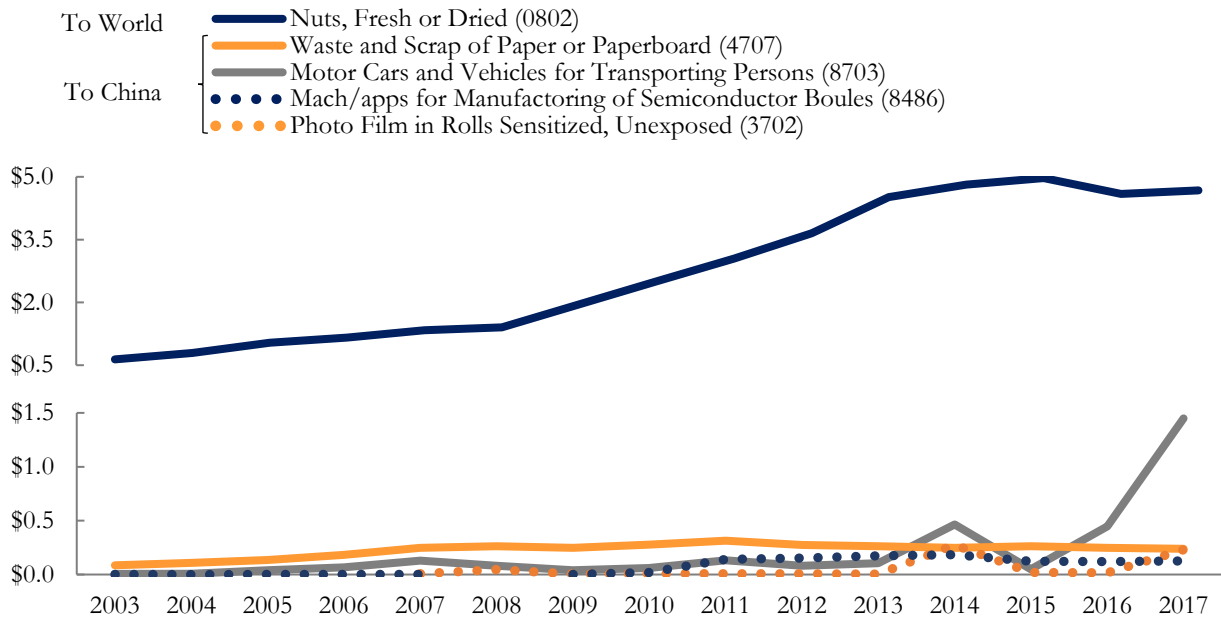


**Note:** The Port of Oakland is a container port and reports trade volume in Twenty-foot Equivalent Units (TEUs).

**Source:** Port of Oakland.

## B. China Exports to and Imports from San Francisco Port District by Vessel

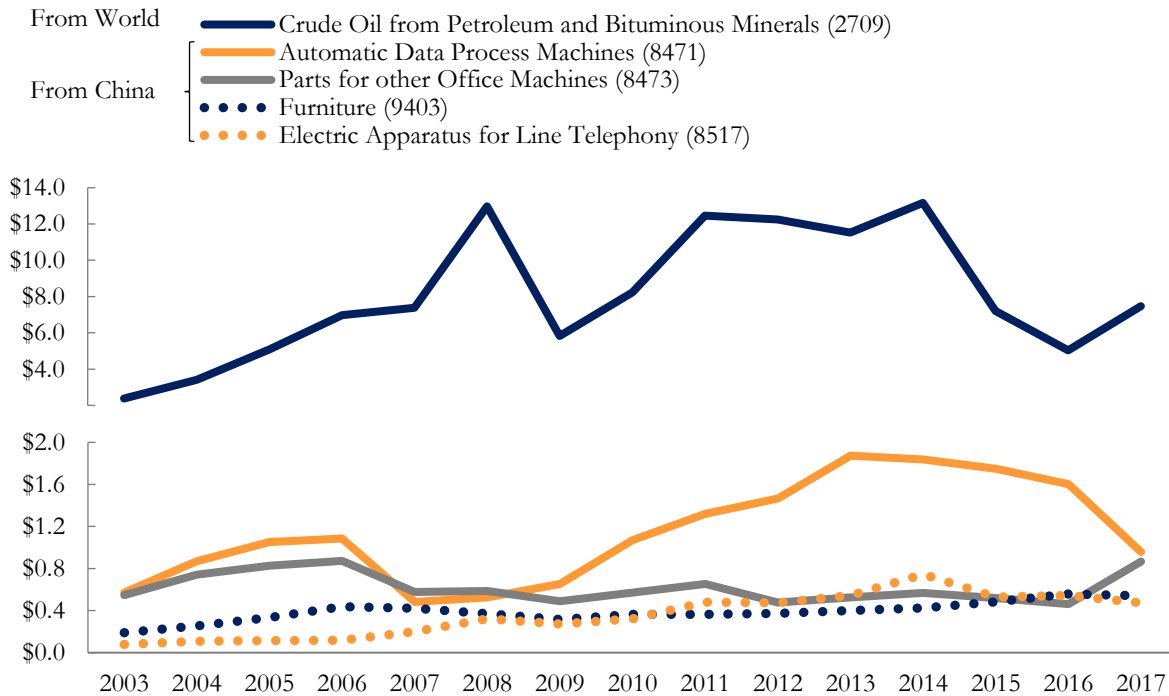
San Francisco Port District: Leading Export Commodities to the World and China (Billion USD)



**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

San Francisco Port District: Leading Import Commodities from the World and China (Billion USD)



**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

C. Imports and Exports from Eastern Asia by Water through the San Francisco Customs Ports District connected to El Paso and New Mexico by Rail

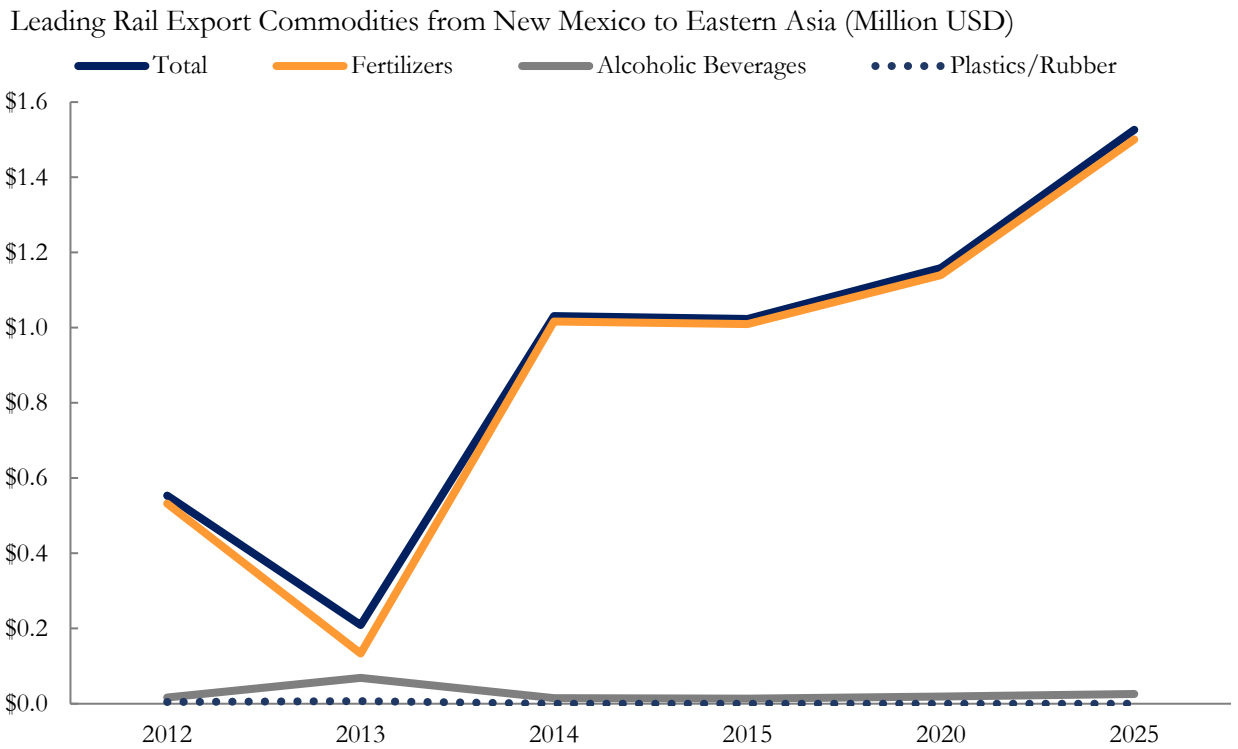
Leading Rail Import Commodities from Eastern Asia to El Paso (Million USD)

*Data not available*

Leading Rail Export Commodities from El Paso to Eastern Asia (Million USD)

*Data not available*

Leading Rail Import Commodities from Eastern Asia to New Mexico (Million USD)  
*Data not available*

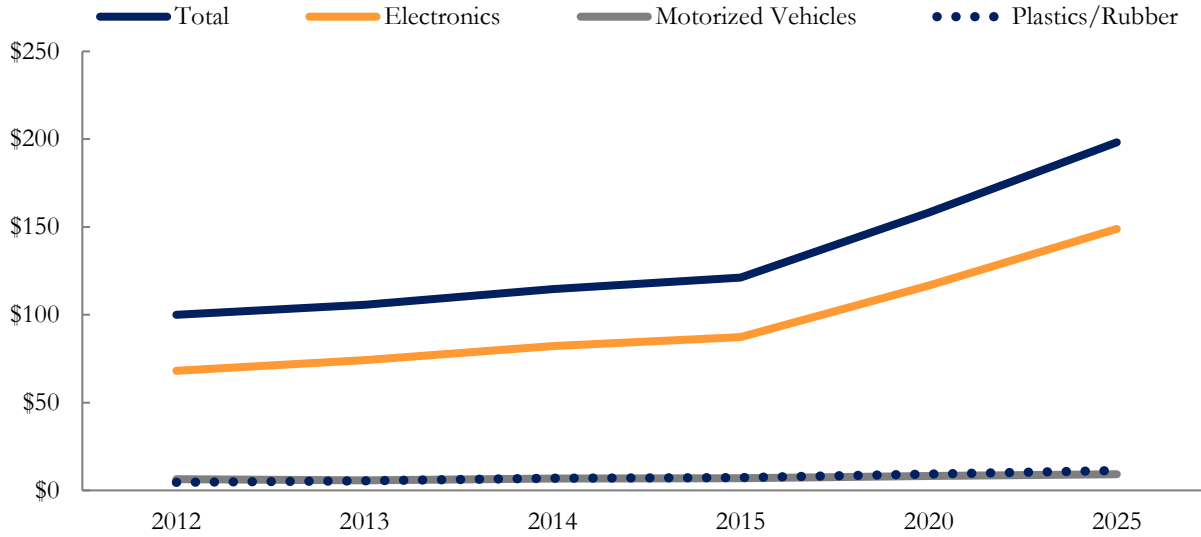


**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** *Freight Analysis Framework*.



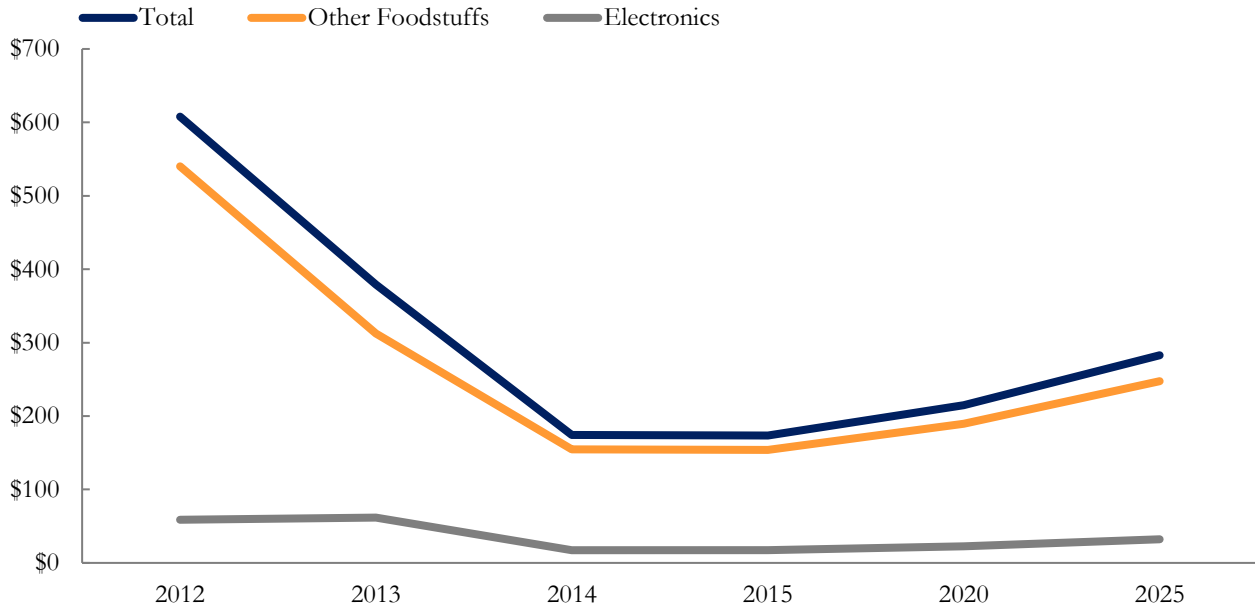
D. Imports and Exports from Eastern Asia by Water through the San Francisco Customs Ports District connected to El Paso and New Mexico by Truck

Leading Truck Import Commodities from Eastern Asia to El Paso (Thousand USD)



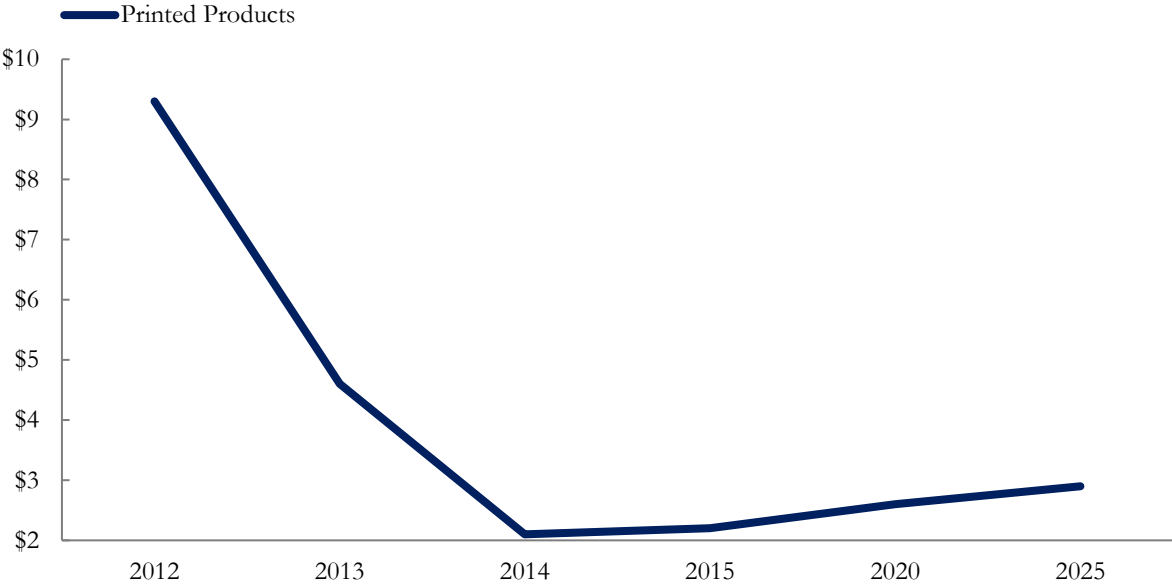
**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** Freight Analysis Framework.

Leading Truck Export Commodities from El Paso to Eastern Asia (Thousand USD)



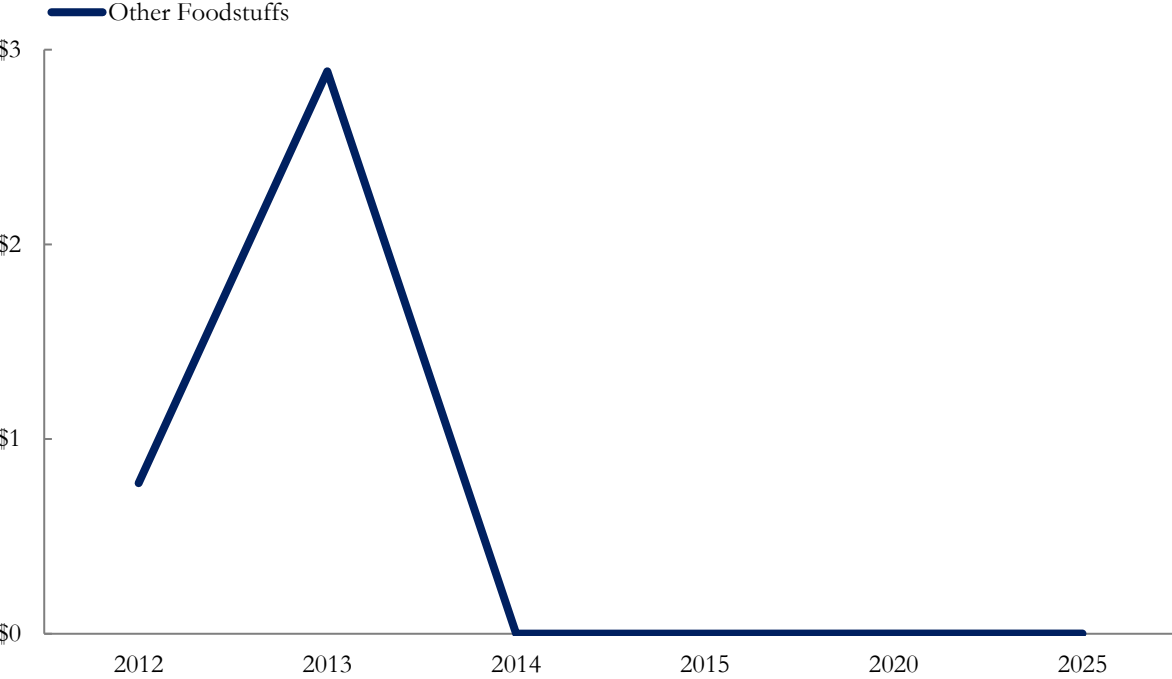
**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** Freight Analysis Framework.

Leading Truck Import Commodities from Eastern Asia to New Mexico (Thousand USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** Freight Analysis Framework.

Leading Truck Export Commodities from New Mexico to Eastern Asia (Million USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** Freight Analysis Framework.

#### IV. San Diego Customs Port District



The Port of San Diego is the major maritime port in the San Diego Customs Port District, located in San Diego County, California, approximately 96 miles southeast of Los Angeles and ten miles north of the international border with Mexico. The Port of San Diego possesses almost 220 acres of maritime facilities, with 34 miles of waterfront, and has two principal cargo terminals.

The Port of San Diego is governed by a seven member Board of Port Commissioners appointed by the City Councils of the five member cities of the port: Chula Vista, Coronado, Imperial Beach, National City, and San Diego. Each city appoints one member except San Diego, which appoints three members for a period of four years.

### **Terminal Facilities:**

- The **Port of San Diego** includes two principal cargo terminals. The Tenth Avenue Marine Terminal is a multi-purpose eight berth facility that handles refrigerated commodities, fertilizer, cement, break-bulk commodities, and forest products. The National City Marine Terminal processes vehicle cargo [See map above].
  - **Principal Container Terminals:**
    1. 10<sup>th</sup> Avenue Marine Terminal
    2. National City Marine Terminal

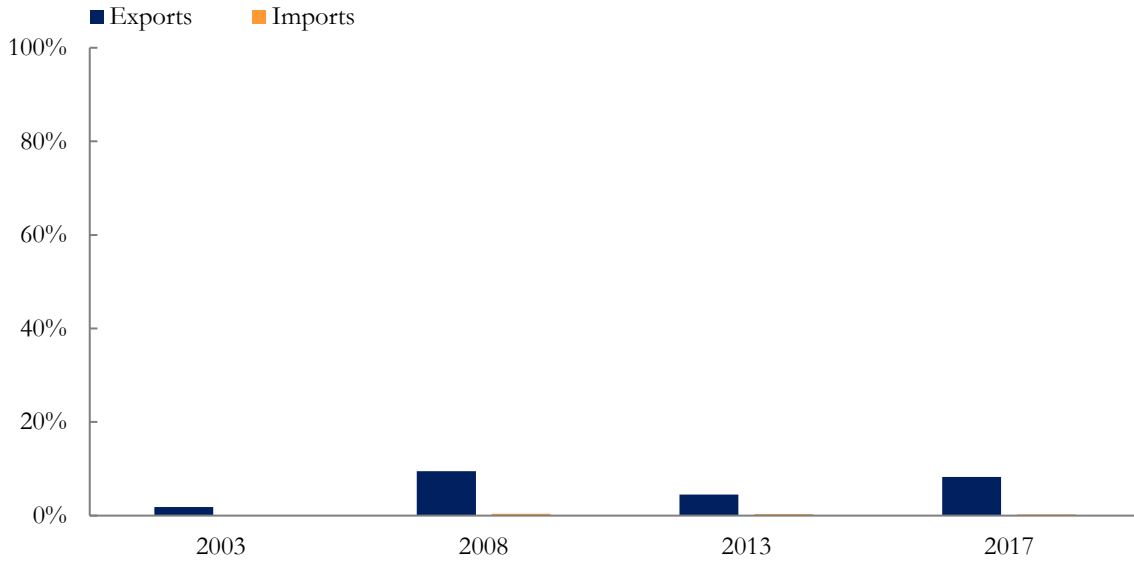
### **Freight Rail and Interstate Highway Access:**

- Burlington Northern Santa Fe (BNSF) provides primarily automobile rail service north and south along the coast, interfacing in Los Angeles with the Transcontinental Route, a Primary California freight corridor heading eastward.
  - **Port of San Diego Intermodal Facilities:**
    - A. Burlington Northern Santa Fe (BNSF) Vehicle Facility
- Major Interstate and State Highway System Access: I-5 and I-8.

### **Major Trading Partners and Distances to Paso del Norte Hinterland Corridors:**

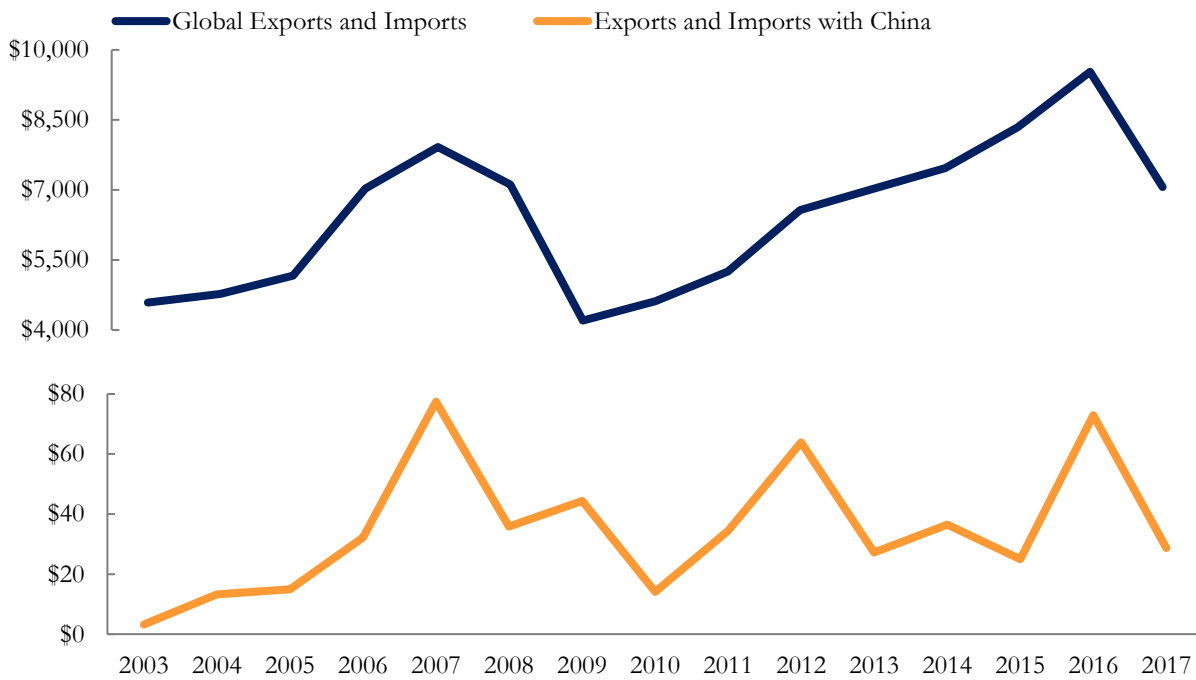
- Japan, Germany, South Korea, and China.
- Distance to Asian Ports: 5,700 – 6,600 nautical miles.
- Distance to El Paso, Texas: 730 miles.
- Distance to Albuquerque, New Mexico: 775 miles.

San Diego Customs Port District (All Ports):  
Maritime Vessel Exports and Imports with China (Percentage of Total Trade)



Source: U.S. Census Bureau.

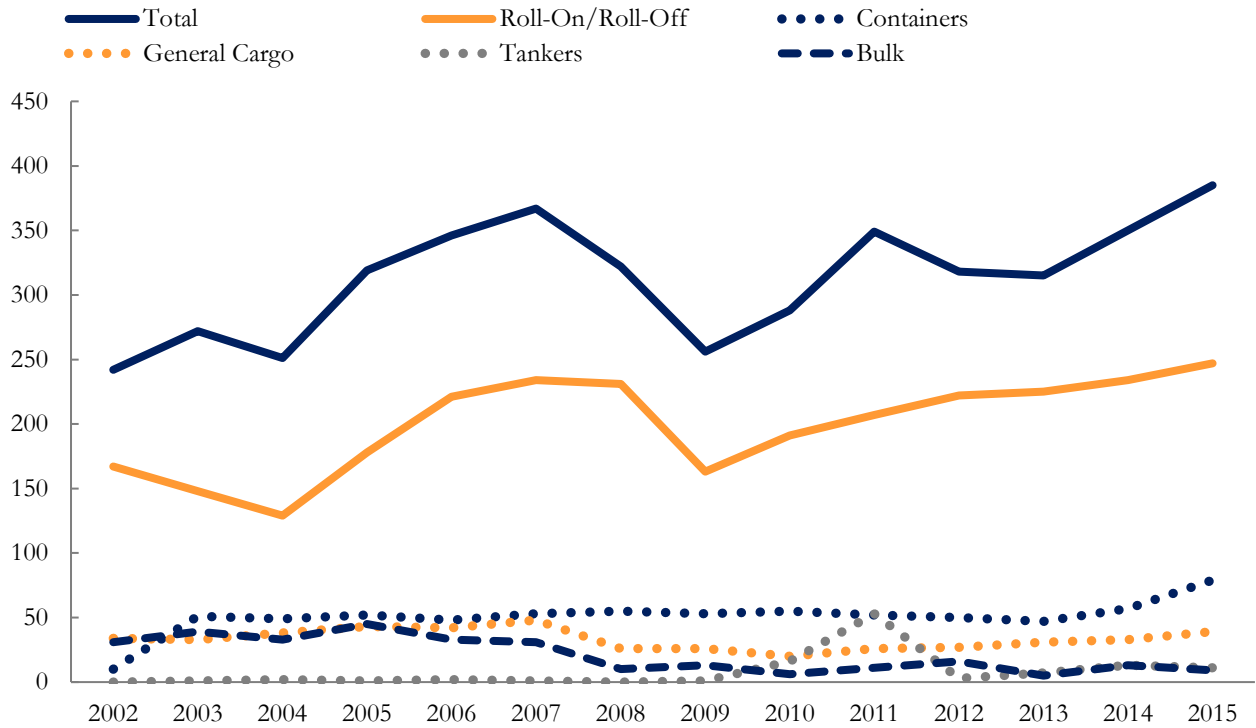
San Diego Customs Port District (All Ports):  
Maritime Vessel Exports and Imports (Billion USD)



Source: U.S. Census Bureau.

## A. Port Cargo Profile

Port of San Diego Vessel Calls



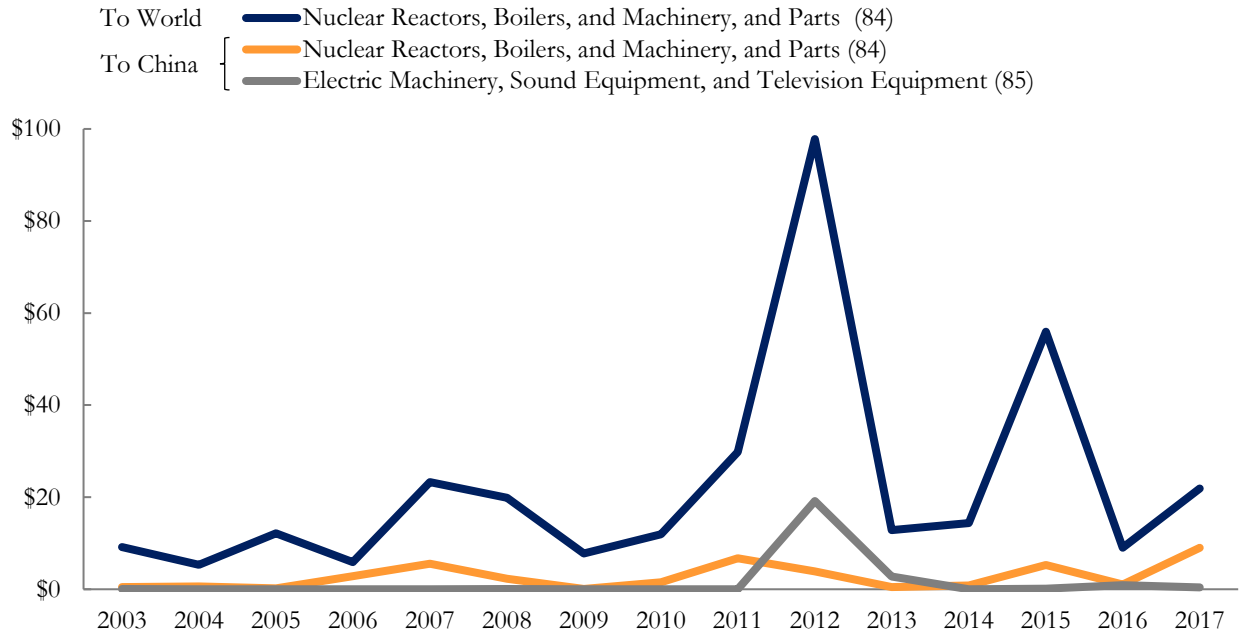
Source: *The U.S. Maritime Administration.*

## Port of San Diego Cargo Breakdown (Million Metric Tons)

*Data not available*

## B. China Exports to and Imports from San Diego Port District by Vessel

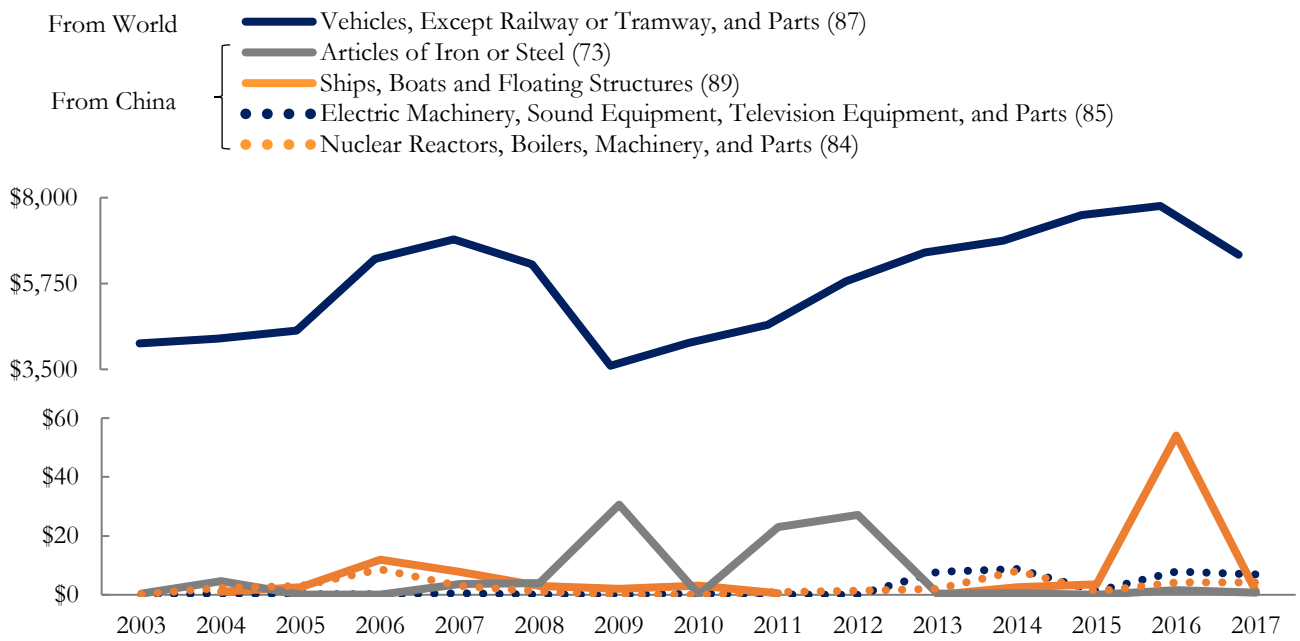
San Diego Port District: Leading Export Commodities to the World and China (Million USD)



**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

San Diego Port District: Leading Import Commodities from the World and China (Million USD)

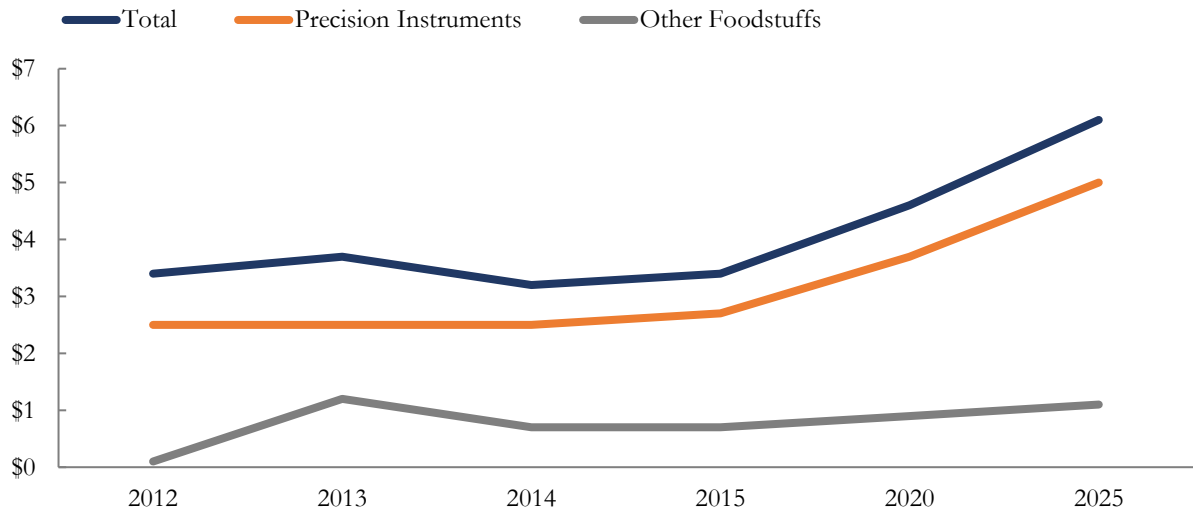


**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

C. Imports and Exports from Eastern Asia by Water through the San Diego Customs Ports District connected to El Paso and New Mexico by Rail

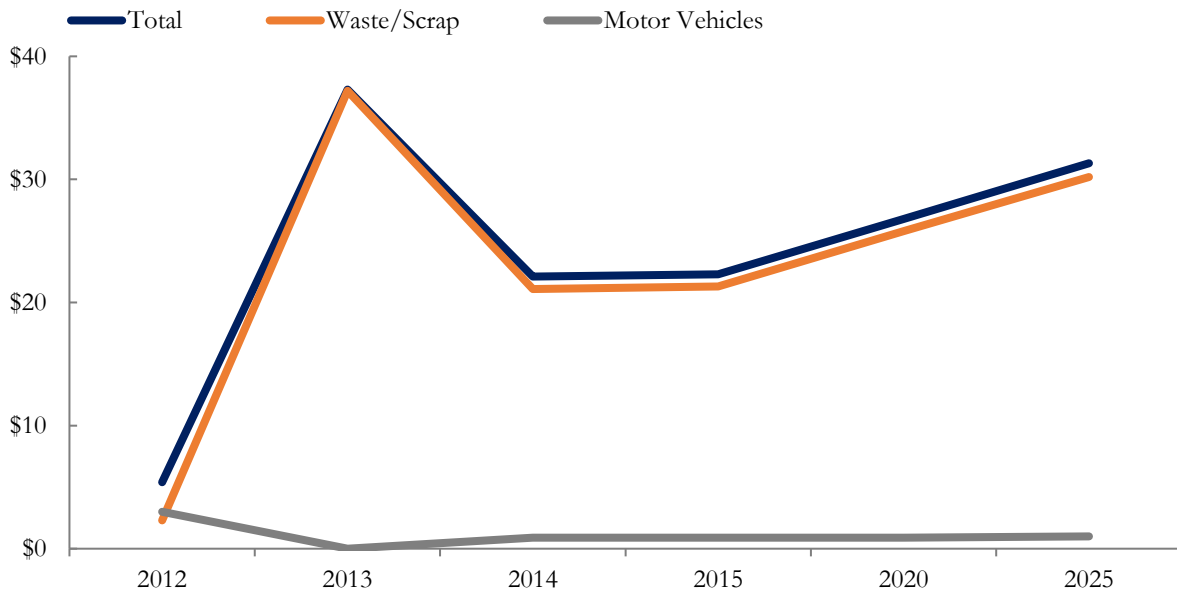
Leading Rail Import Commodities from Eastern Asia to El Paso (Thousand USD)



**Note:** Eastern Asia includes China (Mainland China, Hong Kong, Macao, Taiwan) Mongolia, North Korea, and South Korea.

**Source:** Freight Analysis Framework.

Leading Rail Export Commodities from El Paso to Eastern Asia (Thousand USD)



**Note:** Eastern Asia includes China (Mainland China, Hong Kong, Macao, Taiwan) Mongolia, North Korea, and South Korea.

**Source:** Freight Analysis Framework.

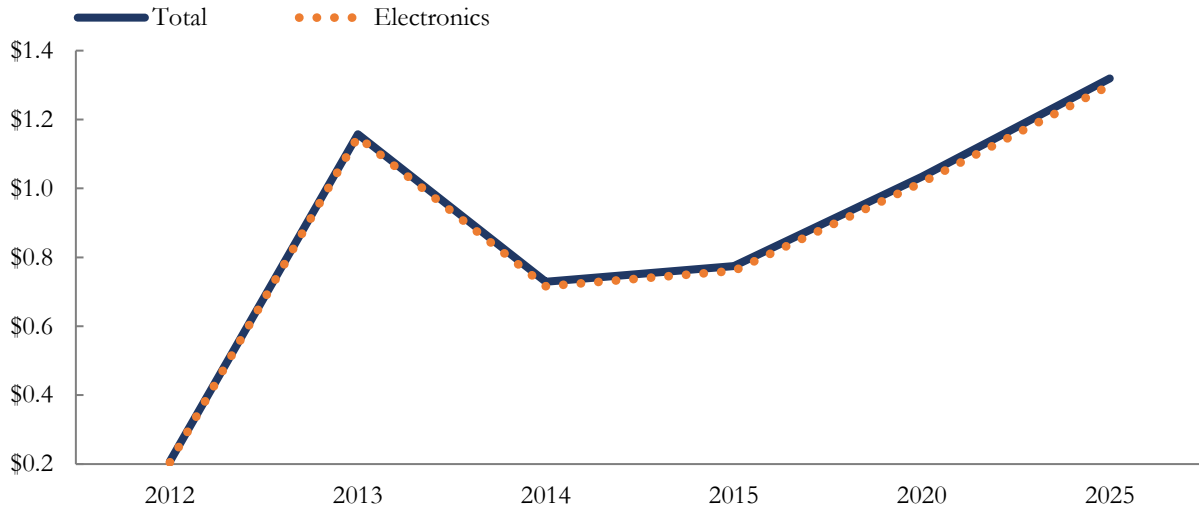


Leading Rail Import Commodities from Eastern Asia to New Mexico (Million USD)  
*Data not available*

Leading Rail Export Commodities from New Mexico to Eastern Asia (Million USD)  
*Data not available*

D. Imports and Exports from Eastern Asia by Water through the San Diego Customs Ports District connected to El Paso and New Mexico by Truck

Leading Truck Import Commodities from Eastern Asia to El Paso (Million USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

**Source:** *Freight Analysis Framework*.

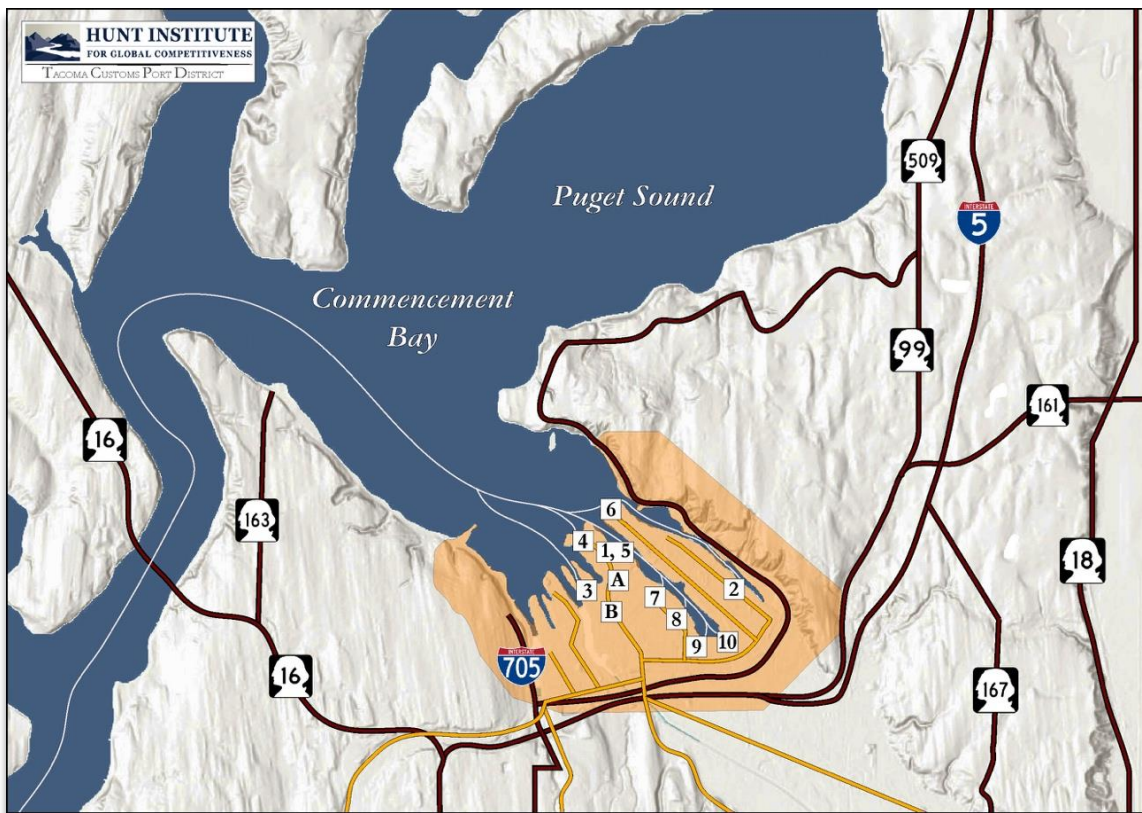
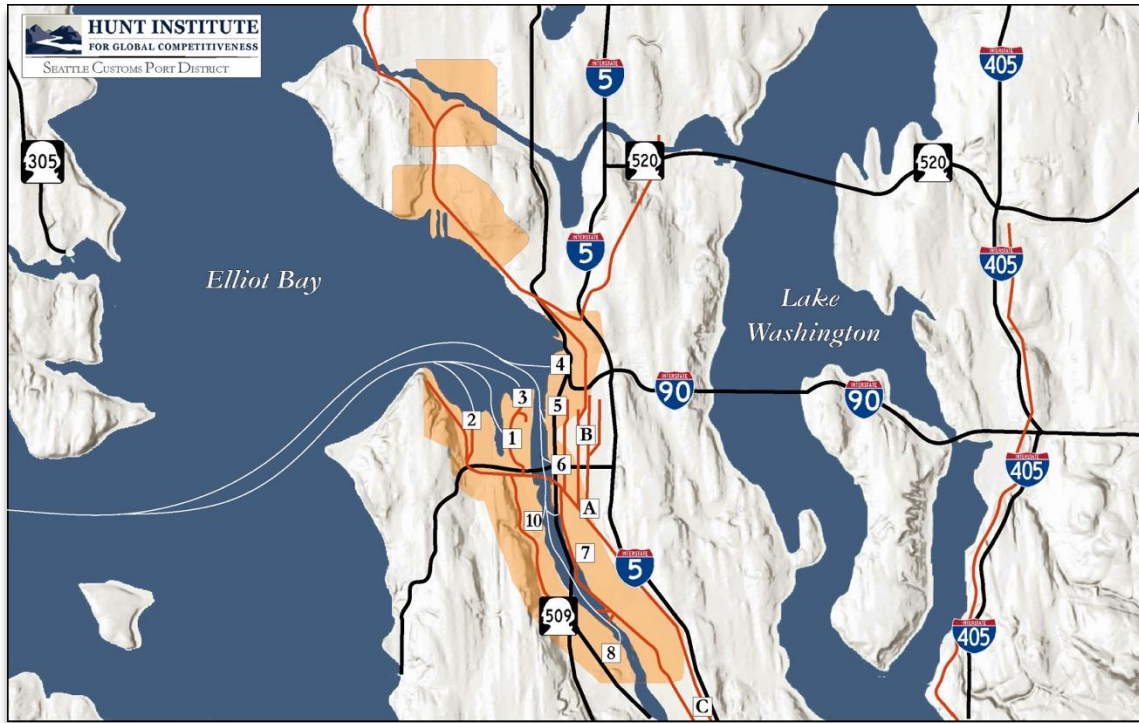
Leading Truck Export Commodities from El Paso to Eastern Asia (Million USD)

*Data not available*

Leading Truck Import Commodities from Eastern Asia to New Mexico (Million USD)  
*Data not available*

Leading Truck Export Commodities from New Mexico to Eastern Asia (Million USD)  
*Data not available*

## V. Seattle Customs Port District



The Ports of Seattle and Tacoma are the two major maritime ports in the Seattle-Tacoma Customs Port District. Together they maintain a marine cargo operating partnership known as the Northwest Seaport Alliance. The Northwest Seaport Alliance owns a total of 1,754 acres, including 993 acres in the Port of Tacoma and 760 acres in the Port of Seattle.

The Port of Seattle is located in King County, Washington, on Elliot Bay, south of downtown Seattle, and the Port of Tacoma is located in Pierce County, Washington, on Commencement Bay, east of downtown Tacoma. Both ports possess a variety of cargo terminals, including break-bulk and container.

The Port of Seattle and the Port of Tacoma are both special-purpose municipal corporations of the State of Washington, and establish port policies by a five-member Commission elected by the respective voters of each county.

### **Terminals Facilities:**

- The **Port of Seattle** includes nine terminals, of which only is a public break-bulk terminal, and seven container terminals [See map above].
  - **Principal Break Bulk Terminal:**
    1. Terminal 10
  - **Principal Container Terminals:**
    2. Terminal 5
    3. Terminal 18
    4. Terminal 46
    5. Terminal 30
    6. Terminal 104 (Transload Facility)
    7. Conglobal Terminal
    8. Terminal 115
  
- The **Port of Tacoma** also includes nine terminals, of which one is break bulk and seven are container terminals.
  - **Principal Break Bulk Terminal:**
    1. Husky Terminal
    2. West Hylebos Log Facility
  - **Principal Container Terminals:**
    3. West Sitcum Terminal
    4. East Sitcum Terminal
    5. Husky Terminal
    6. Tote Terminal
    7. Washington United Terminal
    8. Blair Terminal
    9. Pierce County Terminal
    10. Totem Ocean Trailer Express Terminal

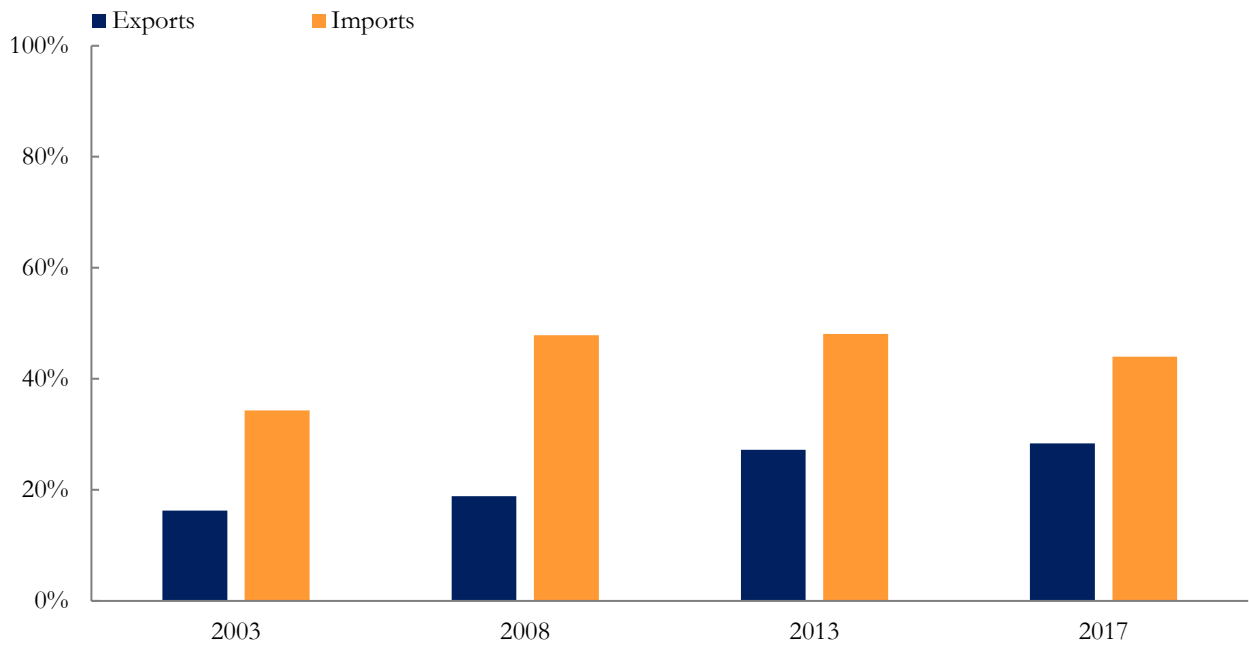
### **Freight, Rail, and Interstate Highway Access:**

- The Ports of Seattle and Tacoma contain five principal intermodal facilities, such as the Union Pacific Intermodal Facility and the Burlington Northern Santa Fe (BNSF) Facility [See map above].
  - **Port of Seattle Intermodal Facilities:**
    - A. Union Pacific (ARGO) Intermodal Facility
    - B. BNSF Seattle International Gateway (SIG) Intermodal Facility
    - C. BNSF Tukwila Intermodal Facility
  - **Port of Tacoma Intermodal Facilities**
    - A. Port of Tacoma, Burlington Northern Santa Fe (BNSF) South Yard
    - B. Port of Tacoma, Burlington Northern Santa Fe (BNSF) North Yard
- Major Interstate and State Highway System Routes Access: Seattle: US I-5, I-90, SR-99, SR-519, and SR-99; Tacoma – US I-5, SR-167, and SR-509.

### **Major Trading Partners and Distances to Paso del Norte Hinterland Corridors:**

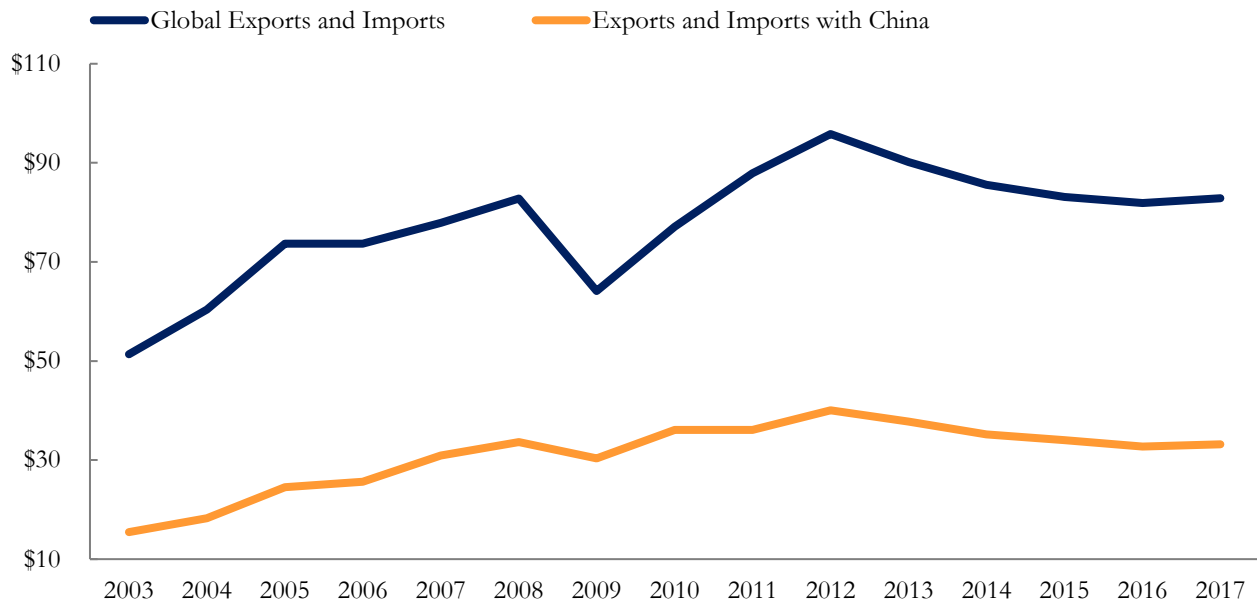
- China, Canada, South Korea, Japan, Taiwan, Vietnam, and Australia (Top 5).
- Distance to Asian Ports: 5,000-5,800 nautical miles.
- Distance to El Paso, Texas: 1,700 miles.
- Distance to Albuquerque, New Mexico: 1,430 miles.

Seattle Customs Port District (All Ports):  
Maritime Vessel Exports and Imports with China (Percentage of Total Trade)



Source: U.S. Census Bureau.

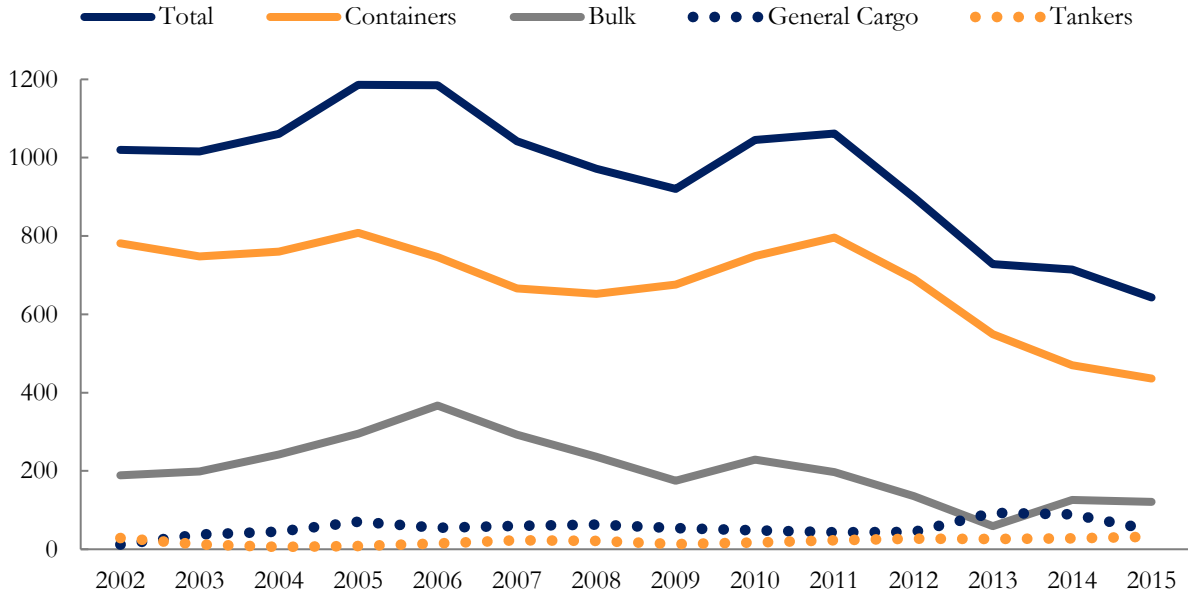
Seattle Customs Port District (All Ports):  
Maritime Vessel Exports and Imports (Billion USD)



Source: U.S. Census Bureau.

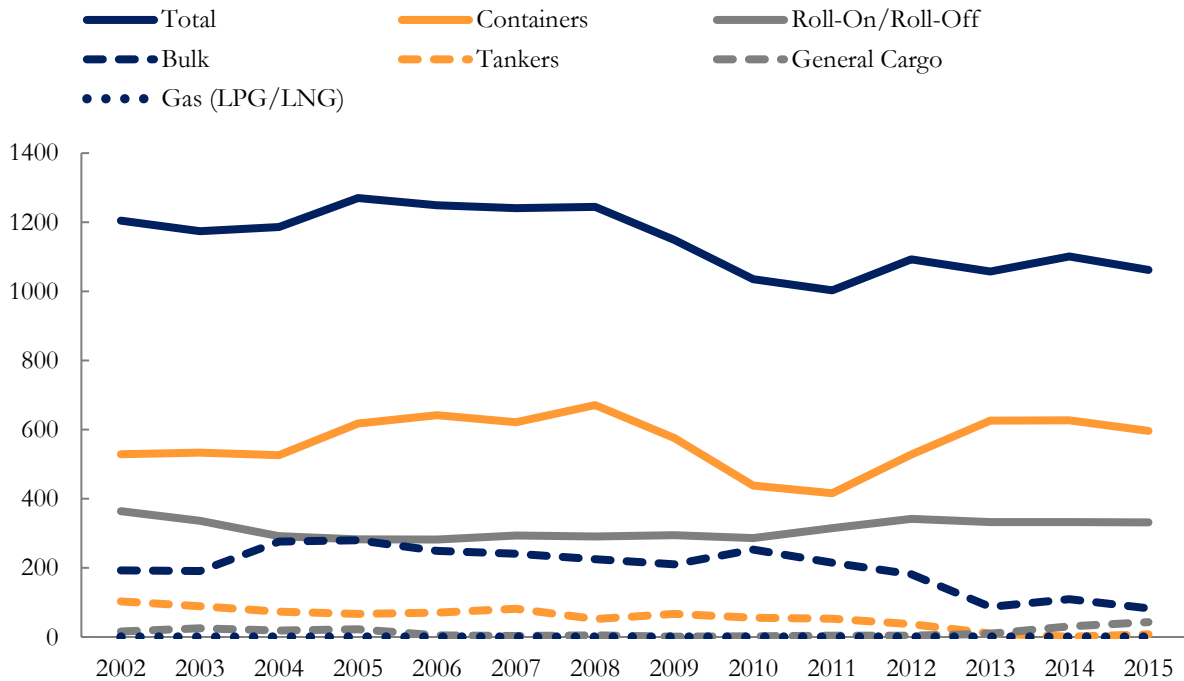
## A. Port Cargo Profile

### Port of Seattle Vessel Calls



Source: *The U.S. Maritime Administration.*

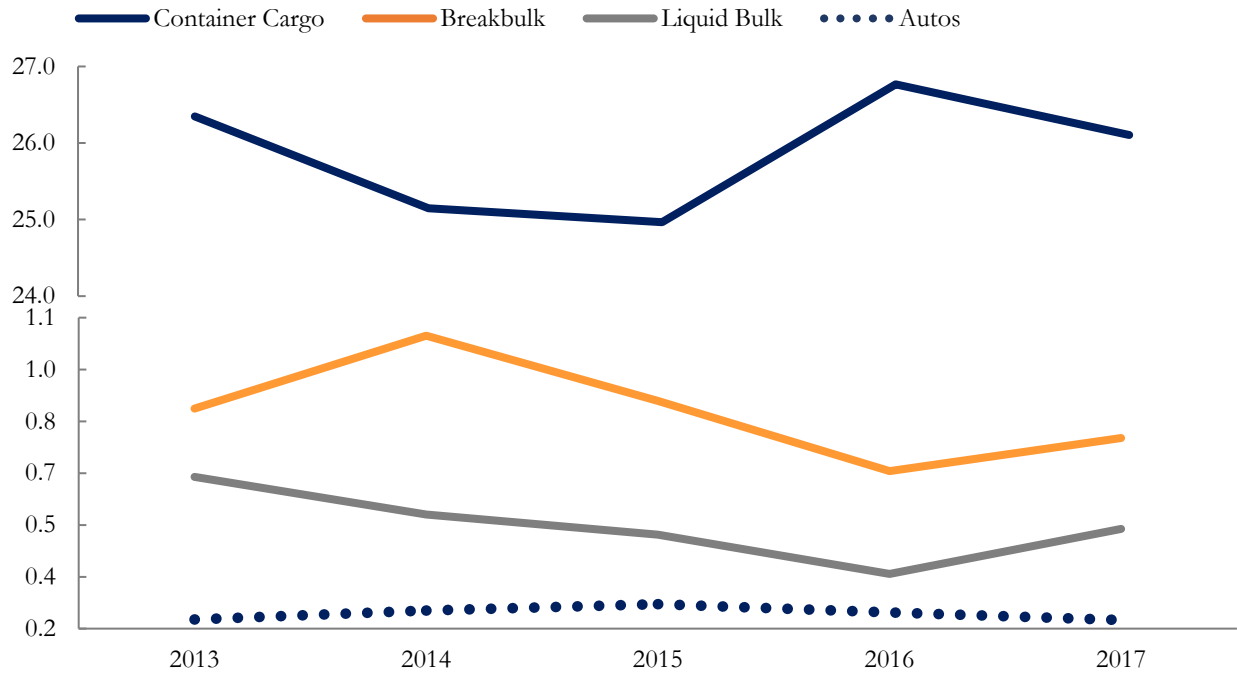
### Port of Tacoma Vessel Calls



Source: *The U.S. Maritime Administration.*



Northwestern Seaport Alliance Cargo Breakdown by Type (Million Metric Tons)

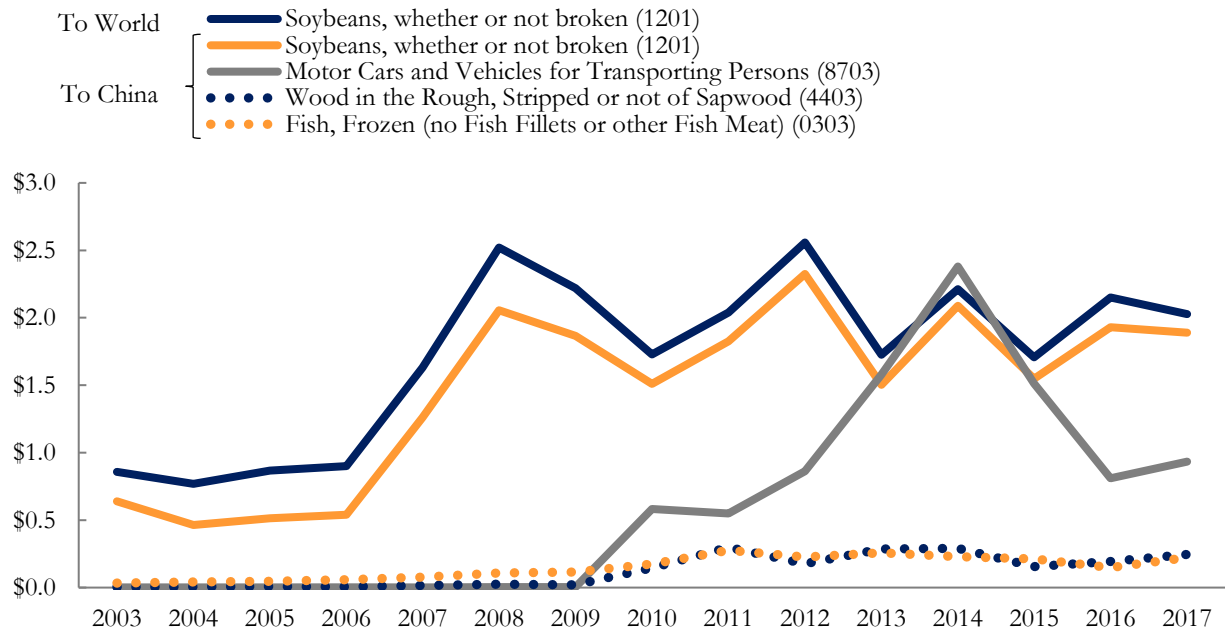


Source: *Northwestern Seaport Alliance*.

Note: The Northwestern Seaport Alliance includes the Ports of Seattle and Tacoma.

## B. China Exports to and Imports from Seattle Port District by Vessel

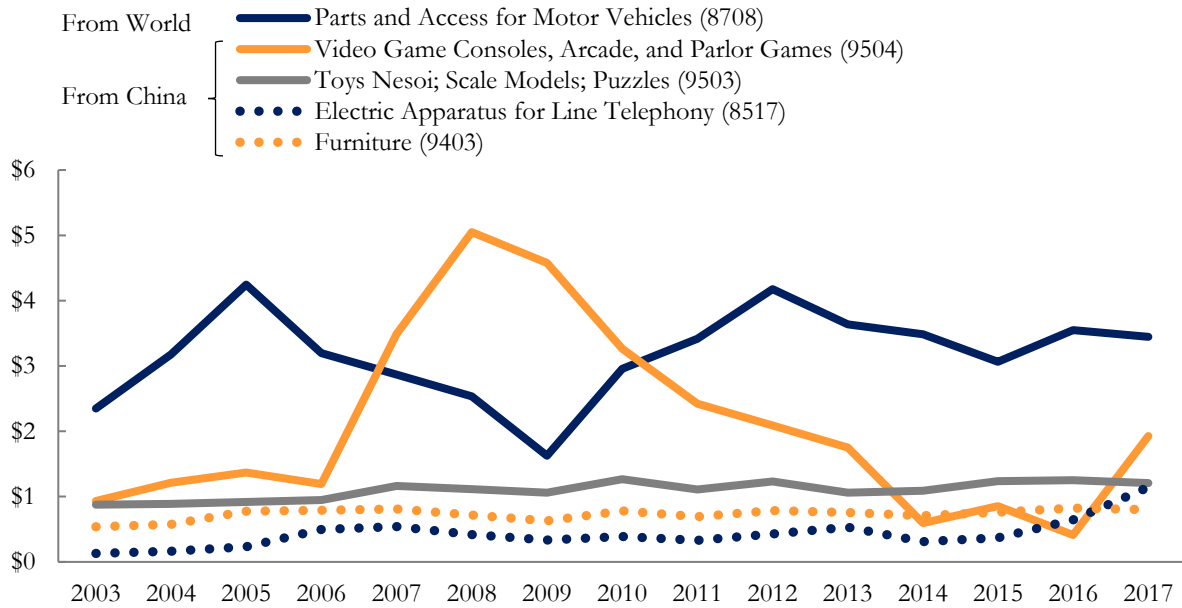
Seattle Port District: Leading Export Commodities to the World and China (Million USD)



**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

Seattle Port District: Leading Import Commodities from the World and China (Million USD)

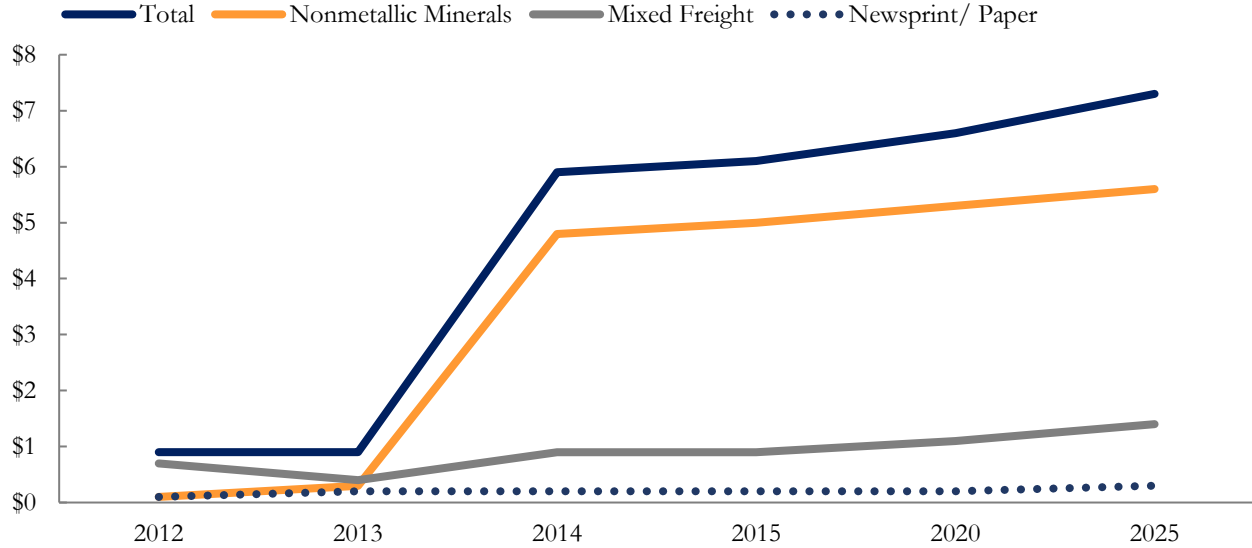


**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

C. Imports and Exports from Eastern Asia by Water through the Seattle Customs Port District connected to El Paso and New Mexico by Rail

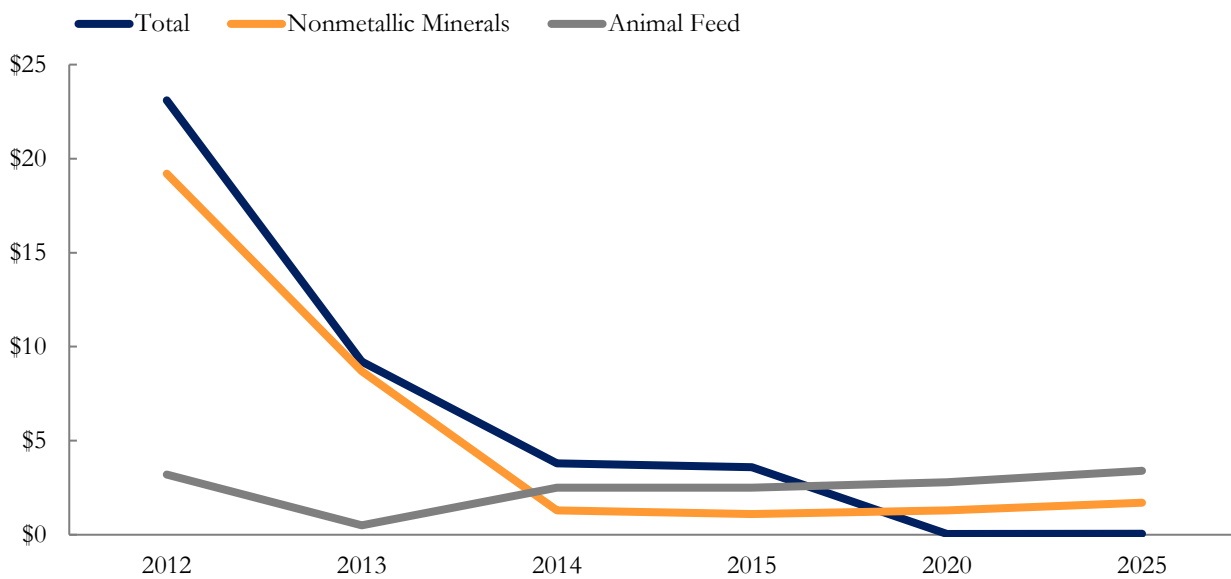
Leading Rail Import Commodities from Eastern Asia to El Paso (Thousand USD)



**Note:** Eastern Asia includes China (Mainland China, Hong Kong, Macao, Taiwan) Mongolia, North Korea, and South Korea.

**Source:** Freight Analysis Framework.

Leading Rail Export Commodities from El Paso to Eastern Asia (Thousand USD)

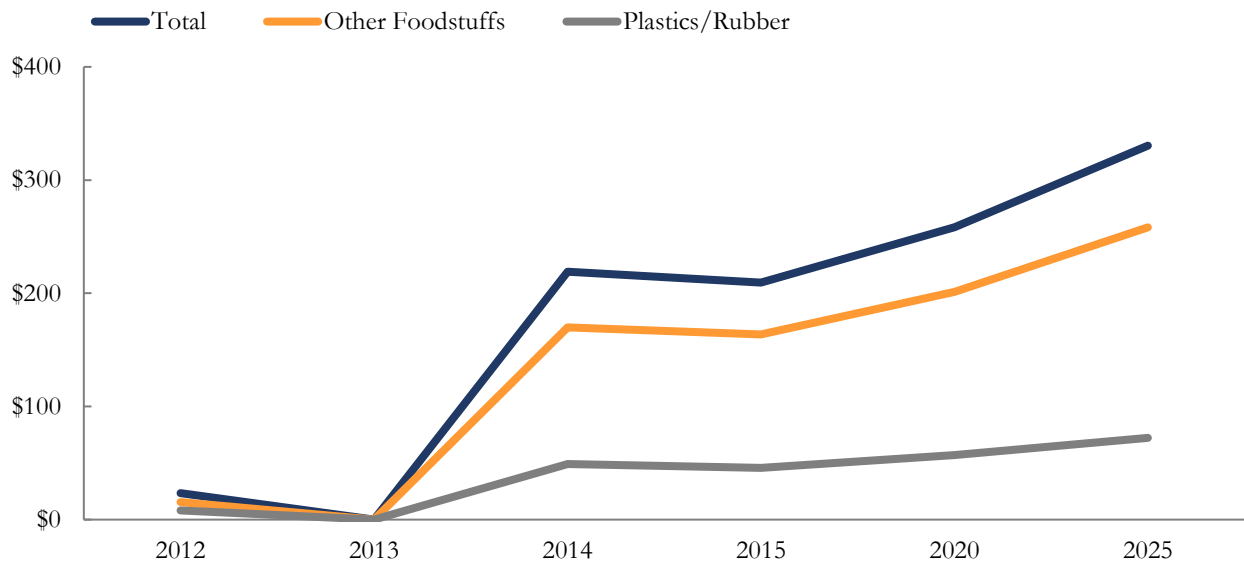


**Note:** Eastern Asia includes China (Mainland China, Hong Kong, Macao, Taiwan) Mongolia, North Korea, and South Korea.

**Source:** Freight Analysis Framework.

Leading Rail Import Commodities from Eastern Asia to New Mexico (Thousand USD)  
*Data not available*

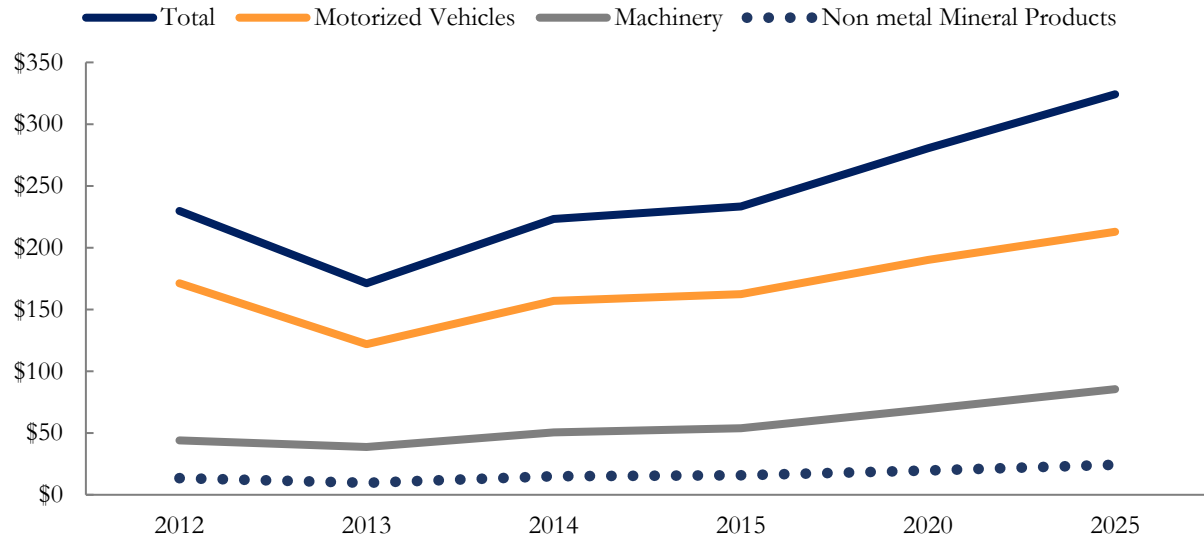
Leading Rail Export Commodities from New Mexico to Eastern Asia (Thousand USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** *Freight Analysis Framework.*

D. Imports and Exports from Eastern Asia by Water through the Seattle Customs Port District connected El Paso and New Mexico by Truck

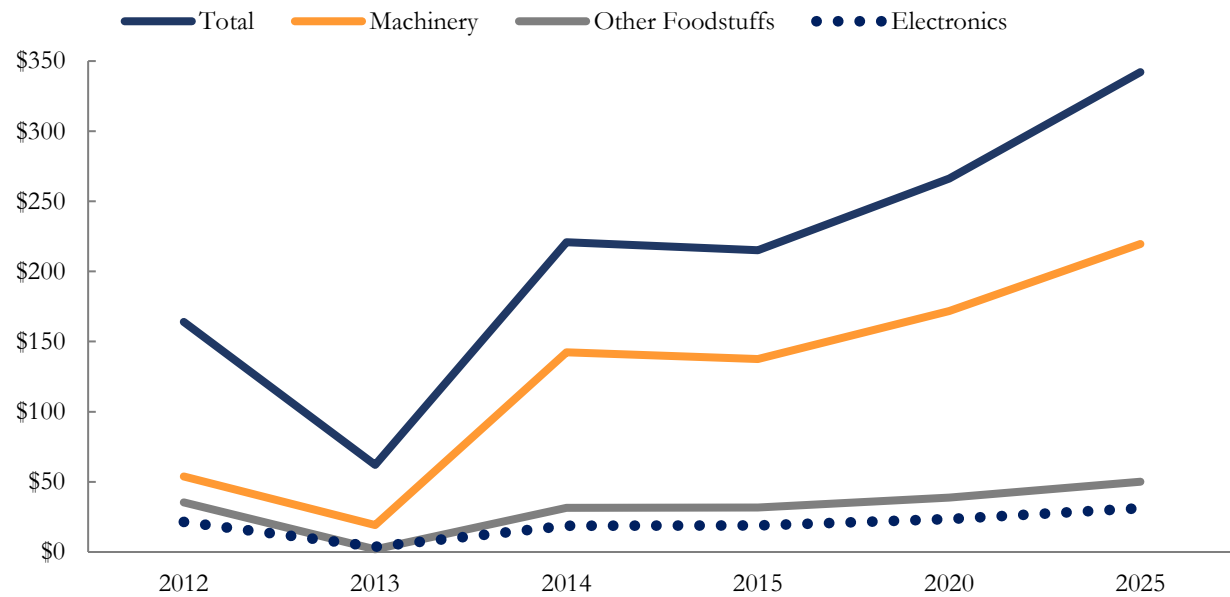
Leading Truck Import Commodities from Eastern Asia to El Paso (Thousand USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

**Source:** Freight Analysis Framework.

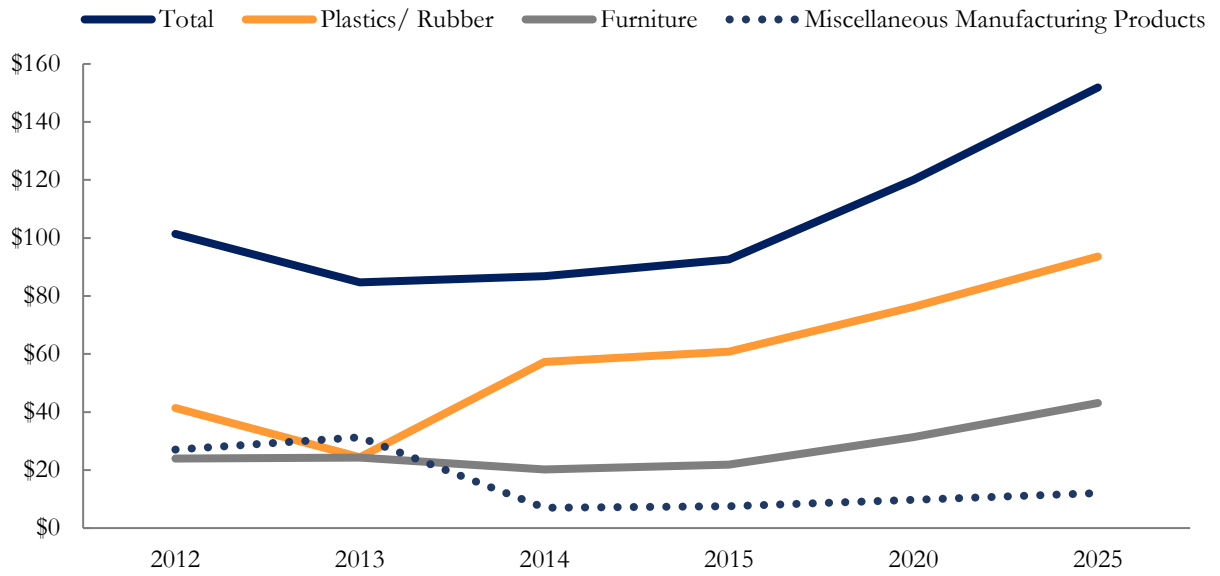
Leading Truck Export Commodities from El Paso to Eastern Asia (Thousand USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

**Source:** Freight Analysis Framework.

Leading Truck Import Commodities from Eastern Asia to New Mexico (Thousand USD)



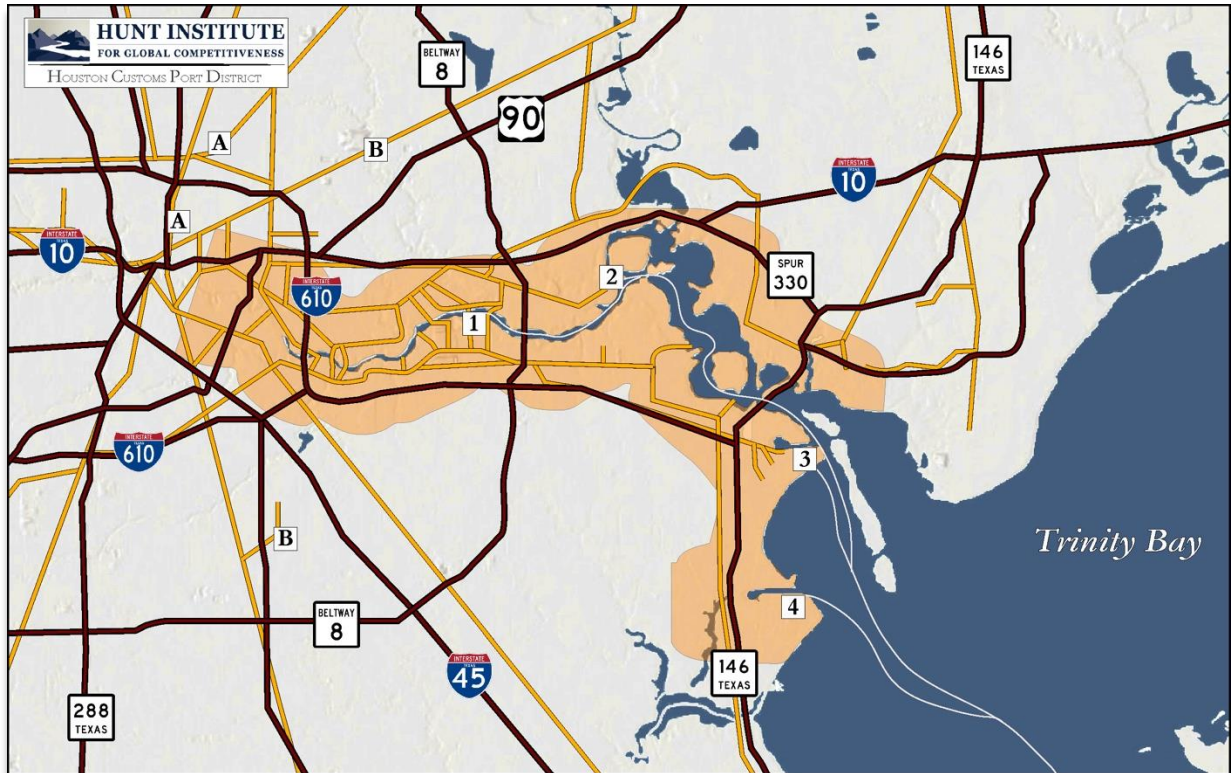
**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

**Source:** *Freight Analysis Framework.*

Leading Truck Export Commodities from New Mexico to Eastern Asia (Thousand USD)

*Data not available*

## VI. Houston - Galveston Customs Port District



The Port of Houston is the primary port in the Houston-Galveston Port District, located in Harris County, Texas, beginning five miles east of Houston and terminating fifty-two miles east, in the Gulf of Mexico. The port handles all types of cargo including containers, dry bulk, liquid bulk, break-bulk, roll-on/roll-off, and refrigerated and project cargo.

The Port of Houston is a cooperative entity consisting of both the governmental Port Authority, which operates the major public terminals along Houston Ship Channel, and the more than 150 privately owned companies. The Port Authority is governed by a seven member Commission. The City of Houston and Harris County jointly appoint the Chair of the Commission. The other six members are appointed by Harris County and the City of Pasadena. These members serve two year terms.

### **Terminal Facilities:**

- The **Port of Houston** is equipped to handle all types of cargo including containers, dry bulk, liquid bulk, break-bulk, roll-on/roll-off, and refrigerated and project cargos. The public Barbours Cut and Bayport container terminals comprise the majority of Gulf Coast container trade. The other public terminals handle bulk, break-bulk, project, and roll-on/roll-off cars.
  - **Houston Port Break Bulk Terminals:**
    1. Southside Warves
    2. Bulk Material Handling
  - **Houston Port Container Terminals:**
    3. Barbours Cut Terminal
    4. Bayport Terminal

### **Freight, Rail, and Interstate Highway Access:**

- The Port of Houston contains two principal intermodal facilities, such as the Union Pacific Settegast Yard and the Union Pacific and BNSF Intermodal Facilities. The Port of Houston terminals at Barbours Cut and Bayport represent the most modern intermodal facilities on the Gulf Coast [See map above].
  - **Port of Houston Intermodal Facilities:**
    - A. Union Pacific Settegast Yard
    - B. Union Pacific and BNSF Intermodal Rail Facilities
- The Port Terminal Railroad Association (PTRA) – provides access to the industries along the Houston Ship Channel for all railroads entering Houston. It is an Association of the Port of Houston Authority of Harris County, Houston Belt & Terminal Railway Co., and three Class I railroads: Union Pacific, BNSF Railway, and Kansas City Southern Railway.
- Major State Highway System Routes: Houston – I-10, I-45, I-610, Beltway 8, Hwy 225, Hwy 146 Galveston – I-45, Hwy 3, and Hwy 146.

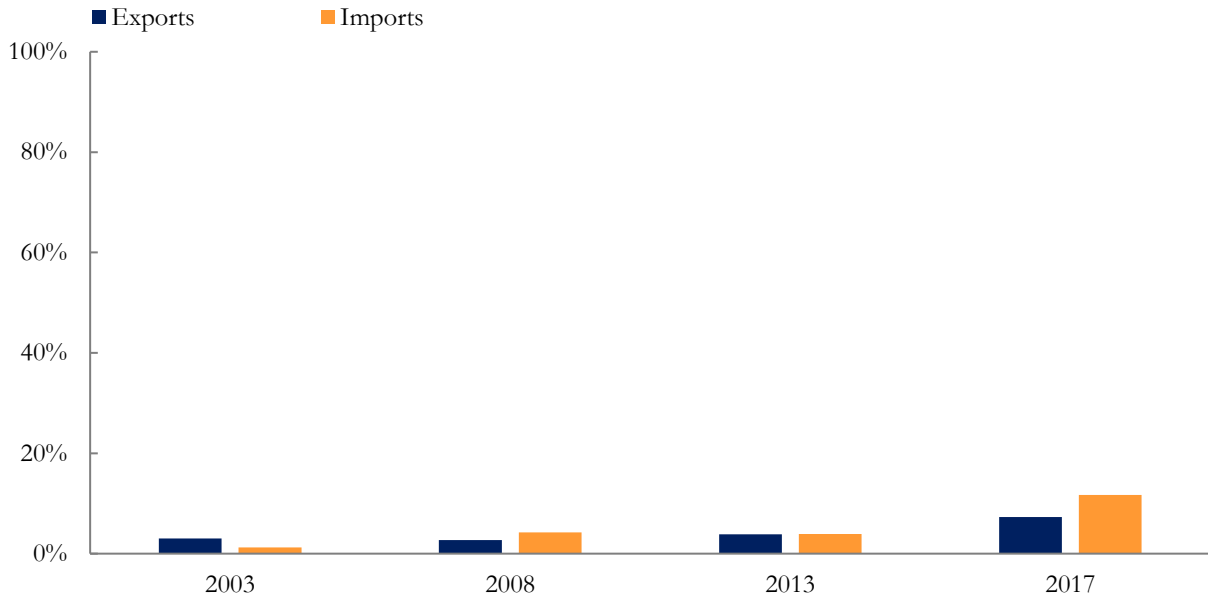
### **Major Trading Partners and Distances to Paso del Norte Hinterland Corridors:**

- China, Mexico, Brazil, and Germany.
- Distance to Asian Ports: 10,100 – 10,900 nautical miles (via Panama Canal).
- Distance to El Paso, Texas: 760 miles.
- Distance to Albuquerque, New Mexico: 895 miles.



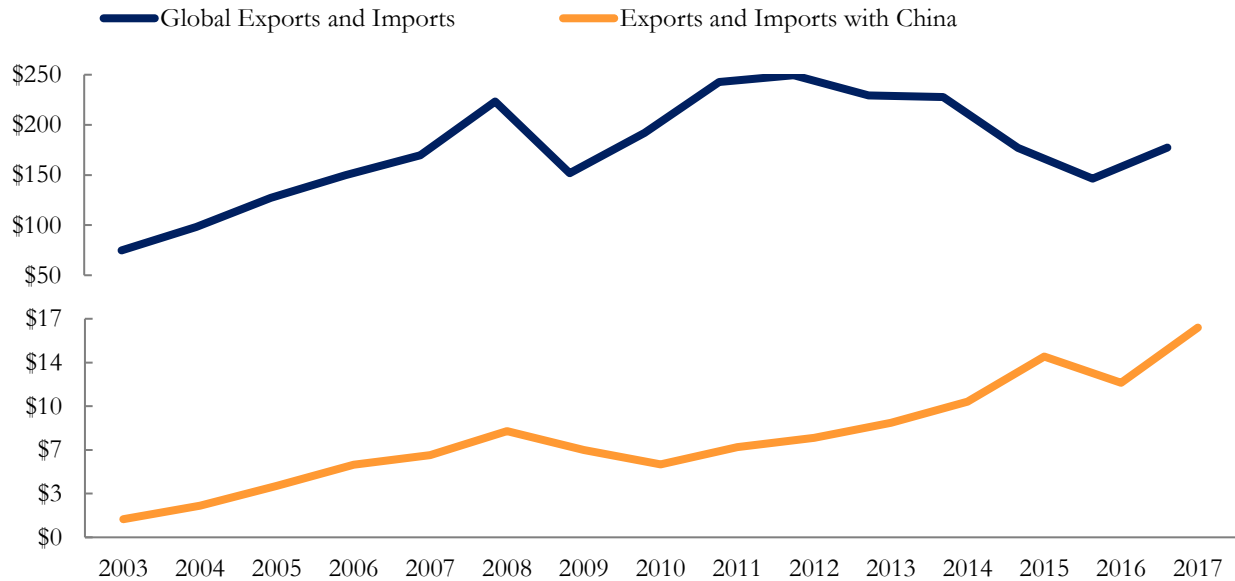
## A. Port Cargo Profile

Houston-Galveston Customs Port District (All Ports):  
Maritime Vessel Exports and Imports with China (Percentage of Total Trade)



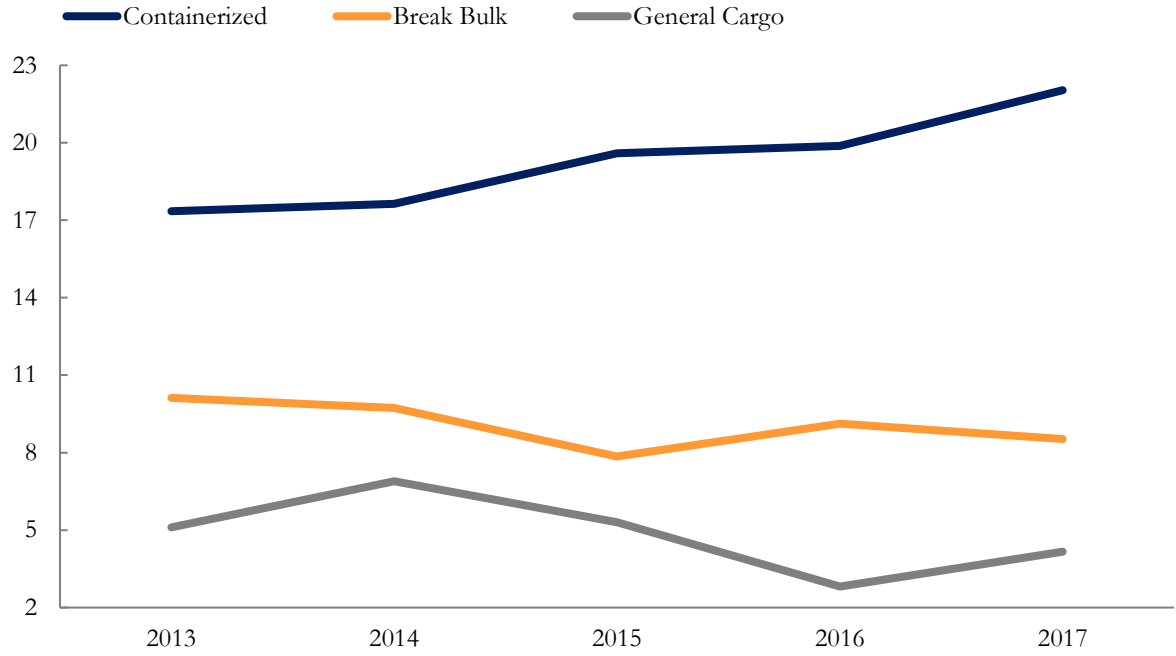
Source: U.S. Census Bureau.

Houston-Galveston Customs Port District (All Ports):  
Maritime Vessel Exports and Imports (Billion USD)



Source: U.S. Census Bureau.

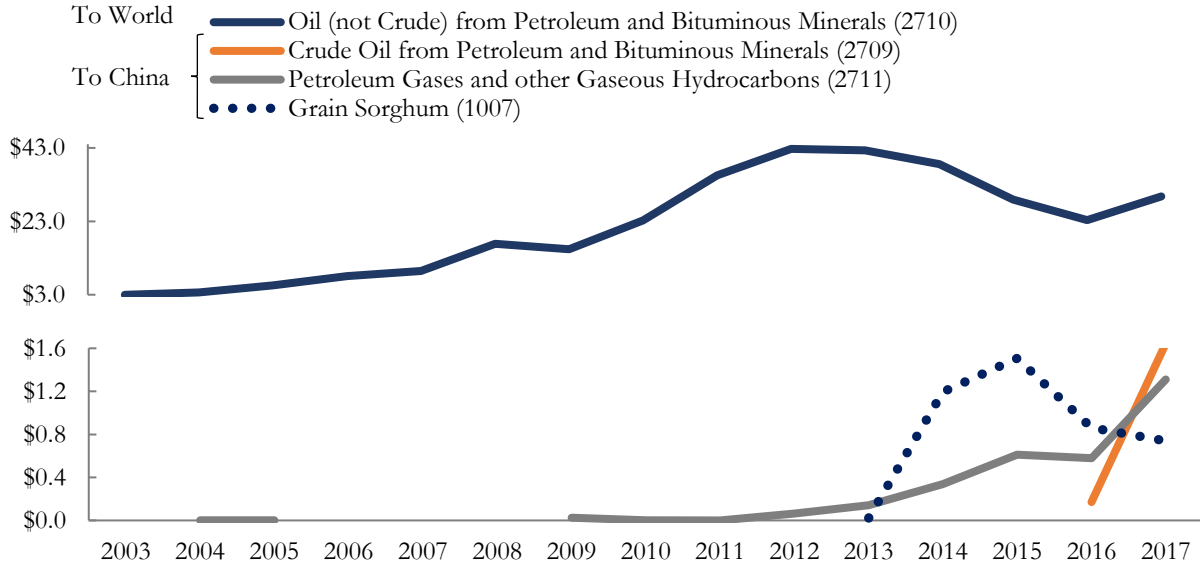
Port of Houston Cargo Breakdown by Type (Million Metric Tons)



Source: Port of Houston.

B. China Exports to and Imports from the Houston - Galveston Port District by Vessel

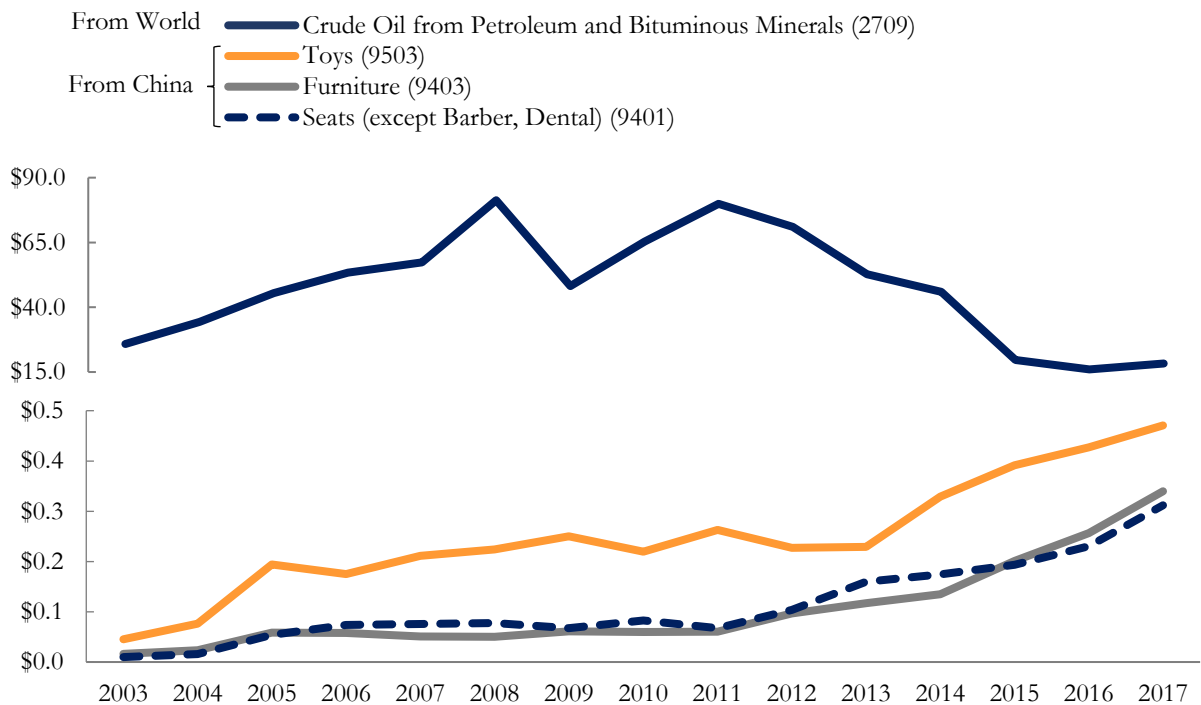
Houston-Galveston Port District: Leading Export Commodities to World and China (Billion USD)



**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

Houston-Galveston Port District: Leading Import Commodities from World and China (Billion USD)

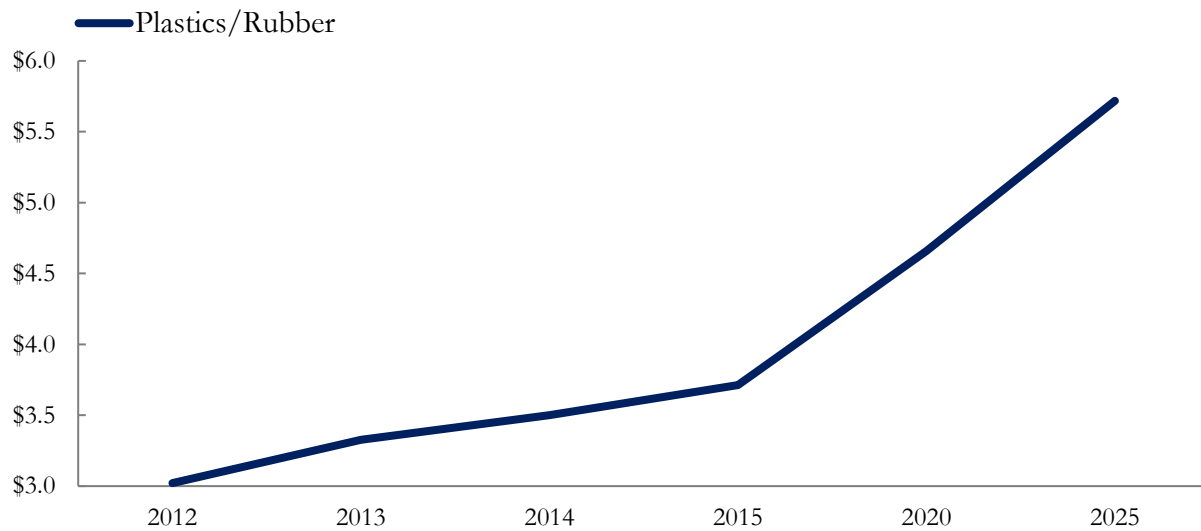


**Note:** Commodity descriptions and codes in parenthesis follow the Harmonized Commodity Description System.

**Source:** U.S. Census Bureau.

C. Imports and Exports from Eastern Asia by Water through the Houston – Galveston Customs Port District connected to El Paso and New Mexico by Rail

Leading Rail Import Commodities from Eastern Asia to El Paso (Thousand USD)



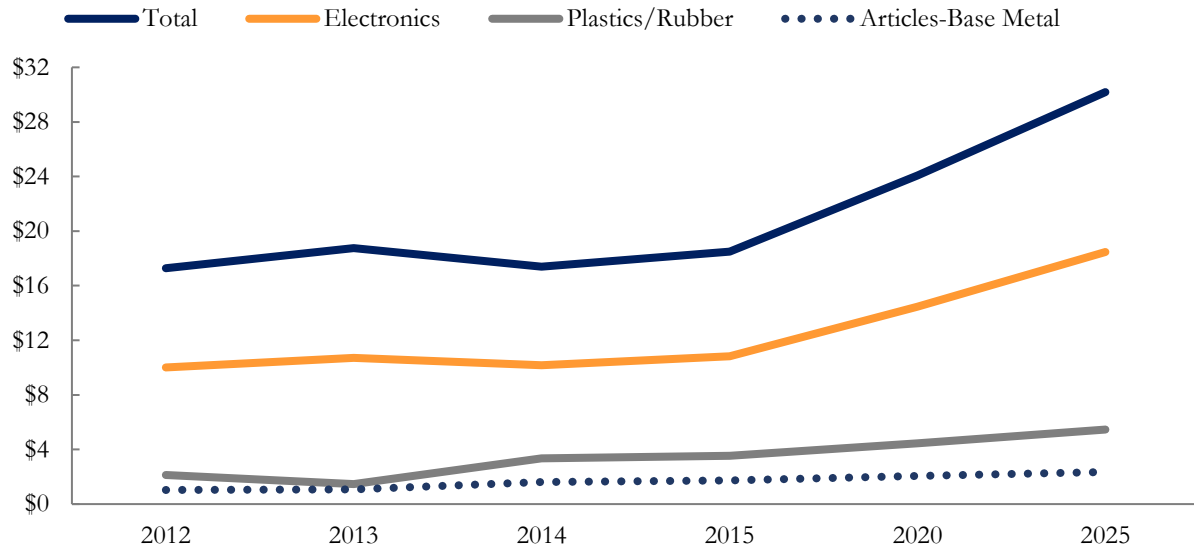
**Note:** Eastern Asia includes China (Mainland China, Hong Kong, Macao, Taiwan) Mongolia, North Korea, and South Korea.

**Source:** *Freight Analysis Framework.*

Leading Rail Export Commodities from El Paso to Eastern Asia (Thousand USD)

*Data not available*

Leading Rail Import Commodities from Eastern Asia to New Mexico (Million USD)

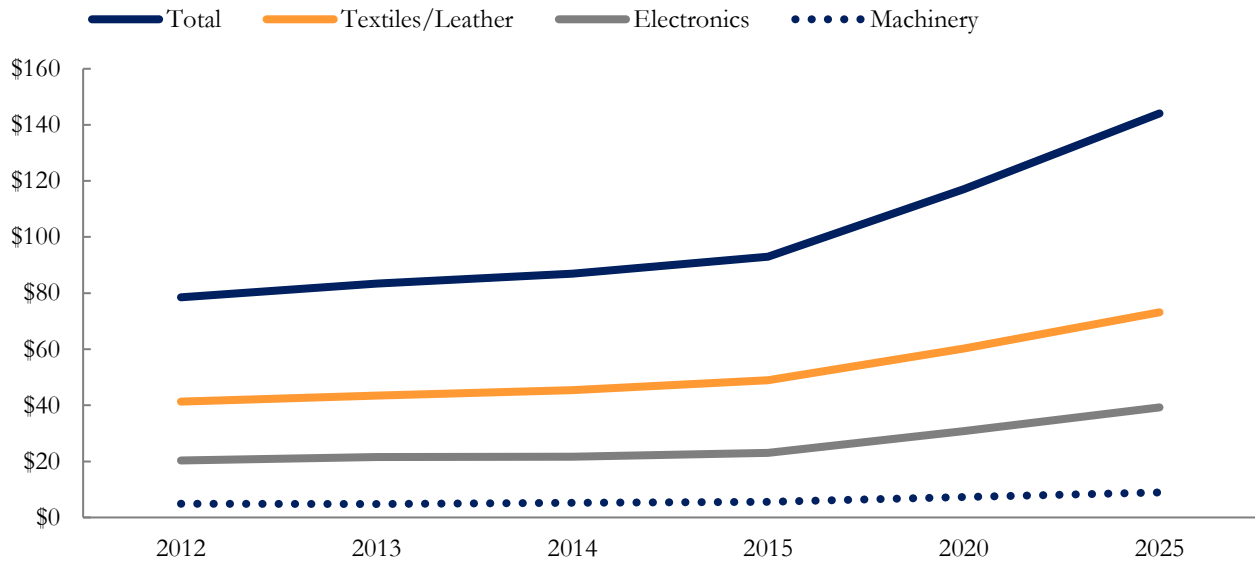


**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** *Freight Analysis Framework.*

Leading Rail Export Commodities from New Mexico to Eastern Asia (Million USD)  
*Data not available*

D. Imports and Exports from Eastern Asia by Water through the Houston – Galveston Customs Port District connected to El Paso and New Mexico by Truck

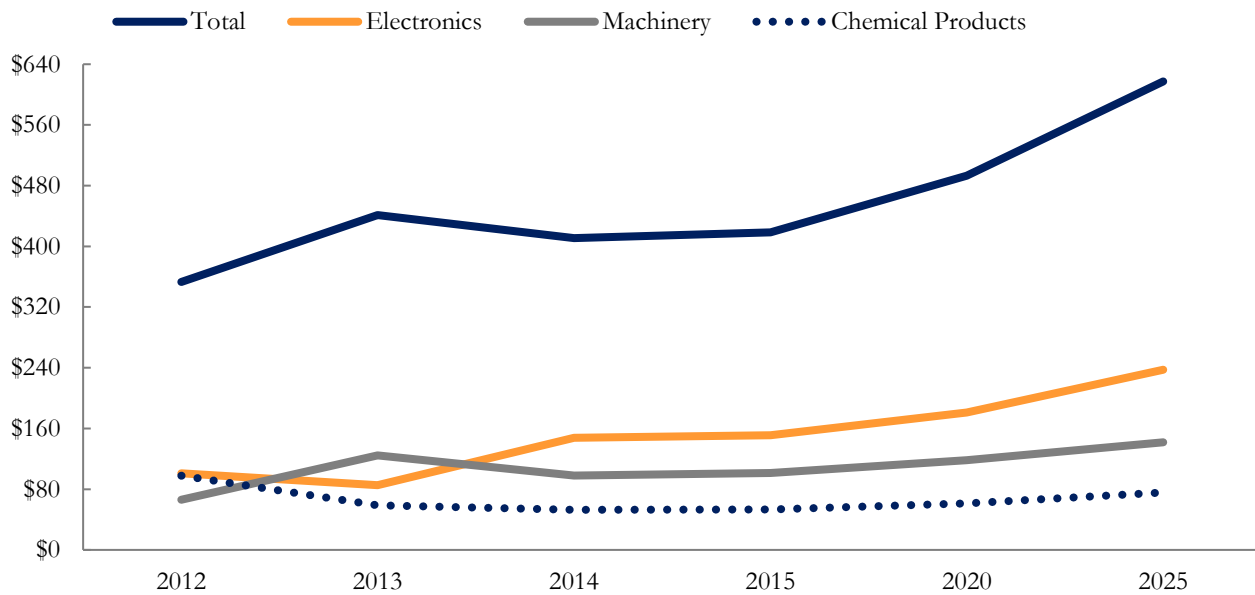
Leading Truck Import Commodities from Eastern Asia to El Paso (Million USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

**Source:** Freight Analysis Framework.

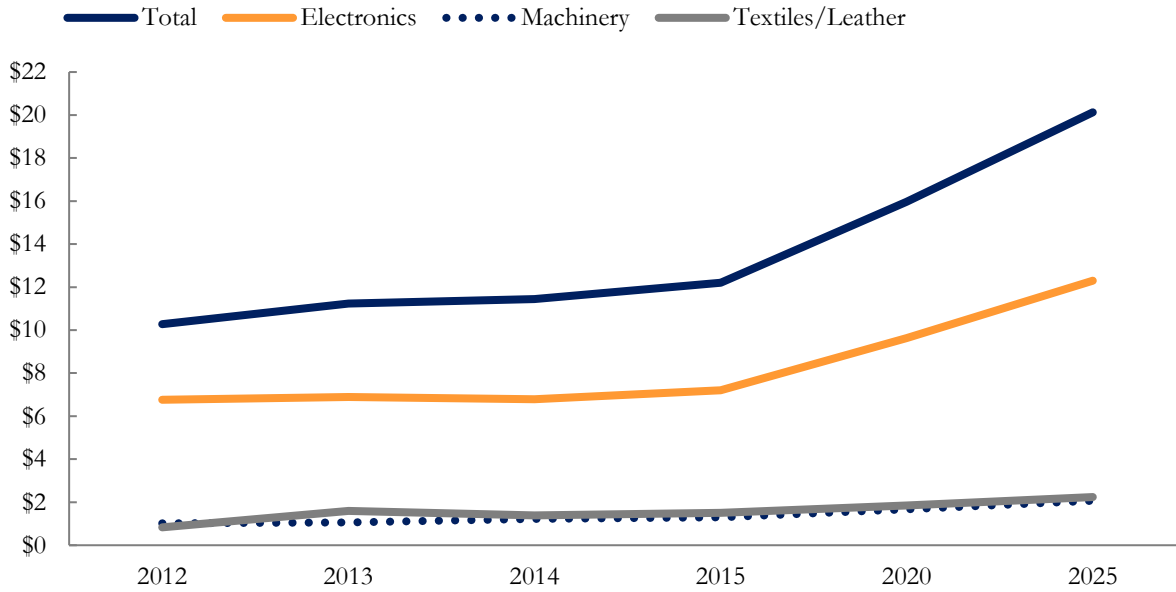
Leading Truck Commodities from El Paso to Eastern Asia (Thousand USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.

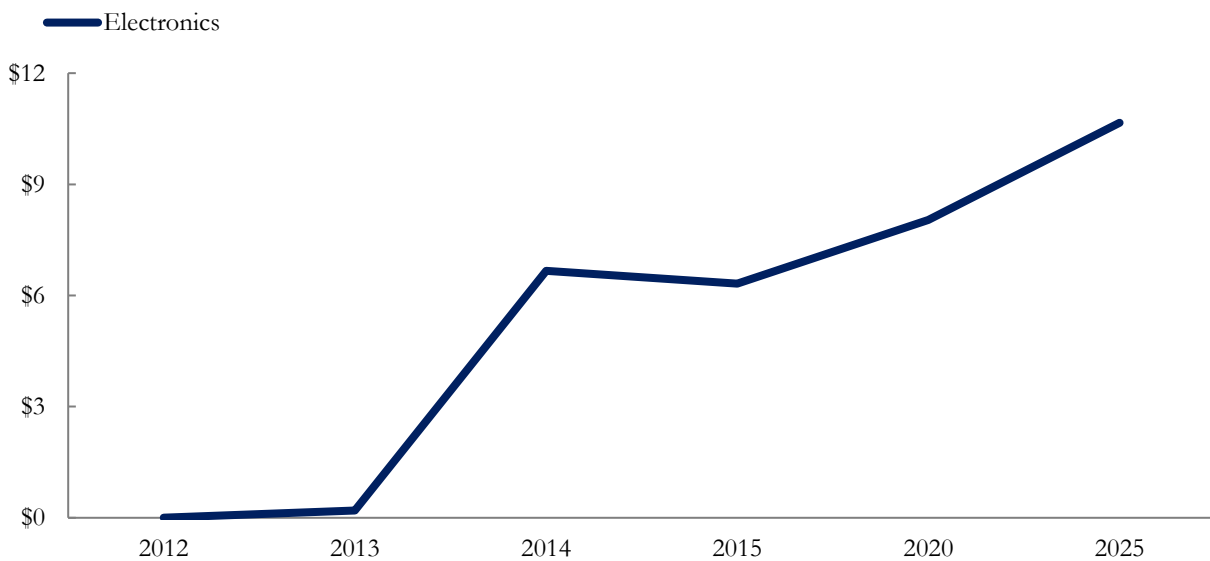
**Source:** Freight Analysis Framework.

Leading Truck Import Commodities from Eastern Asia to New Mexico (Million USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** Freight Analysis Framework.

Leading Truck Export Commodities from New Mexico to Eastern Asia (Thousand USD)



**Note:** Eastern Asia includes China, Hong Kong, Japan, Macao, Mongolia, North Korea, South Korea, and Taiwan.  
**Source:** Freight Analysis Framework.