

Measuring Price Change for Air Freight in the U.S.

Import/Export Price Indexes

The International Price Program at the Bureau of Labor Statistics (BLS) calculates and publishes two types of international air freight price indexes – Import/Export and Inbound/Outbound. The Import and Export Air Freight indexes adhere to the Balance of Payments definitions and are used by the Bureau of Economic Analysis to deflate the Gross Domestic Product and adjust the Balance of Payment Accounts. The Inbound and Outbound Air Freight indexes are directional and measure price trends for the transportation of freight between the United States and foreign countries and can be used for analysis and contract escalation. Air freight data are available on a monthly basis beginning January 2006 and on a quarterly basis from September 1990.

Definitions

Air freight consists of both consolidated shipments and individual packages tendered to an airline for transportation, but does not include mail or passenger baggage. The scope of the air freight service measured is air transportation only; the service being priced is from airport to airport and does not include any ground transportation or port service.

Import and Export Air Freight Price Indexes measure price changes for the international transportation of air freight payments and receipts between U.S. and foreign residents. The Import Air Freight Index measures payments made by U.S. residents to foreign carriers for international air freight transportation from a foreign country to the United States. An example of an import air freight service is when a U.S. resident company pays a foreign carrier to transport widgets from Paris to New York. The Export Air Freight Index measures receipts from foreign residents to U.S. carriers for international air freight transportation from the United States to the foreign country and between foreign countries. An example of an export air freight service is when a foreign resident company pays a U.S. carrier to transport widgets from New York to Paris or, alternatively, from Paris to Rome. For imports and exports, the resident of the final recipient of the freight, located in the country of destination, pays for the service.

Inbound and Outbound Air Freight Price Indexes measure price changes for the international air freight service based on the direction of travel, regardless of the residencies of the buyer and service providers. The Inbound Air Freight Index measures price changes of air freight flown from foreign countries to the United States on any carrier. The Outbound Air Freight Price Index measures price changes of air freight flown from the United States to foreign countries. For example, Inbound Air Freight measures price changes for the air transportation of widgets coming into the United States and Outbound Air Freight measures the price changes for the air transportation of all widgets flown out of the United States, regardless of the nationality of the carriers.

Data Sources and Sampling Information

The BLS uses the U.S. Department of Transportation's (DOT) T-100 International Market file as the sampling source for the Import/Export and Inbound/Outbound indexes. The route-specific data contained in this frame source includes origin and destination airports, air carrier names and nationalities, and the amount of cargo transported. A sample of company-routes representative of international air freight transportation is selected by probability methods from the T-100 file. A company-route is composed of an air carrier transporting freight internationally between a specific origin and destination.

After the company-route is selected for an air freight carrier, BLS approaches air freight carrier representatives to request participation in the survey and assist in the selection of specific items that can be priced each month. Each air freight item includes the air carrier nationality; the air carrier; origin and destination airports; the type of freight rates (e.g. contract, express, market, tariff, etc.); specific characteristics of the shipments; type of commodities; and any applicable commissions, discounts, and surcharges (fuel, security) that are price determining characteristics of the cost of the air freight service.

Pricing and Index Calculation

BLS air freight indexes follow matched model methods that price consistent items each period. Pricing information for air freight items are collected from air freight carriers each month using the International Price Program's Import and Export survey. The survey is conducted via an online web-based pricing application, mail, or an e-mail application. The prices that carriers provide are used in the monthly calculation of indexes.

The Import and Export Price Indexes are calculated using a modified Laspeyres formula and the air freight indexes are aggregated into regional indexes. The revenue weights are derived from a regression analysis based on data from entry documents filed with the U.S. Customs and Border Protection and the DOT's T-100 International Market file. The trade dollar value weights are updated annually with a two-year lag.

Access the Data

The most recent data for this industry can be found on Table 8 of the U.S. Import and Export Price Indexes News Release (<https://www.bls.gov/news.release/pdf/ximpim.pdf>). Historical News Releases can be found at <https://www.bls.gov/bls/news-release/ximpim.htm>. The data are available in a variety of other formats on the BLS website (<http://www.bls.gov/mxp>).

Additional Information

Additional information on the U.S. International Price Index Program can be found at mxpinfo@bls.gov or by telephone at (202) 691-7101.

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