

Variance Estimates for Price Changes in the Import and Export Price Indexes January–December 2019

Each month, the International Price Program (IPP) at the Bureau of Labor Statistics (BLS) collects roughly 21,000 prices for a representative sample of goods traded by approximately 3,500 importers and exporters to and from the United States. The prices represent the market basket of imports and exports. The sample of import and export transaction prices is drawn from the complete universe of all items traded during a calendar year as measured by the Census Bureau. Sampling variability results whenever a sample is used rather than the complete universe.

Variance Results

As of 2019, variance publication is expanded to cover the majority of published import and export price indexes for merchandise trade sampled items. Variances are not calculated for locality of origin, locality of destination, and terms of trade price indexes covering goods, nor for services price indexes. Because services price indexes are largely composed of nonsampled alternative source data, variances for these indexes are not calculated.

The variance results by year measure the absolute median 1-, 3-, and 12-month percent changes for all published import and export indexes along with the median standard error for those estimates. In those cases where an index temporarily does not meet publication criteria, IPP will still publish variance estimates for the index provided the index was published for at least nine months during the year. Tables are broken out by classification system down to the 5-digit level of detail for the Bureau of Economic Analysis (BEA) End-Use Classification System, the 5-digit level of detail for the North American Industrial Classification System (NAICS), and the 4-digit index level of detail for the Harmonized Classification System.

The standard error, the square root of the estimated variance, is a common measure used to derive confidence intervals for percent changes in the import and export price indexes. Confidence intervals can be used to determine if an index change is significantly different from zero.

Take for example the median absolute 1-month percent change of 0.2 percent for All Commodities import prices, as seen in Table 1. The standard error for imports on a 1-month basis was 0.09. So, deriving a confidence interval plus or minus two standard errors from the point estimate, assuming a normal distribution, the true change would most likely be 0.2 percent plus or minus 0.18, or between 0.02 percent and 0.38 percent.

Sources of Error

There are different types of errors introduced when calculating the estimates of average price changes for imports and exports published by the Bureau of Labor Statistics. There are two sources of error: sampling and nonsampling error. Sampling error, reported in the tables of this report, is the error resulting from drawing a *sample* of imported and exported items to and from the United States, rather than using the entire universe of trade.

Nonsampling error can take a number of different forms. One form is misspecification error, which takes place if the universe of data from which the sample is being drawn does not correctly measure the actual population. For import and export prices indexes, this type of error could result if there are mistakes in the trade dollar value statistics measured by the Census Bureau. A second type of nonsampling error is nonresponse error. Each month, a subset of the items sampled by the Bureau of Labor Statistics does not have prices reported. This type of error results if the respondents and nonrespondents do not represent a similar cross section of the total universe. Another form of nonsampling error can be introduced from misreported prices, a possibility regardless of whether deriving the indexes from a sample or from the complete universe of data.

One issue when deriving an estimate from a sample is the potential trade-off between variance and bias. Variance is a measure of how much the estimates derived from numerous samples differ from the true value of the estimate. Bias results if the expected value of the estimate is either higher or lower than the true value of what is being estimated. An estimate could have a high sampling variance and still be unbiased if the expected value of the

estimate is equal to the true value. Likewise, an estimate may have small variation over numerous samples, yet be biased if the expected value of the estimate deviates from the true value.

The Bureau of Labor Statistics strives to minimize both sampling and nonsampling error as much as possible. Sampling error is reduced by maintaining as many prices as possible to support an index given resource and company burden constraints. Nonsampling error is reduced by subjecting the data to careful review using automated checks and a staff of professional economists, as well as by employing methods to estimate missing observations.

Sampling in the International Price Program

Trade into and out of the United States is highly regulated and therefore highly documented. This allows the IPP to sample from a fairly complete and detailed frame. U.S. Customs and Border Protection provides the sampling frame for import merchandise, while the export merchandise frame is created from a combination of data collected by the Canada Border Services Agency, for exports to Canada, and from the Census Bureau for exports to the rest of the world.

The import and export merchandise universes are divided into two panels each, with each product-based panel representing approximately half of the trade dollar value for its respective universe. One import and one export panel are sampled each year, resulting in a fully sampled universe every 2 years. Each panel is sampled using a 3-stage sample design. The first stage independently selects establishments within product-based sampling strata using systematic probability proportional to size, where the measure of size is the total trade dollar value for establishments within the sampling stratum. The second stage selects more highly detailed product categories, known as classification groups, within each establishment–stratum combination selected during the first stage using the technique of systematic probability proportional to size with replacement. The final stage of sampling, which results in a unique item to price, occurs in the field and is a random selection technique with the probability of selection proportionate to field-collected trade estimates.

Index Calculations

IPP calculates its indexes using a modified Laspeyres formula. Rather than calculate indexes relative to a base period, the IPP indexes are calculated relative to the previous period and are theoretically chained to the reweight period. For this reason, IPP's indexes can be considered chained Laspeyres indexes. Explicitly, the index formula for the modified chained Laspeyres is derived from the classic formula as follows:

$$LTR_t = \left(\frac{\sum_i p_{i,t} q_{i,0}}{\sum_i p_{i,0} q_{i,0}} \right) (100) = \left(\frac{\sum_i \frac{p_{i,t}}{p_{i,0}} p_{i,0} q_{i,0}}{\sum_i p_{i,0} q_{i,0}} \right) (100) = \left(\frac{\sum_i r_{i,t} w_{i,0}}{\sum_i w_{i,0}} \right) (100) = \left(\frac{\sum_i r_{i,t} w_{i,0}}{\sum_i r_{i,t-1} w_{i,0}} \right) \left(\frac{\sum_i r_{i,t-1} w_{i,0}}{\sum_i w_{i,0}} \right) (100) =$$

$$\left(\frac{\sum_i r_{i,t} w_{i,0}}{\sum_i r_{i,t-1} w_{i,0}} \right) (LTR_{t-1}) = (STR_t) (LTR_{t-1}),$$

where

LTR_t = the long term relative of a collection of items at time t ;

$p_{i,t}$ = price of item i at time t ;

$q_{i,0}$ = quantity of item i in base period 0;

$w_{i,0}$ = $p_{i,0} q_{i,0}$, or the total revenue generated by item i in base period 0;

$r_{i,t}$ = $p_{i,t}/p_{i,0}$, or the long term relative of item i in period t ; and

$STR_t = \frac{\sum_i r_{i,t} w_{i,0}}{\sum_i r_{i,t-1} w_{i,0}}$, or the short term relative of a collection of items at time t .

Depending on the level of aggregation, the weights used during index aggregation are either trade dollar-based or probability-based. At the lowest level of aggregation, items are weighted by probability-based weights calculated monthly corresponding to detailed categories within establishments.

These weighted-item price relatives are combined across establishments and aggregated to the lowest level stratum indexes as

$$P_{h,t} = \frac{\sum_k \sum_j \sum_i w_{k,t} w_{j,t} w_{i,t} \left(\frac{p_{i,t}}{p_{i,0}} \right)}{\sum_k \sum_j \sum_i w_{k,t} w_{j,t} w_{i,t}},$$

where

$P_{h,t}$ = the price index for lowest level stratum h , at time t ;

$w_{k,t}$ = the weight of detailed product category k , within stratum h ;

$w_{j,t}$ = the weight of establishment j , within detailed product category k ;

$w_{i,t}$ = the weight of item i , within establishment j and detailed product category k ; and

$\frac{p_{i,t}}{p_{i,0}}$ = the price relative of item i , from period t , to base period 0.

The weights used for these lowest level stratum indexes are derived from sampling frame trade dollar values, divided by the corresponding probabilities of selection determined by the sample design.

At the next level of aggregation, child strata-level indexes are aggregated to their corresponding parent stratum-level indexes. A child stratum index is simply one level of aggregation less than its parent stratum index. The weights used for this aggregation are based on Census Bureau trade dollar values for the base period.

The aggregation formula for these upper index levels is

$$P_{H,t} = \frac{\sum_h w_{h,t} P_{h,t}}{\sum_h w_{h,t}},$$

where

$P_{H,t}$ = the price index at period t , for upper level index H ;

$w_{h,t}$ = the weight at period t , for child index h ; and

$P_{h,t}$ = the price index at period t , for child index h .

Replication and Variance Estimation

A modified bootstrap method, applying rescaled sampling weights, is used to produce 150 replicate index set estimates from 150 simulated item set samples. Item set replicates are constructed according to IPP's 3-stage sample design. At both of the first two stages of sampling, it is possible for a selection to be either a certainty selection (i.e. the probability of selection is greater than the iteratively calculated sampling interval) or a probability selection. The replicate resampling method takes this into consideration by first partitioning the selected items within each sampling stratum m into those items that resulted from certainty establishment selections and those items resulting from probability establishment selections. The item set resulting from establishment certainty selections is further partitioned into two item sets: sampling classification group certainty selections and sampling classification group probability selections. Thus, the set of all sampled items S is the union of these three partitions over all sampling strata m ;

$$S = \bigcup_{m=1}^N S_m = \bigcup_{m=1}^N \left(\bigcup_{p=1}^3 S_{m,p} \right)$$

where N is the number of sampling strata, $p \in \{1,2,3\}$, with $p = 1$ for items selected from probability establishments, $p = 2$ for items selected from probability sampling classification groups within certainty establishments, and $p = 3$ for items selected from certainty sampling classification groups within certainty establishments.

Each bootstrap sampling, b , selects $n_{m_p}^b$ units within each partition of each sampling stratum as follows:

$$n_{m_p}^b = \begin{cases} n_{m_p} - 1 & n_{m_p} > 1 \\ 1 & n_{m_p} = 1 \end{cases},$$

where $n_{m_p}^b$ is the number of units originally sampled in partition p of sampling stratum m .

Bootstrap item weights are then calculated as

$$w_{m_p,j,i}^b = \begin{cases} w_{m_p,j,i} \left(\frac{n_{m_p}^b + 1}{n_{m_p}^b} \right) d_{m_p,j}^b & \text{for } n_{m_p} > 1 \\ w_{m_p,j,i} & \text{for } n_{m_p} = 1 \end{cases}$$

where

$w_{m_p,j,i}^b$ = the b^{th} replicate item weight for item i , within establishment j and sampling stratum partition m_p ;

$w_{m_p,j,i}$ = the standard item weight for item i , within establishment j and sampling stratum partition m_p ; and

$d_{m_p,j}^b$ = the number of times establishment j , within partition p of sampling stratum m , is selected in bootstrap sample b .

In the rare instances that $n_{m_p} = 1$, a simple random sample of items within that establishment is selected. If only one item exists under this establishment singleton, that item is chosen with certainty.

For each of the 150 bootstrap samples, chained indexes of the desired length are calculated at all levels of aggregation using these modified item weights, original probabilities of selection, trade dollar values, and collected price data. For variance estimates, the variance is calculated across replicate percent change values for all published indexes as $v_B = \frac{1}{150} \sum_{b=1}^{150} (\hat{\theta}_b - \hat{\theta})^2$ where $\hat{\theta}$ is the full sample estimate.

Table Contents

Tables 1 through 6 below present the absolute median percent change over the year for a given published index within the product and industry classifications used to publish official import and export price indexes, as well as the standard error of that estimate. Tables 1 and 2 present the BEA End-Use Classification System product categories, Tables 3 and 4 present the NAICS industry categories, and Tables 5 and 6 present the Harmonized Classification System product categories. The first column displays a text description of the category. The second column displays the code used to query the BLS database (<https://data.bls.gov/PDQWeb/ei>). The subsequent columns record the absolute median percent change and standard error of the 1-month, 3-month, and 12-month price changes.

Table 1. Variances for U.S. import price indexes for categories of goods: January 2019–December 2019

Description	End Use	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
All commodities	R	0.2	0.09	0.9	0.15	1.3	0.29
Foods, feeds, & beverages	R0	0.5	1.00	1.6	1.36	1.6	1.14
Agricultural foods, feeds & beverages, excluding distilled beverages	R00	0.8	1.28	2.0	1.76	2.3	1.42
Green coffee, cocoa beans, sugar	R000	1.7	1.15	2.0	1.51	3.3	1.66
Green coffee (Dec. 2007=100)	R00000	2.8	1.74	3.6	2.45	6.5	2.09
Other agricultural foods	R001	0.8	1.45	2.5	2.03	2.6	1.67
Meat, poultry & other edible animal products	R00100	1.6	0.68	3.1	1.21	5.2	1.43
Fruit and fruit preparations including frozen juices	R00120	6.9	3.74	8.7	6.06	8.7	5.23
Vegetables and vegetable preparations	R00130	4.1	5.28	3.1	6.51	12.9	8.79
Food oils & oilseeds (Dec. 2007=100)	R00150	1.1	0.86	2.3	1.66	14.3	2.48
Bakery & confectionery products	R00160	0.2	0.25	0.5	0.50	1.7	1.33
Other animal & vegetable preparations & products (Dec. 2015=100)	R00180	0.1	0.08	0.2	0.22	0.2	0.52
Wine, beer, & related products	R00190	0.3	0.17	0.8	0.64	2.1	1.01
Feedstuff and foodgrains (Dec. 2013=100)	R002	1.4	0.85	1.2	1.17	1.5	1.75
Nonagricultural foods (fish, distilled beverages)	R01	0.2	0.26	1.1	0.44	0.8	0.82
Fish & shellfish	R01000	0.3	0.36	1.0	0.54	1.6	0.81
Distilled alcoholic beverages	R01010	0.1	0.11	0.4	0.50	2.1	1.23
Industrial supplies & materials	R1	1.0	0.26	2.5	0.36	5.2	0.58
Fuels & lubricants	R10	2.9	0.55	4.6	0.83	7.8	1.00
Petroleum & petroleum products	R100	4.1	0.45	4.8	0.73	7.5	0.74
Crude ⁽¹⁾	R10000	4.3	0.00	6.5	0.00	9.4	0.00
Fuel oil	R10010	2.6	1.63	3.8	3.16	3.3	3.61
Other petroleum products	R10020	4.7	1.97	5.2	3.63	4.7	4.29
Fuels, n.e.s.-coals & gas	R101	14.3	5.86	22.1	5.44	13.7	6.40
Gas-natural	R10110	18.2	7.50	26.7	7.63	13.7	8.74
Paper & paper base stocks	R11	0.6	0.63	3.3	1.08	6.8	2.23
Newsprint & other paper products	R111	0.4	0.33	1.0	1.18	2.9	2.35
Coated and uncoated paper/paperboard	R11110	0.4	0.38	0.9	1.33	3.4	2.10
Materials associated with nondurable supplies & materials	R12	0.3	0.32	1.6	0.49	3.5	0.91
Agricultural products used for industrial supplies and materials	R120	0.5	0.46	1.1	0.66	3.6	1.54
Other agricultural products (tobacco, waxes, nonfood oils)	R12070	0.7	0.54	1.3	0.79	5.1	1.86

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Description	End Use	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Textile supplies & related materials	R121	1.1	0.66	0.7	0.80	2.8	1.38
Synthetic cloth, fabric, and thread	R12135	2.4	1.60	1.3	1.91	6.1	3.53
Finished textile industrial supplies (Dec. 2011=100)	R12150	0.3	0.19	0.6	0.47	0.6	0.75
Chemicals, excluding medicinals	R125	0.6	0.37	1.7	0.63	3.9	1.10
Plastic materials	R12500	0.9	0.61	1.6	1.38	5.5	3.62
Fertilizers, pesticides & insecticides (Dec. 2007=100)	R12510	2.0	1.00	3.4	1.87	7.0	3.62
Industrial inorganic chemicals (Dec. 2016=100)	R12530	1.1	0.52	2.8	1.71	5.9	3.87
Industrial organic chemicals (Dec. 2012=100)	R12540	0.6	0.51	1.3	0.94	5.7	2.50
Other chemicals (coloring agents)	R12550	0.1	0.15	0.5	0.69	0.5	2.24
Selected building materials	R13	0.7	0.37	0.6	0.58	7.3	1.10
Lumber and other unfinished building materials	R130	1.5	0.68	1.5	0.94	10.2	0.98
Lumber & wood in the rough	R13000	3.7	1.44	4.0	1.87	15.7	1.81
Building materials, finished	R131	0.6	0.21	1.0	0.40	2.7	2.13
Nontextile floor & wall coverings; mach. parts of china (Dec. 2007=100)	R13120	0.0	0.02	0.2	0.10	2.6	3.06
Unfinished metals related to durable goods	R14	1.1	0.18	1.2	0.28	1.8	0.50
Steelmaking & ferroalloying matls	R140	2.2	0.61	3.2	0.66	8.1	1.12
Iron & steel mill products	R141	1.8	0.43	3.4	0.77	6.5	1.19
Major nonferrous metals-crude	R142	1.2	0.08	3.2	0.18	5.2	0.38
Bauxite, alumina, aluminum, and products thereof ⁽²⁾	R14200	1.6	0.14	2.9	0.24	10.7	1.02
Copper (Dec. 2017=100) ⁽²⁾	R14220	3.0	0.03	4.8	0.04	6.9	0.07
Nickel (Dec. 2007=100) ⁽²⁾	R14240	5.0	0.00	15.6	0.00	16.5	0.06
Tin (Dec. 2010=100) ⁽¹⁾	R14250	2.7	0.00	10.3	0.00	7.8	0.00
Zinc (Dec. 2008=100) ⁽¹⁾	R14260	7.1	0.00	6.7	0.00	12.1	0.00
Nonmonetary gold ⁽²⁾	R14270	2.4	0.03	5.3	0.06	7.5	0.07
Other precious metals ⁽²⁾	R14280	2.5	0.35	7.9	0.80	15.4	2.66
Finished metals related to durable goods	R15	0.4	0.24	0.6	0.42	1.8	0.77
Iron & steel products, except advanced manufacturing	R150	0.5	0.53	2.2	1.07	7.4	2.05
Iron & steel advanced manufacturing	R151	0.4	0.14	1.0	0.49	4.0	1.60
Finished metals shapes and advanced manufacturing	R152	0.6	0.42	0.7	0.68	1.3	1.29
Nonmetals related to durable goods	R16	0.1	0.24	0.3	0.40	0.8	0.84
Finished nonmetals (boxes, belting, glass, etc.)	R161	0.1	0.24	0.4	0.41	0.9	0.83

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Description	End Use	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Other finished nonmetals (boxes, belting, glass, etc.)	R16120	0.1	0.24	0.4	0.42	1.0	0.85
Capital goods	R2	0.2	0.08	0.5	0.16	1.3	0.22
Electric generating equipment	R20	0.1	0.20	0.5	0.49	1.2	0.71
Generators, transformers & access	R20000	0.2	0.51	1.1	0.80	3.4	1.83
Electric apparatus & parts, n.e.s.	R20005	0.1	0.08	0.2	0.39	0.4	0.56
Nonelectrical machinery	R21	0.2	0.10	0.7	0.18	1.9	0.30
Oil drilling, mining, and construction machinery and equipment	R210	0.7	0.45	2.4	1.00	2.3	1.54
Excavating, paving & construction machinery	R21030	0.1	0.20	0.8	0.54	0.7	1.62
Industrial and service machinery	R211	0.1	0.05	0.2	0.16	0.3	0.34
Industrial engines, pumps, & compressors	R21100	0.1	0.14	0.4	0.41	1.0	0.82
Metal working machine tools and rolling mills	R21120	0.0	0.09	0.2	0.20	0.3	0.40
Measuring, testing & control instruments	R21160	0.0	0.08	0.1	0.16	0.2	0.75
Materials handling equipment	R21170	0.1	0.06	0.7	0.30	1.9	0.56
Other industrial machines	R21180	0.1	0.07	0.2	0.18	1.3	0.49
Photo & other service industry machinery	R21190	0.2	0.14	0.8	0.90	1.7	1.40
Computers, peripherals and semiconductors	R213	0.6	0.21	1.8	0.35	5.3	0.57
Computers	R21300	0.6	0.47	1.5	0.80	5.1	1.25
Computer accessories, peripherals, and parts	R21301	0.6	0.24	2.3	0.46	5.9	0.93
Semiconductors	R21320	0.4	0.23	1.9	0.60	4.7	1.10
Telecommunications equipment	R214	0.1	0.09	0.1	0.14	0.4	0.32
Business machinery and equipment, except computers	R215	0.0	0.13	0.2	0.44	0.6	2.29
Scientific and medical machinery	R216	0.1	0.17	0.1	0.42	0.4	0.75
Laboratory testing and control instruments (Dec. 2016=100)	R21600	0.1	0.13	0.4	0.43	2.2	0.96
Other scientific, medical, and hospital equipment	R21610	0.1	0.19	0.1	0.35	0.4	0.80
Transportation equipment excluding motor vehicles (Dec. 2001=100)	R22	0.1	0.12	0.7	0.33	0.9	0.55
Civilian aircraft, complete (Dec. 2018=100)	R22000	0.0	0.02	0.6	0.07	3.1	0.84
Parts for civilian aircraft (Dec. 2012=100)	R22010	0.0	0.09	0.2	0.16	0.2	0.61
Engines for civilian aircraft	R22020	0.3	0.26	2.1	0.61	4.1	1.36
Automotive vehicles, parts & engines	R3	0.1	0.05	0.2	0.13	0.6	0.41
Passenger cars, new and used	R300	0.0	0.04	0.3	0.20	1.0	0.49
Vehicles designed to transport goods (Dec. 2013=100)	R301	0.1	0.06	0.9	0.27	0.4	1.93

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Description	End Use	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Parts, engines, bodies and chassis	R302	0.1	0.08	0.2	0.17	0.5	0.40
Engines and engine parts for automotive vehicles (Dec. 2004=100)	R30200	0.3	0.24	0.4	0.66	0.6	2.10
Automotive tires & tubes (Dec. 2004=100)	R30220	0.1	0.09	0.9	0.36	1.4	0.58
Non-engine parts & accessories (Dec. 2003=100)	R30230	0.1	0.09	0.1	0.16	0.3	0.55
Consumer goods, excluding automotives	R4	0.1	0.07	0.2	0.14	0.5	0.37
Nondurables, manufactured	R40	0.1	0.09	0.1	0.27	0.4	0.60
Apparel, footwear, and household goods	R400	0.1	0.08	0.1	0.19	0.3	0.32
Cotton apparel and household goods	R40000	0.1	0.11	0.3	0.23	0.5	0.45
Apparel and household goods for other textiles	R40020	0.1	0.13	0.1	0.34	0.5	0.69
Nontextile apparel and household goods	R40030	0.5	0.30	0.8	0.49	1.4	0.93
Footwear of leather, rubber, or other materials	R40040	0.1	0.17	0.5	0.38	0.3	0.58
Sporting/camping apparel and footwear	R40050	0.2	0.17	0.6	0.49	1.2	0.99
Other consumer nondurables	R401	0.1	0.13	0.4	0.58	0.8	1.28
Medicinal, dental and pharmaceutical preparatory materials	R40100	0.2	0.14	0.5	0.76	1.0	1.42
Toiletries and cosmetics (Dec. 2017=100)	R40120	0.3	0.12	0.8	0.35	2.8	0.73
Other products (notions, writing supplies, tobacco products, etc)	R40140	0.2	0.17	0.4	0.37	0.5	4.13
Durables, manufactured	R41	0.1	0.09	0.4	0.16	1.5	0.31
Household goods	R410	0.2	0.07	0.5	0.21	2.0	0.46
Furniture, household items	R41000	0.2	0.14	0.6	0.20	1.0	0.45
Glassware and ceramics (Dec. 2007=100)	R41010	0.1	0.12	0.2	0.39	0.7	1.39
Cookware, chinaware, cutlery for the house and garden	R41020	0.2	0.18	0.4	0.37	0.3	0.63
Household and kitchen appliances	R41030	0.4	0.17	0.6	0.42	0.9	0.85
Other Household Goods, nes	R41050	0.1	0.06	0.6	0.28	3.5	0.71
Recreational equipment and materials	R411	0.1	0.10	0.4	0.23	0.7	0.33
Motorcycles & parts (Dec. 2001=100)	R41100	0.2	0.23	1.2	1.02	0.9	1.42
Toys, shooting & sporting goods	R41120	0.2	0.12	0.4	0.27	0.9	0.48
Photo & optical equipment (Dec. 2011=100)	R41130	0.0	0.00	0.1	0.12	0.5	0.58
Musical instruments and parts (Dec. 2010=100)	R41140	0.1	0.11	0.4	0.66	0.5	0.63
Home entertainment equipment	R412	0.2	0.15	0.7	0.32	3.4	1.24
Television and video receivers	R41200	0.3	0.20	1.0	0.41	4.8	1.12
Radios, phonographs, and tape decks (Dec. 2012=100)	R41210	0.0	0.03	0.2	0.13	3.5	3.94

Table 1. Variances for U.S. import price indexes for categories of goods: January 2019–December 2019

Description	End Use	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Coins, gems, jewelry, and collectibles	R413	0.4	0.33	1.3	0.70	3.9	0.78
Jewelry (watches, rings, etc)	R41310	0.5	0.41	1.2	0.83	4.8	0.96
Nonmanufactured consumer goods	R42	0.1	0.13	0.3	0.29	1.1	1.31
Nonmanufactured consumer durables	R421	0.0	0.00	0.4	0.06	0.4	0.26
Gem diamonds-uncut or unset (Dec. 2007=100) ⁽¹⁾	R42100	0.0	0.00	0.5	0.00	0.7	0.00

Footnotes

(1) Index calculated using strictly alternative price data from one or more secondary sources. Indexes calculated using this method will have standard error values of zero.

(2) Index calculated using a mix of directly collected price data and alternative price data from one or more secondary sources. Indexes calculated using this method will have low standard error values.

Table 2. Variances for U.S. export price indexes for categories of goods: January 2019–December 2019

Description	End Use	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
All commodities	Q	0.3	0.08	0.8	0.12	0.9	0.26
Agricultural commodities	QAG	1.5	0.28	1.7	0.43	2.0	0.56
Nonagricultural commodities	QEXAG	0.3	0.08	0.8	0.13	1.2	0.25
Foods, feeds, & beverages	Q0	1.6	0.28	1.9	0.44	1.8	0.63
Agricultural foods, feeds & beverages, excluding distilled beverages	Q00	1.7	0.28	2.1	0.47	1.9	0.65
Wheat and rice	Q000	3.0	0.04	3.6	0.09	6.1	0.17
Wheat ⁽¹⁾	Q00000	4.1	0.00	3.9	0.00	6.0	0.00
Soybeans & other oil seeds	Q001	2.2	0.13	2.8	0.15	6.9	0.77
Soybeans and soybean by-products, prior to the extraction of oil ⁽²⁾	Q00100	2.6	0.11	3.0	0.11	7.5	0.14
Feedstuff	Q002	1.9	0.45	4.1	0.81	2.8	1.00
Corn ⁽²⁾	Q00200	2.2	0.12	5.9	0.24	4.3	0.29
Other feedgrains (Dec. 2010=100) ⁽¹⁾	Q00210	2.0	0.00	4.6	0.00	7.6	0.00
Other animal feeds, n.e.s.	Q00220	1.6	1.00	1.4	1.86	1.1	2.35
Other agricultural foods	Q003	1.1	0.46	1.6	0.81	3.7	1.06
Meat, poultry & other edible animal products (Dec. 2006=100)	Q00300	0.7	0.64	2.1	1.04	2.7	1.19
Dairy products & eggs (Dec. 2017=100)	Q00310	1.1	0.82	2.4	1.23	12.6	2.01
Fruit and fruit preparations, including fruit juices	Q00320	3.0	1.43	1.9	3.11	3.1	3.28
Vegetables and vegetable preparations and juices (Dec. 2018=100)	Q00330	7.3	3.62	10.0	5.74	16.9	7.42
Nuts & preparations (Dec. 2014=100)	Q00340	1.2	0.79	3.0	1.18	7.3	1.43
Bakery & confectionery products (Dec. 2016=100)	Q00350	0.6	0.25	0.8	1.04	0.7	0.88
Other foods and food preparations (lard, soft bev, spices), n.e.s.	Q00360	0.4	0.34	0.8	0.70	3.7	1.98
Nonagricultural foods (fish, distilled beverages)	Q01	1.0	1.13	2.1	2.12	0.9	2.04
Fish and shellfish (Dec. 2016=100)	Q01000	1.4	1.51	3.0	2.81	0.9	2.68
Industrial supplies & materials	Q1	0.6	0.22	2.3	0.35	4.3	0.66
Agricultural industrial supplies & materials	Q10	1.1	0.49	2.2	0.79	5.9	1.43
Cotton, incl linters-raw (Dec. 2005=100)	Q100	2.6	1.23	6.5	0.88	14.5	1.34
Other agricultural materials	Q101	0.4	0.60	1.1	0.90	2.0	1.84
Fuels & lubricants	Q11	1.4	0.56	6.1	0.76	10.4	1.15
Other coal & related fuels (Dec. 2012=100)	Q11020	1.7	1.40	2.6	1.61	2.7	2.70
Petroleum & petroleum products	Q111	2.1	0.55	7.4	0.80	11.3	1.55
Fuel oil	Q11110	2.5	0.71	8.0	0.95	9.4	1.14

Table 2. Variances for U.S. export price indexes for categories of goods: January 2019–December 2019

Description	End Use	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Other petroleum products	Q11120	3.2	0.76	7.4	1.39	7.6	1.62
Gas-natural (Dec. 2014=100)	Q112	5.1	4.59	7.7	5.23	9.0	8.73
Nonagricultural supplies & materials excluding fuels & building materials	Q12	0.2	0.14	0.7	0.25	1.7	0.98
Nonferrous & other metals	Q122	0.9	0.41	2.4	0.54	7.8	0.92
Aluminum & alumina ⁽²⁾	Q12200	1.5	0.19	4.1	1.11	13.9	2.83
Copper (Dec. 2008=100) ⁽²⁾	Q12210	1.6	0.61	3.9	0.96	8.4	1.19
Nonmonetary gold ⁽²⁾	Q12260	2.4	0.04	5.5	0.05	7.4	0.10
Other precious metals (Dec. 2001=100) ⁽²⁾	Q12270	3.6	1.79	8.7	2.30	14.8	4.20
Other nonferrous metals	Q12290	0.7	0.88	1.4	1.27	14.1	3.56
Finished metal shapes	Q123	0.2	0.33	0.8	1.30	2.8	1.67
Paper & paper base stocks	Q124	1.2	0.44	4.4	1.06	10.9	2.50
Woodpulp and recovered paper	Q12420	2.7	1.02	9.0	2.01	21.6	3.52
Linerboard, newsprint, and other paper/paperboard	Q12430	0.4	0.56	1.5	1.26	3.7	3.57
Chemicals, excluding medicinals	Q125	0.4	0.24	1.4	0.45	2.4	1.97
Plastic materials	Q12500	0.4	0.60	1.4	1.04	2.5	2.66
Fertilizers, pesticides, & insecticides (Dec. 2012=100)	Q12510	0.8	0.57	2.2	1.25	3.6	2.05
Industrial inorganic chemicals	Q12530	0.6	0.32	1.4	0.90	4.0	2.31
Industrial organic chemicals	Q12540	0.8	0.55	2.6	1.37	8.7	4.02
Other chemicals, excluding medicinals	Q12550	0.2	0.29	0.6	0.52	1.7	1.52
Industrial textile fibers, yarn, and fabric (Dec. 2008=100)	Q126	0.3	0.32	1.0	0.50	2.7	0.78
Other nonagricultural industrial supplies and materials	Q127	0.1	0.13	0.2	0.28	1.0	0.52
Synthetic rubber-primary (Dec. 2008=100)	Q12700	0.6	0.57	2.6	1.59	8.7	3.00
Industrial rubber products (Dec. 2013=100)	Q12750	0.0	0.02	0.7	0.53	3.4	1.34
Mineral supplies-manufactured	Q12760	0.1	0.23	1.0	0.63	7.4	1.14
Other goods manufactured and unmanufactured	Q12770	0.2	0.14	0.2	0.23	1.0	0.53
Selected building materials	Q13	0.8	0.34	1.1	0.82	2.9	1.83
Lumber & other wood supplies	Q131	1.1	0.58	3.3	0.93	10.8	1.94
Logs, lumber, plywood and veneers	Q13100	1.3	0.59	3.8	1.06	11.1	2.43
Other building materials, exclude wood and glass (Dec. 2016=100)	Q13210	0.2	0.19	1.9	1.26	6.8	3.70
Capital goods	Q2	0.1	0.08	0.2	0.17	0.8	0.28
Electrical generating equipment	Q20	0.1	0.09	0.4	0.16	0.8	0.42

Table 2. Variances for U.S. export price indexes for categories of goods: January 2019–December 2019

Description	End Use	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Generators, transformers & access (Dec. 2012=100)	Q20000	0.2	0.12	0.8	0.44	3.5	1.15
Electric apparatus and parts, n.e.s.	Q20005	0.1	0.08	0.3	0.17	0.2	0.38
Nonelectrical machinery	Q21	0.1	0.11	0.2	0.25	0.3	0.35
Oil drilling, mining, and construction machinery, and equipment	Q210	0.2	0.14	0.6	0.35	1.8	0.55
Excavating, paving & construction machinery	Q21030	0.2	0.15	0.4	0.35	1.6	0.59
Industrial and service machinery	Q211	0.1	0.09	0.3	0.24	1.9	0.63
Industrial engines, pumps, & compressors	Q21100	0.2	0.18	1.1	0.35	2.9	0.72
Metal working machine tools and rolling mill machines	Q21120	0.0	0.07	0.2	0.13	2.3	0.42
Measuring, testing & control instruments	Q21160	0.1	0.15	0.7	0.27	2.8	0.76
Materials handling equipment	Q21170	0.0	0.04	0.2	0.19	2.0	0.42
Other industrial machinery	Q21180	0.1	0.16	0.1	0.48	1.2	1.53
Photo and other service industry machines	Q21190	0.1	0.09	0.6	0.48	2.4	0.71
Agricultural machinery and equipment (Dec. 2016=100)	Q212	0.1	0.05	0.2	0.15	0.9	0.35
Computers, peripherals, and semiconductors	Q213	0.3	0.20	1.1	0.65	3.7	0.95
Computers	Q21300	0.4	0.56	1.3	1.12	5.4	1.42
Computer peripherals, accessories and parts	Q21301	0.5	0.31	2.0	1.14	6.3	2.21
Semiconductors	Q21320	0.1	0.13	0.4	0.58	1.3	0.98
Telecommunications equipment	Q214	0.1	0.11	0.2	0.24	0.4	0.39
Scientific and medical machinery	Q216	0.2	0.13	0.2	0.23	0.4	0.41
Laboratory testing & control instruments	Q21600	0.2	0.22	0.7	0.35	1.6	0.36
Other scientific, medical and hospital equipment	Q21610	0.1	0.15	0.4	0.29	0.6	0.56
Transportation equipment excluding motor vehicles (Dec. 2001=100)	Q22	0.1	0.05	0.7	0.10	3.5	0.26
Parts for civilian aircraft	Q22010	0.1	0.07	0.5	0.30	3.0	0.97
Automotive vehicles, parts & engines	Q3	0.1	0.07	0.4	0.14	0.4	0.35
Passenger cars, new and used	Q300	0.2	0.12	0.2	0.27	0.5	0.88
Vehicles designed to transport goods	Q301	0.1	0.05	0.3	0.13	1.5	0.27
Parts, engines, bodies & chassis	Q302	0.2	0.09	0.6	0.16	0.5	0.38
Engines and engine parts for automotive vehicles	Q30200	0.1	0.11	0.7	0.48	3.2	0.64
Nonengine parts & accessories	Q30230	0.1	0.07	0.4	0.17	0.1	0.45
Consumer goods, excluding automotives	Q4	0.2	0.15	0.3	0.27	0.4	0.85
Nondurables, manufactured	Q40	0.2	0.11	0.6	0.45	1.3	1.72

Table 2. Variances for U.S. export price indexes for categories of goods: January 2019–December 2019

Description	End Use	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Apparel, footwear, and household goods (Dec. 2016=100)	Q400	0.3	0.15	0.6	0.32	1.4	1.70
Textile apparel and footwear (Dec. 2016=100)	Q40000	0.4	0.25	0.9	0.49	3.1	2.62
Other consumer nondurables	Q401	0.1	0.10	0.6	0.50	1.6	1.85
Medicinal, dental, and pharmaceutical preparatory materials	Q40100	0.2	0.07	0.9	0.76	2.0	2.44
Toiletries & cosmetics	Q40120	0.2	0.22	0.6	0.50	0.7	1.96
Other products (notions & writing articles)	Q40140	0.2	0.25	0.5	0.60	2.1	2.00
Durables, manufactured	Q41	0.2	0.29	0.4	0.45	0.2	0.51
Household goods	Q410	0.1	0.07	0.6	0.35	1.6	0.81
Furniture and household items (Dec. 2007=100)	Q41000	0.1	0.07	0.2	0.22	1.0	0.46
Household and kitchen appliances	Q41030	0.1	0.10	0.3	0.16	2.6	0.43
Miscellaneous household goods	Q41050	0.1	0.10	0.9	0.54	3.6	1.08
Recreational equip & materials	Q411	0.2	0.20	0.3	0.34	0.8	0.44
Pleasure boats and parts including motors (Dec. 2007=100)	Q41110	0.0	0.04	0.4	0.22	1.0	0.36
Toys, shooting and sporting goods	Q41120	0.2	0.29	0.5	0.47	0.9	0.61
Home entertainment equipment (Dec. 2009=100)	Q412	0.4	0.30	0.2	0.23	0.2	0.51
Nonmanufactured consumer goods (Dec. 2018=100)	Q42	0.1	0.05	0.4	0.06	0.5	0.09

Footnotes

(1) Index calculated using strictly alternative price data from one or more secondary sources. Indexes calculated using this method will have standard error values of zero.

(2) Index calculated using a mix of directly collected price data and alternative price data from one or more secondary sources. Indexes calculated using this method will have low standard error values.

Table 3. Variances for U.S. import price indexes for industries: January 2019–December 2019

Description	NAICS	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Nonmanufacturing	ZNONMANU	3.0	0.54	6.0	0.64	6.3	1.03
Agriculture, forestry, fishing and hunting	Z11	1.9	2.51	3.7	3.00	4.7	2.57
Crop production	Z111	2.3	3.05	5.1	3.59	5.4	3.40
Vegetable and melon farming (Dec. 2017=100)	Z1112	4.6	6.19	3.3	7.25	16.0	10.13
Fruit and tree nut farming	Z1113	3.6	2.76	7.0	4.37	6.7	3.98
Mining	Z21	3.2	0.22	6.1	0.33	7.8	1.05
Oil and gas extraction	Z211	3.3	0.21	6.3	0.34	8.3	1.08
Manufacturing	ZMANU	0.1	0.07	0.3	0.12	1.1	0.23
Manufacturing, part 1	Z31	0.1	0.09	0.1	0.16	0.1	0.30
Food manufacturing	Z311	0.3	0.26	0.7	0.37	1.1	0.72
Grain and oilseed milling	Z3112	0.8	0.70	1.3	0.87	8.5	1.84
Starch and vegetable fats and oils manufacturing	Z31122	1.1	0.75	1.8	1.30	11.7	1.96
Fruit and vegetable preserving and specialty food manufacturing	Z3114	0.7	0.83	1.5	1.58	6.9	3.15
Fruit and vegetable canning, pickling, and drying (Dec. 2017=100)	Z31142	0.4	0.87	1.8	1.58	8.0	4.72
Animal slaughtering and processing	Z3116	0.9	0.71	3.1	1.04	5.4	1.49
Seafood product preparation and packaging	Z3117	0.4	0.29	1.1	0.45	1.1	0.85
Other food manufacturing	Z3119	0.5	0.46	0.8	0.73	1.4	0.96
Beverage and tobacco product manufacturing	Z312	0.2	0.15	0.6	0.51	1.8	0.83
Beverage manufacturing (Dec. 2009=100)	Z3121	0.2	0.16	0.6	0.51	1.9	0.89
Breweries (Dec. 2006=100)	Z31212	0.2	0.10	1.5	1.36	4.0	2.04
Wineries	Z31213	0.2	0.16	0.5	0.52	0.4	0.60
Distilleries	Z31214	0.1	0.15	0.5	0.62	2.4	1.51
Textile mills (Dec. 2011=100)	Z313	0.3	0.36	0.6	0.57	0.4	0.63
Fabric mills	Z3132	0.3	0.42	0.5	0.74	0.9	0.74
Textile product mills	Z314	0.2	0.13	0.4	0.31	1.0	1.00
Textile furnishings mills	Z3141	0.3	0.14	0.6	0.41	0.8	0.88
Curtain and linen mills	Z31412	0.3	0.13	0.5	0.29	1.1	0.67
Other textile product mills (Dec. 2006=100)	Z3149	0.1	0.09	0.3	0.30	1.9	1.72
All other textile product mills (Dec. 2012=100)	Z31499	0.1	0.11	0.5	0.35	2.4	2.42
Apparel manufacturing	Z315	0.1	0.10	0.1	0.19	0.6	0.41
Cut and sew apparel manufacturing (Dec. 2009=100)	Z3152	0.0	0.11	0.2	0.20	0.8	0.42

Table 3. Variances for U.S. import price indexes for industries: January 2019–December 2019

Description	NAICS	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Men and boys cut and sew apparel manufacturing	Z31522	0.1	0.12	0.2	0.40	0.6	0.62
Women and girls cut and sew apparel manufacturing (Dec. 2013=100)	Z31524	0.1	0.12	0.3	0.25	1.0	0.56
Apparel accessories and other apparel manufacturing	Z3159	0.3	0.28	0.8	0.43	2.5	1.45
Leather and allied product manufacturing	Z316	0.2	0.11	0.3	0.27	0.2	0.49
Footwear manufacturing	Z3162	0.2	0.13	0.5	0.38	0.3	0.63
Other leather and allied product manufacturing (Dec. 2015=100)	Z3169	0.1	0.07	0.2	0.18	0.3	0.46
Manufacturing, part 2	Z32	0.4	0.30	0.7	0.46	1.6	0.83
Sawmills and wood preservation	Z3211	3.7	1.44	4.1	1.87	15.7	1.81
Veneer, plywood, and engineered wood product manufacturing	Z3212	1.7	0.56	3.9	1.32	16.4	2.72
Paper manufacturing	Z322	0.4	0.33	2.1	0.61	5.8	1.97
Pulp, paper, and paperboard mills	Z3221	0.8	0.64	3.9	1.46	9.6	2.45
Converted paper product manufacturing	Z3222	0.1	0.11	0.3	0.52	1.7	1.75
Paper bag and coated and treated paper manufacturing (Dec. 2006=100)	Z32222	0.2	0.19	0.3	0.78	3.2	2.93
Petroleum and coal products manufacturing	Z324	2.1	1.63	3.5	2.64	3.6	2.92
Chemical manufacturing	Z325	0.3	0.18	0.5	0.43	1.5	0.89
Basic chemical manufacturing	Z3251	0.7	0.39	1.6	0.87	4.3	1.94
Other basic inorganic chemical manufacturing (Dec. 2008=100)	Z32518	2.2	1.17	1.0	1.85	8.1	5.83
Other basic organic chemical manufacturing	Z32519	0.5	0.39	0.8	0.76	4.3	1.83
Resin, synthetic rubber, and artificial synthetic fibers and filaments	Z3252	0.5	0.84	1.8	1.22	5.2	2.62
Resin and synthetic rubber manufacturing	Z32521	0.7	0.57	1.3	1.30	4.3	3.16
Pesticide, fertilizer, other agricult. chemical manufacturing (Dec. 2007=100)	Z3253	1.5	0.89	3.6	1.67	6.9	3.01
Pharmaceutical and medicine manufacturing	Z3254	0.2	0.14	0.6	0.70	1.0	1.31
Soap, cleaning compound, and toilet preparation manufacturing	Z3256	0.3	0.12	1.0	0.48	2.8	1.12
Toilet preparation manufacturing (Dec. 2016=100)	Z32562	0.2	0.11	0.5	0.33	2.2	0.69
Other chemical product and preparation manufacturing (Dec. 2006=100)	Z3259	0.4	0.37	1.7	0.68	5.0	1.68
All other chemical product and prep. manufacturing (Dec. 2016=100)	Z32599	0.6	0.22	3.1	0.77	10.4	2.17
Plastics and rubber products manufacturing	Z326	0.1	0.15	0.4	0.33	0.5	0.52
Plastics product manufacturing	Z3261	0.2	0.25	0.2	0.47	0.4	0.81
Other plastics product manufacturing	Z32619	0.2	0.21	0.4	0.27	1.4	0.66
Rubber product manufacturing	Z3262	0.1	0.13	0.5	0.31	0.9	0.43
Tire manufacturing	Z32621	0.1	0.13	0.8	0.30	0.9	0.49

Table 3. Variances for U.S. import price indexes for industries: January 2019–December 2019

Description	NAICS	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Nonmetallic mineral product manufacturing	Z327	0.2	0.08	0.2	0.20	0.5	0.43
Clay product and refractory manufacturing	Z3271	0.0	0.06	0.4	0.32	1.1	0.71
Manufacturing, part 3	Z33	0.1	0.06	0.3	0.13	1.2	0.21
Primary metal manufacturing	Z331	0.9	0.18	1.1	0.31	0.6	0.56
Iron and steel mills and ferroalloy manufacturing	Z3311	1.4	0.36	2.8	0.72	6.3	1.18
Alumina and aluminum production and processing	Z3313	1.3	0.30	2.3	0.32	8.7	1.11
Nonferrous metal (except aluminum) production and processing	Z3314	1.6	0.19	5.0	0.35	5.2	0.79
Nonferrous metal (except aluminum) smelting and refining	Z33141	1.6	0.05	5.8	0.09	6.2	0.16
Fabricated metal product manufacturing	Z332	0.2	0.15	0.2	0.24	0.9	0.42
Cutlery and handtool manufacturing	Z3322	0.2	0.15	0.2	0.23	1.1	0.48
Hardware manufacturing	Z3325	0.1	0.12	0.9	0.54	0.8	0.78
Machine shops; and screw, nut, and bolt manufacturing (Dec. 2012=100)	Z3327	0.6	0.22	0.9	0.55	7.6	2.88
Other fabricated metal product manufacturing	Z3329	0.1	0.17	0.2	0.34	0.6	0.65
Metal valve manufacturing	Z33291	0.1	0.10	0.1	0.32	0.7	0.94
All other fabricated metal product manufacturing	Z33299	0.2	0.22	0.4	0.45	0.9	0.93
Machinery manufacturing	Z333	0.1	0.04	0.3	0.20	0.3	0.48
Agriculture, construction, and mining machinery manufacturing	Z3331	0.1	0.10	0.4	0.45	0.2	1.08
Agricultural implement manufacturing (Dec. 2016=100)	Z33311	0.1	0.08	0.4	0.69	1.6	1.93
Construction machinery manufacturing	Z33312	0.1	0.14	0.7	0.46	0.8	0.97
Industrial machinery manufacturing	Z3332	0.2	0.13	0.5	0.31	1.8	0.88
Industrial machinery manufacturing (Dec. 2013=100)	Z33324	0.2	0.13	0.5	0.31	1.8	0.88
Commercial and service industry machinery manufacturing	Z3333	0.1	0.09	0.2	0.40	1.0	3.47
Ventilation, heating, air-conditioning, and commercial refrigeration equipment	Z3334	0.1	0.11	0.4	0.18	0.5	0.50
Metalworking machinery manufacturing	Z3335	0.0	0.06	0.2	0.24	0.7	0.67
Engine, turbine, and power transmission equipment manufacturing	Z3336	0.2	0.08	0.4	0.17	0.5	0.34
Other general purpose machinery manufacturing	Z3339	0.1	0.12	0.3	0.44	0.5	0.69
Pump and compressor manufacturing (Dec. 2013=100)	Z33391	0.3	0.26	0.4	0.39	0.2	0.62
Material handling equipment manufacturing	Z33392	0.2	0.06	0.4	0.18	1.2	0.83
All other general purpose machinery manufacturing	Z33399	0.1	0.12	0.4	0.68	0.4	1.11
Computer and electronic product manufacturing	Z334	0.2	0.09	0.9	0.18	3.4	0.33
Computer and peripheral equipment manufacturing	Z3341	0.4	0.30	1.1	0.54	4.2	0.82

Table 3. Variances for U.S. import price indexes for industries: January 2019–December 2019

Description	NAICS	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Communications equipment manufacturing	Z3342	0.1	0.03	0.5	0.18	2.6	0.51
Audio and video equipment manufacturing	Z3343	0.1	0.13	0.4	0.35	2.9	1.23
Semiconductor and other electronic component manufacturing	Z3344	0.6	0.24	1.5	0.41	3.2	0.94
Navigational, measuring, electromedical, and control instruments	Z3345	0.1	0.15	0.2	0.18	0.5	0.41
Manufacturing and reproducing magnetic and optical media	Z3346	1.5	0.65	6.1	1.76	24.3	3.38
Electrical equipment, appliance, and component manufacturing	Z335	0.1	0.19	0.3	0.37	1.1	1.65
Electric lighting equipment manufacturing	Z3351	0.3	0.20	0.4	0.37	0.6	0.74
Lighting fixture manufacturing	Z33512	0.3	0.20	0.4	0.35	0.4	0.75
Household appliance manufacturing	Z3352	0.3	0.19	0.6	0.39	0.9	0.86
Small electrical appliance manufacturing	Z33521	0.0	0.04	0.2	0.11	0.2	0.53
Major household appliance manufacturing	Z33522	0.6	0.30	1.1	0.67	1.3	1.42
Electrical equipment manufacturing (Dec. 2017=100)	Z3353	0.2	0.28	0.3	0.77	1.5	0.85
Other electrical equipment and component manufacturing	Z3359	0.1	0.24	0.4	0.85	1.4	5.08
Battery manufacturing (Dec. 2009=100)	Z33591	0.2	0.19	0.3	0.87	4.5	3.89
Wiring device manufacturing (Dec. 2013=100)	Z33593	0.0	0.08	0.3	0.47	0.2	0.88
All other electrical equipment and component manufacturing	Z33599	0.1	0.33	0.4	0.58	2.0	9.11
Transportation equipment manufacturing	Z336	0.1	0.07	0.1	0.12	0.5	0.53
Motor vehicle manufacturing	Z3361	0.0	0.03	0.3	0.17	0.9	0.80
Automobile and light duty motor vehicle manufacturing	Z33611	0.0	0.04	0.3	0.18	1.1	0.85
Heavy duty truck manufacturing (Dec. 2015=100)	Z33612	0.0	0.00	0.1	0.02	2.0	0.21
Motor vehicle parts manufacturing	Z3363	0.2	0.10	0.2	0.24	0.7	0.53
Motor vehicle gasoline engine and engine parts manufacturing	Z33631	0.6	0.42	0.3	0.94	0.8	3.46
Motor vehicle electrical and electronic equipment manufacturing	Z33632	0.1	0.07	0.2	0.31	1.0	0.59
Motor vehicle steering and suspension components manufacturing (Dec. 2016=100)	Z33633	0.1	0.11	0.3	0.20	0.5	1.13
Motor vehicle brake system manufacturing	Z33634	0.3	0.15	0.6	0.45	1.6	0.85
Motor vehicle transmission and power train parts manufacturing	Z33635	0.1	0.18	0.4	0.42	0.7	1.23
Motor vehicle seating and interior trim manufacturing (Dec. 2012=100)	Z33636	0.1	0.10	0.2	0.27	0.8	0.60
Other motor vehicle parts manufacturing	Z33639	0.3	0.16	0.5	0.39	1.4	1.05
Aerospace product and parts manufacturing	Z3364	0.1	0.13	0.7	0.38	1.1	0.65
Other transportation equipment manufacturing	Z3369	0.2	0.20	0.4	0.50	0.4	0.72
Furniture and related product manufacturing	Z337	0.1	0.12	0.5	0.23	0.9	0.41

Table 3. Variances for U.S. import price indexes for industries: January 2019–December 2019

Description	NAICS	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Household and institutional furniture and kitchen cabinet manufacturing	Z3371	0.1	0.14	0.3	0.25	0.6	0.45
Office furniture (including fixtures) manufacturing	Z3372	0.1	0.18	0.6	0.39	2.1	0.93
Miscellaneous manufacturing	Z339	0.2	0.14	0.3	0.17	0.4	0.35
Medical equipment and supplies manufacturing	Z3391	0.2	0.16	0.5	0.42	2.5	1.02
Other miscellaneous manufacturing	Z3399	0.2	0.13	0.3	0.18	1.0	0.23
Jewelry and silverware manufacturing	Z33991	0.3	0.16	0.6	0.31	2.1	0.35
Sporting and athletic goods manufacturing	Z33992	0.0	0.04	0.2	0.18	3.5	1.08
Doll, toy, and game manufacturing	Z33993	0.3	0.19	0.8	0.43	2.0	0.58
All other miscellaneous manufacturing	Z33999	0.2	0.10	0.4	0.18	1.1	0.38

Table 4. Variances for U.S. export price indexes for industries: January 2019–December 2019

Description	NAICS	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Nonmanufacturing	YNONMANU	1.7	0.37	2.5	0.59	5.7	1.56
Agriculture, forestry, fishing and hunting	Y11	2.4	0.42	2.8	0.77	3.5	0.80
Crop production	Y111	2.4	0.45	3.0	0.82	3.8	0.83
Oilseed and grain farming	Y1111	2.7	0.20	4.3	0.44	4.2	0.35
Soybean farming ⁽¹⁾	Y11111	2.7	0.00	3.2	0.00	8.0	0.00
Wheat farming ⁽¹⁾	Y11114	4.1	0.00	3.9	0.00	6.0	0.00
Corn farming ⁽²⁾	Y11115	2.3	0.00	6.2	0.02	5.2	0.05
Fruit and tree nut farming (Dec. 2006=100)	Y1113	2.0	0.96	2.4	1.66	5.0	1.88
Noncitrus fruit and tree nut farming (Dec. 2007=100)	Y11133	1.6	1.02	2.5	1.74	5.6	1.88
Other crop farming	Y1119	2.2	1.05	4.6	1.07	9.2	1.41
Cotton farming (Dec. 2007=100)	Y11192	2.6	1.23	6.5	0.88	14.5	1.34
Mining	Y21	2.1	0.66	4.1	0.98	11.9	2.89
Mining (except oil and gas)	Y212	1.0	0.41	3.5	1.14	5.0	2.16
Metal ore mining (Dec. 2012=100)	Y2122	0.9	0.71	2.5	0.99	8.1	1.55
Manufacturing	YMANU	0.2	0.07	0.5	0.11	0.6	0.37
Manufacturing, part 1	Y31	0.3	0.22	0.4	0.35	0.4	0.60
Food manufacturing	Y311	0.4	0.30	0.9	0.51	0.9	0.69
Grain and oilseed milling	Y3112	0.9	0.79	2.1	1.46	4.4	2.11
Starch and vegetable fats and oils manufacturing	Y31122	1.0	1.03	2.9	1.89	5.2	2.84
Dairy product manufacturing (Dec. 2017=100)	Y3115	0.9	0.86	1.9	1.20	15.1	2.15
Animal slaughtering and processing	Y3116	0.8	0.67	2.2	1.09	2.2	1.22
Seafood product preparation and packaging (Dec. 2017=100)	Y3117	0.8	0.67	2.1	1.24	1.4	2.33
Other food manufacturing (Dec. 2014=100)	Y3119	0.3	0.40	1.1	0.99	1.6	1.47
All other food manufacturing (Dec. 2017=100)	Y31199	0.7	0.67	1.5	1.20	2.1	2.29
Beverage and tobacco product manufacturing	Y312	0.4	0.68	1.2	1.09	2.4	2.48
Beverage manufacturing (Dec. 2009=100)	Y3121	0.5	0.81	1.5	1.30	2.8	2.99
Manufacturing, part 2	Y32	0.9	0.18	2.0	0.27	2.3	1.33
Wood product manufacturing (Dec. 2017=100)	Y321	0.8	0.35	2.3	0.77	6.5	2.40
Paper manufacturing	Y322	0.7	0.34	2.7	0.79	5.0	2.13
Pulp, paper, and paperboard mills	Y3221	1.2	0.65	4.0	1.28	7.2	3.67
Pulp mills (Dec. 2018=100)	Y32211	2.0	0.87	6.0	1.75	9.6	4.63

Table 4. Variances for U.S. export price indexes for industries: January 2019–December 2019

Description	NAICS	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Converted paper product manufacturing (Dec. 2014=100)	Y3222	0.4	0.28	1.2	0.66	3.7	1.58
Paper bag and coated and treated paper manufacturing (Dec. 2015=100)	Y32222	0.2	0.17	0.6	0.58	1.2	1.35
Petroleum and coal products manufacturing	Y324	3.1	0.61	6.3	0.92	9.5	1.15
Chemical manufacturing	Y325	0.3	0.17	0.7	0.37	1.1	1.97
Basic chemical manufacturing	Y3251	0.6	0.41	1.2	0.71	2.4	2.25
Other basic organic chemical manufacturing (Dec. 2017=100)	Y32519	0.5	0.48	2.0	1.01	3.8	3.23
Resin, synthetic rubber, and artificial synthetic fibers and filaments	Y3252	0.4	0.53	1.6	0.88	3.1	2.44
Resin and synthetic rubber manufacturing (Dec. 2014=100)	Y32521	0.4	0.57	1.7	0.93	3.4	2.61
Pesticide, fertilizer, and other agri. chemical manufacturing (Dec. 2012=100)	Y3253	1.2	0.68	1.9	1.60	3.8	2.05
Pharmaceutical and medicine manufacturing	Y3254	0.1	0.08	0.9	0.70	2.0	2.17
Paint, coating, and adhesive manufacturing (Dec. 2012=100)	Y3255	0.5	0.34	2.0	0.68	5.3	2.42
Soap, cleaning compound, and toilet preparation manufacturing	Y3256	0.1	0.17	0.6	0.41	1.1	2.10
Soap and cleaning compound manufacturing	Y32561	0.2	0.17	0.7	0.35	3.7	2.91
Toilet preparation manufacturing	Y32562	0.2	0.24	0.9	0.87	1.3	2.15
Other chemical product and preparation manufacturing	Y3259	0.2	0.11	0.4	0.23	1.2	0.85
All other chemical product and preparation manufacturing	Y32599	0.2	0.13	0.5	0.27	1.1	0.83
Plastics and rubber products manufacturing	Y326	0.1	0.12	0.4	0.27	1.2	0.58
Plastics product manufacturing	Y3261	0.2	0.14	0.4	0.27	1.6	0.72
Other plastics product manufacturing	Y32619	0.0	0.14	0.3	0.24	1.1	0.91
Rubber product manufacturing (Dec. 2006=100)	Y3262	0.1	0.15	0.5	0.56	0.7	1.59
Tire manufacturing (Dec. 2006=100)	Y32621	0.2	0.17	0.4	0.44	2.8	2.16
Nonmetallic mineral product manufacturing	Y327	0.1	0.23	0.2	0.93	0.8	1.92
Glass and glass product manufacturing	Y3272	0.2	0.43	1.9	2.13	0.9	3.33
Manufacturing, part 3	Y33	0.1	0.07	0.3	0.12	1.0	0.16
Primary metal manufacturing	Y331	0.8	0.36	2.1	0.63	1.8	1.12
Alumina and aluminum production and processing (Dec. 2009=100)	Y3313	1.1	0.29	2.7	0.88	6.6	3.39
Nonferrous metal (except aluminum) production and processing	Y3314	1.2	0.37	4.8	0.65	5.7	1.27
Nonferrous metal (except aluminum) smelting and refining	Y33141	1.9	0.38	5.6	0.46	7.1	0.89
Nonferrous metal (except copper and aluminum) rolling, drawing, extruding,	Y33149	1.2	1.28	3.4	2.66	5.0	6.21
Fabricated metal product manufacturing	Y332	0.2	0.19	1.0	0.52	4.9	0.90
Other fabricated metal product manufacturing	Y3329	0.2	0.26	1.0	0.83	6.1	1.16

Table 4. Variances for U.S. export price indexes for industries: January 2019–December 2019

Description	NAICS	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Metal valve manufacturing	Y33291	0.2	0.16	1.2	0.59	6.4	1.05
Machinery manufacturing	Y333	0.2	0.13	0.3	0.31	2.0	0.43
Agriculture, construction, and mining machinery manufacturing	Y3331	0.1	0.08	0.3	0.21	1.7	0.33
Agricultural implement manufacturing (Dec. 2017=100)	Y33311	0.1	0.06	0.1	0.15	1.5	0.53
Construction machinery manufacturing	Y33312	0.1	0.08	0.4	0.27	1.7	0.44
Commercial and service industry machinery manufacturing	Y3333	0.2	0.21	0.7	0.48	0.4	0.41
Ventilation, heating, air-conditioning, and refrigeration manu. (Dec. 2017=100)	Y3334	0.3	0.13	0.8	0.26	2.4	0.52
Metalworking machinery manufacturing	Y3335	0.0	0.02	0.4	0.36	1.9	0.62
Engine, turbine, and power transmission equipment manufacturing	Y3336	0.2	0.20	0.9	0.87	4.8	2.82
Other general purpose machinery manufacturing	Y3339	0.1	0.16	0.4	0.29	1.5	0.90
Pump and compressor manufacturing	Y33391	0.2	0.37	0.5	0.63	2.3	1.51
Material handling equipment manufacturing	Y33392	0.1	0.06	0.1	0.09	1.2	0.45
All other general purpose machinery manufacturing	Y33399	0.2	0.24	0.5	0.40	1.3	1.15
Computer and electronic product manufacturing	Y334	0.1	0.10	0.4	0.28	1.6	0.39
Computer and peripheral equipment manufacturing	Y3341	0.6	0.33	1.7	0.99	5.9	1.58
Communications equipment manufacturing	Y3342	0.1	0.11	0.3	0.25	1.5	0.51
Radio and TV broadcasting and wireless equipment (Dec. 2009=100)	Y33422	0.2	0.13	0.3	0.28	1.8	0.59
Audio and video equipment manufacturing	Y3343	0.0	0.04	0.3	0.27	1.6	0.98
Semiconductor and other electronic component manufacturing	Y3344	0.1	0.09	0.2	0.46	0.7	0.77
Navigational, measuring, electromedical, and control instruments	Y3345	0.1	0.10	0.4	0.24	1.3	0.38
Electrical equipment, appliance, and component manufacturing	Y335	0.1	0.15	0.2	0.27	0.6	0.42
Electrical equipment manufacturing	Y3353	0.1	0.03	0.1	0.13	0.8	0.45
Transportation equipment manufacturing	Y336	0.1	0.04	0.4	0.09	1.7	0.19
Motor vehicle manufacturing	Y3361	0.1	0.11	0.1	0.21	0.2	0.70
Automobile and light duty motor vehicle manufacturing	Y33611	0.1	0.10	0.1	0.22	0.3	0.75
Motor vehicle body and trailer manufacturing (Dec. 2013=100)	Y3362	0.2	0.22	0.5	0.53	2.9	1.50
Motor vehicle parts manufacturing	Y3363	0.1	0.07	0.3	0.15	0.5	0.32
Motor vehicle electrical and electronic equipment manufacturing (Dec. 2008=100)	Y33632	0.1	0.06	0.3	0.18	0.3	0.35
Motor vehicle transmission and power train parts manu. (Dec. 2015=100)	Y33635	0.3	0.23	0.4	0.36	1.0	0.78
Other motor vehicle parts manufacturing	Y33639	0.1	0.08	0.1	0.21	0.3	0.40
Furniture and related product manufacturing (Dec. 2011=100)	Y337	0.1	0.08	0.1	0.19	1.6	0.35

Table 4. Variances for U.S. export price indexes for industries: January 2019–December 2019

Description	NAICS	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12-month median absolute percent change	12-month median standard error
Miscellaneous manufacturing	Y339	0.3	0.23	0.3	0.43	0.1	0.48
Medical equipment and supplies manufacturing	Y3391	0.2	0.14	0.5	0.43	1.6	0.88
Other miscellaneous manufacturing (Dec. 2013=100)	Y3399	0.3	0.22	0.4	0.57	1.3	0.52
All other miscellaneous manufacturing	Y33999	0.1	0.01	0.3	0.03	0.4	0.15

Footnotes

- (1) Index calculated using strictly alternative price data from one or more secondary sources. Indexes calculated using this method will have standard error values of zero.
 (2) Index calculated using a mix of directly collected price data and alternative price data from one or more secondary sources. Indexes calculated using this method will have low standard error values.

Table 5. Variances for U.S. import price indexes for categories of goods: January 2019–December 2019

Description	Harmo- nized system	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12- month median absolute percent change	12- month median standard error
Live animals; animal products	PI	0.7	0.50	0.8	0.71	1.1	1.65
Meat and edible meat offal	P02	1.4	0.87	3.2	1.20	6.8	1.38
Fish and crustaceans, molluscs and other aquatic invertebrates	P03	0.5	0.44	1.4	0.66	2.0	1.14
Fish fillets and other fish meat, fresh, chilled, frzn, (Dec. 2008=100)	P0304	0.9	0.69	2.3	0.97	1.2	1.75
Crustaceans, live, fresh, chilled, etc; in shell or not; cooked or uncooked	P0306	0.7	0.70	2.2	1.01	3.0	1.57
Vegetable products	PII	2.3	2.92	4.9	3.57	5.6	3.44
Edible vegetables, roots, and tubers	P07	5.4	7.32	2.7	8.49	17.5	12.00
Edible fruit and nuts; peel of citrus fruit or melons	P08	7.5	3.88	8.8	6.19	10.4	5.45
Coffee, tea, mate and spices	P09	1.6	1.20	2.7	1.66	6.7	2.59
Coffee, roasted or unroasted, decaf; coffee husks and skins (Dec. 2007=100)	P0901	2.5	1.57	3.5	2.18	4.7	3.53
Animal or vegetable fats and oils (Dec. 2009=100)	PIII	1.3	0.96	2.2	1.95	15.3	2.87
Prepared foodstuffs, beverages, and tobacco	PIV	0.1	0.12	0.4	0.24	0.9	0.44
Edible preps of meat, of fish, or of aquatic invertebrates (Dec. 2004=100)	P16	0.8	0.45	1.4	0.93	2.9	1.16
Cocoa and cocoa preparations (Dec. 2009=100)	P18	0.9	0.59	1.3	0.83	2.3	2.09
Preparations of vegetables, fruit, nuts, or other parts of plants	P20	0.3	0.29	1.1	1.11	1.3	2.08
Beverages, spirits, and vinegar	P22	0.2	0.15	0.5	0.48	1.8	0.83
Beer, ale, porter, stout and the like (Dec. 2006=100)	P2203	0.2	0.10	1.5	1.36	4.0	2.04
Ethyl alcohol undenatured less than 80% alcohol (Dec. 2001=100)	P2208	0.1	0.12	0.4	0.50	2.1	1.23
Mineral products	PV	2.9	0.56	4.5	0.83	7.9	0.97
Mineral fuels, oils and residuals, bituminous substances and mineral waxes	P27	3.0	0.56	4.6	0.85	8.2	1.01
Petroleum oils and oils from bituminous minerals, crude ⁽¹⁾	P2709	4.3	0.00	6.5	0.00	9.4	0.00
Petroleum oils (not crude), bituminous oils, & products thereof, nesoi	P2710	2.0	1.66	3.3	2.69	3.3	3.06
Petroleum gases and other gaseous hydrocarbons	P2711	16.5	6.13	24.2	6.11	13.5	6.22
Products of the chemical or allied industries	PVI	0.3	0.21	0.3	0.40	1.2	0.93
Inorganic chemicals	P28	3.1	1.33	6.5	2.31	7.9	3.24
Organic chemicals	P29	0.4	0.33	0.9	0.67	4.4	1.79
Heterocyclic compounds with nitrogen hetero-atoms only (Dec. 2016=100)	P2933	0.3	0.46	2.5	1.93	1.9	4.16
Nucleic acids and their salts, other heterocyclic compounds (Dec. 2009=100)	P2934	0.1	0.13	0.3	0.30	3.0	3.37
Pharmaceutical products	P30	0.2	0.15	0.7	0.73	1.1	1.48
Human and animal blood, prep; antisera & other blood fractions (Dec. 2014=100)	P3002	0.2	0.16	0.8	0.74	5.2	3.28
Medicaments (except vaccines, band., pharmaceuticals) (Dec. 2001=100)	P3004	0.1	0.16	0.9	0.63	0.6	1.44

Table 5. Variances for U.S. import price indexes for categories of goods: January 2019–December 2019

Description	Harmo- nized system	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12- month median absolute percent change	12- month median standard error
Fertilizers (Dec. 2009=100)	P31	2.2	1.03	3.8	1.93	9.3	5.15
Essential oils and resinoids (Dec. 2016=100)	P33	0.2	0.12	0.4	0.32	0.4	0.97
Miscellaneous chemical products	P38	0.4	0.18	0.9	0.83	3.6	1.80
Plastics and articles thereof; rubber and articles thereof	PVII	0.2	0.16	0.3	0.27	0.7	0.58
Plastics and articles thereof	P39	0.2	0.19	0.4	0.42	1.2	0.81
Articles for the conveyance or packing of goods, of plastics (Dec. 2003=100)	P3923	0.1	0.03	0.3	0.44	3.3	2.32
Tableware, kitchenware, other articles of plastics (Dec. 2009=100)	P3924	0.0	0.00	0.1	0.29	0.4	0.74
Articles of plastic, polymers & resins of heading 3901 to 3914, nesoi	P3926	0.4	0.40	0.6	0.47	0.5	0.85
Rubber and articles thereof	P40	0.4	0.23	0.5	0.44	0.8	0.60
New pneumatic tires of rubber (Dec. 2004=100)	P4011	0.1	0.13	0.8	0.31	1.0	0.51
Raw hides, skins, leather, furskins, travel goods, etc	PVIII	0.1	0.13	0.4	0.20	0.8	0.63
Articles of leather; travel goods, bags, etc. of various materials	P42	0.1	0.14	0.4	0.23	0.5	0.64
Travel goods and handbags (Dec. 2015=100)	P4202	0.1	0.07	0.1	0.15	0.6	0.44
Wood, wood charcoal, cork, straw, basketware and wickerwork	PIX	1.3	0.48	1.0	0.70	12.7	1.01
Wood sawn or chipped lengthwise, sliced or peeled (Dec. 2013=100)	P4407	3.7	1.44	4.0	1.87	15.7	1.81
Woodpulp, recovered paper, and paper products	PX	0.4	0.45	1.9	0.84	5.1	1.83
Paper and paperboard; articles of paper pulp, paper or paperboard	P48	0.3	0.27	0.8	0.89	2.9	2.19
Textile and textile articles	PXI	0.1	0.13	0.2	0.22	0.2	0.38
Articles of apparel and clothing accessories, knitted or crocheted	P61	0.1	0.15	0.3	0.35	0.7	0.71
Knitted sweaters, pullovers, sweatshirts vests and similar art. (Dec. 2015=100)	P6110	0.4	0.23	1.0	0.60	1.5	0.85
Articles of apparel and clothing accessories, not knitted or crocheted	P62	0.1	0.07	0.2	0.20	0.7	0.38
Men or boys suits, ensembles, suit-type jackets, blazers & trousers	P6203	0.1	0.04	0.4	0.22	0.6	0.41
Women or girls suits, dresses, skirts; not knitted (Dec. 2017=100)	P6204	0.1	0.08	0.3	0.22	0.3	0.41
Made-up or worn textile articles	P63	0.1	0.10	0.3	0.28	1.0	1.01
Headgear, umbrellas, artificial flowers, etc.	PXII	0.2	0.18	0.4	0.40	0.2	0.56
Footwear and parts of such articles	P64	0.2	0.15	0.4	0.47	0.3	0.68
Footwear, with outer soles and uppers of rubber or plastics (Dec. 2016=100)	P6402	0.1	0.18	0.5	0.47	1.3	1.19
Footwear with uppers of leathers	P6403	0.1	0.14	0.5	0.37	0.3	0.67
Ceramic products	P69	0.0	0.02	0.3	0.30	0.5	0.86
Stone, plaster, cement, asbestos, ceramics, glass etc.	PXIII	0.1	0.14	0.2	0.26	0.1	0.57
Pearls, stones, precious metals, imitation jewelry, and coins	PXIV	0.8	0.21	3.7	0.25	4.6	0.37

Table 5. Variances for U.S. import price indexes for categories of goods: January 2019–December 2019

Description	Harmo- nized system	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12- month median absolute percent change	12- month median standard error
Diamonds, whether or not worked, but not mounted or set ⁽¹⁾	P7102	0.0	0.00	0.5	0.00	0.7	0.00
Gold (incl plated with platinum), unwrght, semi-mfg or pwdr ⁽¹⁾	P7108	2.4	0.00	5.4	0.00	7.5	0.00
Base metals and articles of base metals	PXV	0.5	0.15	1.7	0.24	4.5	0.39
Iron and steel	P72	1.3	0.43	3.5	0.63	6.6	0.96
Articles of iron or steel	P73	0.3	0.23	0.6	0.40	2.2	0.68
Copper and articles thereof	P74	2.3	0.52	3.1	1.07	4.9	1.81
Aluminum and articles thereof	P76	1.0	0.07	1.9	0.14	6.9	0.59
Aluminum, unwrought ⁽¹⁾	P7601	2.3	0.00	5.5	0.00	17.3	0.00
Tools, implements, cutlery, spoons and forks, of base metal; parts thereof	P82	0.1	0.07	0.1	0.19	0.7	0.43
Miscellaneous articles of base metal	P83	0.2	0.12	0.5	0.41	0.8	0.59
Machinery, electrical equipment, TV image and sound recorders, parts, etc.	PXVI	0.2	0.09	0.5	0.15	1.6	0.30
Machinery and mechanical appliances; parts thereof	P84	0.2	0.14	0.7	0.26	1.7	0.40
Parts for spark-ignition and diesel internal combustion piston engines	P8409	0.1	0.04	0.5	1.15	3.1	4.70
Turbojets, turbopropellers and other gas turbines, and parts thereof	P8411	0.3	0.26	2.0	0.61	3.1	1.26
Engines & motors, nesoi, & parts thereof (Dec. 2012=100)	P8412	0.1	0.04	0.4	1.72	4.8	5.08
Pumps for liquids; liquid elevators; parts thereof	P8413	0.3	0.24	0.6	0.45	1.4	0.71
Air or vacuum pumps, compressors and fans; vent & recycling hoods; parts	P8414	0.2	0.18	0.7	0.61	0.7	1.11
Air conditioning machines and parts thereof (Dec. 2014=100)	P8415	0.1	0.12	0.3	0.30	0.9	1.23
Refrigerators, freezers, heat pumps; and parts (Dec. 2006=100)	P8418	0.9	0.58	1.6	1.19	1.9	2.14
Centrifuges & filtering/purifying machinery and parts (Dec. 2017=100)	P8421	0.2	0.17	0.4	0.40	1.1	2.96
Self-propelled earth-moving, tamping, & road roller machines (Dec. 2012=100)	P8429	0.0	0.02	0.1	0.20	1.5	0.46
Parts for materials handling & construction machines	P8431	0.1	0.24	1.0	0.77	1.1	1.78
Printing machinery, machines ancillary to printing; & parts (Dec. 2012=100)	P8443	0.1	0.15	0.4	0.28	0.3	1.07
Powered hand tools, nonelectric, and parts thereof (Dec. 2016=100)	P8467	0.0	0.05	2.3	2.92	5.2	4.95
Computer equipment	P8471	0.5	0.39	1.3	0.70	4.9	1.05
Parts and accessories, n.e.s.o.i., for computers and other office machines	P8473	1.5	0.64	5.5	0.99	11.2	1.79
Machines & appliances having functions n.e.s.; parts thereof (Dec. 2016=100)	P8479	0.1	0.13	0.5	0.34	2.4	2.53
Taps, cocks, valves & similar appliances; parts thereof	P8481	0.1	0.08	0.2	0.23	0.5	0.75
Parts for transmitting power (clutches, shafts, gears & boxes, pulleys, etc)	P8483	0.3	0.19	0.3	0.41	0.7	0.64
Machines used for manufacture of semiconductor wafers (Dec. 2012=100)	P8486	0.3	0.11	1.2	0.49	7.0	2.74
Electrical machinery and equip, sound and TV recorders & reproducers, parts	P85	0.1	0.10	0.3	0.21	1.4	0.53

Table 5. Variances for U.S. import price indexes for categories of goods: January 2019–December 2019

Description	Harmo- nized system	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12- month median absolute percent change	12- month median standard error
Electric motors and generators (excludes generating sets)	P8501	0.3	0.38	1.1	0.78	5.2	2.64
Electrical transformers, inductors & static converters (rectifiers); parts	P8504	0.3	0.47	0.3	0.96	0.9	1.25
Electric storage batteries, and parts thereof (Dec. 2013=100)	P8507	0.2	0.21	0.4	0.98	5.2	4.43
Vehicular electric lighting equipment, and defrosters; (Dec. 2014=100)	P8512	0.1	0.16	0.3	0.30	0.6	0.55
Electrothermic domestic appliances; water & space heaters; resistors	P8516	0.1	0.10	0.3	0.20	1.3	0.45
Electrical apparatus for line telephony or line telegraphy; videophones; parts	P8517	0.1	0.03	0.4	0.18	2.8	0.56
Microphones & stands; audio/sound amps; speakers; & headphones (Dec. 2012=100)	P8518	0.0	0.02	0.2	0.11	3.6	3.71
Prepared unrecorded media for sound or similar recording (Dec. 2004=100)	P8523	1.6	0.67	6.2	1.87	24.1	3.59
Radio & TV transmission apparatus; video cameras & camera recorders; TV cameras	P8525	0.1	0.10	0.3	0.41	1.3	0.69
TV reception apparatus; video monitors & video projectors	P8528	0.4	0.18	1.0	0.46	5.5	1.20
Electrical circuit switching, protecting or connection app. of 1000 volts or less	P8536	0.1	0.15	0.6	0.36	1.5	1.49
Electric control or distribution equipment (Dec. 2015=100)	P8537	0.2	0.16	0.6	0.65	1.3	0.72
Semiconductor devices; L.E.D.s; mounted crystals; parts thereof (Dec. 2018=100)	P8541	0.5	0.29	1.4	0.64	2.9	1.23
Electronic integrated circuits and micro assemblies; parts thereof	P8542	0.2	0.28	0.5	0.61	0.9	1.23
Electrical machines & apparatus, func. n.e.s.o.i.; parts (Dec. 2014=100)	P8543	0.0	0.02	0.2	0.15	1.1	0.41
Insulated conductors (Dec. 2010=100)	P8544	0.2	0.14	0.5	0.43	1.1	0.66
Vehicles, aircraft, vessels and associated transport equipment	PXVII	0.1	0.06	0.2	0.11	0.8	0.58
Motor vehicles and their parts	P87	0.1	0.06	0.2	0.12	0.7	0.65
Tractors (other than work trucks of heading 8709) (Dec. 2017=100)	P8701	0.0	0.02	0.1	0.04	2.2	0.34
Motor vehicles designed to transport people	P8703	0.0	0.04	0.3	0.20	1.0	0.50
Motor vehicles for the transport of goods (Dec. 2013=100)	P8704	0.1	0.02	0.9	0.11	1.0	2.65
Parts of tractors, buses, automobiles, trucks, spec. vehicles	P8708	0.2	0.12	0.2	0.23	0.7	0.90
Aircraft, spacecraft, and parts thereof (Dec. 2002=100)	P88	0.1	0.08	0.3	0.17	1.6	0.55
Other aircraft, nesoi; spacecraft & launch vehicles (Dec. 2018=100)	P8802	0.0	0.02	0.6	0.07	3.1	0.84
Parts, nesoi, of civil aircraft and spacecraft (Dec. 2012=100)	P8803	0.0	0.06	0.2	0.14	0.6	0.70
Optical, photo, measuring, medical & musical instruments; & timepieces	PXVIII	0.1	0.11	0.2	0.23	1.0	0.43
Optical, photographic, measuring and medical instruments	P90	0.1	0.12	0.3	0.25	1.0	0.47
Instruments/appliances used in medical, surgical, dental, veterinarian sciences	P9018	0.1	0.24	0.3	0.47	0.8	1.15
Orthopedic appliances; artificial body parts; hearing aids, etc (Dec. 2003=100)	P9021	0.2	0.04	1.6	0.71	6.6	1.58
Instruments and apparatus for physical or chemical analysis (Dec. 2006=100)	P9027	0.1	0.10	0.2	0.24	0.8	0.57
Measuring instruments, appliances, and machines, nesoi (Dec. 2013=100)	P9031	0.0	0.02	0.2	0.15	1.0	0.50

Table 5. Variances for U.S. import price indexes for categories of goods: January 2019–December 2019

Description	Harmo- nized system	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12- month median absolute percent change	12- month median standard error
Automatic regulating or controlling instruments and parts (Dec. 2011=100)	P9032	0.1	0.09	0.2	0.18	3.1	1.54
Clocks and watches and parts thereof	P91	0.3	0.10	0.6	0.46	0.7	0.73
Miscellaneous manufactured articles	PXX	0.1	0.11	0.4	0.17	0.9	0.23
Furniture & stuffed furnishings; lamps & lighting fittings, nesoi; prefab bldgs	P94	0.1	0.11	0.4	0.19	0.8	0.29
Seats other than barber, dental and similar chairs (Dec. 2001=100)	P9401	0.2	0.11	0.4	0.27	0.7	0.43
Furniture other than seats, nesoi (Dec. 2001=100)	P9403	0.2	0.14	0.5	0.36	1.3	0.60
Lamps, lighting fixtures, & illuminated signs and parts thereof	P9405	0.2	0.24	0.4	0.42	0.6	0.96
Toys, games and sports equipment; parts and accessories thereof	P95	0.2	0.13	0.5	0.31	1.1	0.53
Toys nesoi; models; puzzles; parts and accessories thereof	P9503	0.0	0.05	0.1	0.25	0.7	0.36
Articles for arcade, table or games parts thereof (Dec. 2018=100)	P9504	0.5	0.24	2.5	0.93	8.5	1.68
Articles & equipment for sports nesoi; parts & accessories thereof	P9506	0.0	0.03	0.2	0.19	4.0	1.18
Miscellaneous manufactured articles	P96	0.0	0.06	0.5	0.18	0.7	0.65

Footnotes

(1) Index calculated using strictly alternative price data from one or more secondary sources. Indexes calculated using this method will have standard error values of zero.

Table 6. Variances for U.S. export price indexes for categories of goods: January 2019–December 2019

Description	Harmo- nized system	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12- month median absolute percent change	12- month median standard error
Live animals; animal products	DI	0.6	0.51	1.6	0.98	3.0	1.11
Meat & edible meat offal (Dec. 2006=100)	D02	0.9	0.78	2.5	1.33	3.5	1.54
Fish and crustaceans, mollusks and aquatic invertebrates (Dec. 2016=100)	D03	1.2	1.29	2.4	2.43	1.3	2.44
Vegetable products	DII	2.8	0.63	3.3	0.99	3.6	1.34
Edible fruit and nuts; peel of citrus fruit or melons	D08	2.3	1.01	2.8	1.83	4.8	1.76
Nuts nesoi, fresh or dried (Dec. 2015=100)	D0802	1.3	0.88	3.2	1.23	7.9	1.48
Cereals	D10	2.6	0.03	6.4	0.04	3.7	0.07
Wheat and meslin ⁽¹⁾	D1001	4.1	0.00	3.9	0.00	6.0	0.00
Corn (maize) ⁽²⁾	D1005	2.3	0.00	6.2	0.02	5.2	0.05
Oilseeds and misc. grains, seeds, fruits, plants, straw and fodder	D12	2.2	0.19	2.3	0.31	6.2	0.40
Soybeans, whether or not broken (Dec. 2001=100) ⁽¹⁾	D1201	2.7	0.00	3.2	0.00	8.0	0.00
Prepared foodstuffs, beverages, and tobacco	DIV	0.6	0.32	0.9	0.55	1.8	0.98
Miscellaneous edible preparations (Dec. 2017=100)	D21	0.5	0.55	1.3	1.28	2.5	2.37
Beverages, spirits, and vinegar (Dec. 2008=100)	D22	1.4	0.70	1.7	1.15	2.6	1.48
Residues and waste from the food industries; prepared animal feed	D23	1.3	1.09	2.8	1.73	1.4	2.46
Mineral products	DV	1.5	0.49	6.2	0.75	10.3	1.09
Ores, slag and ash (Dec. 2012=100)	D26	0.9	0.73	2.6	1.01	8.2	1.39
Mineral fuels, oils and residuals, bituminous substances and mineral waxes	D27	1.6	0.51	6.5	0.80	10.5	1.16
Petroleum oils & oils from bituminous minerals (excl crude) & products, nes	D2710	3.1	0.65	6.2	0.92	8.3	1.04
Petroleum gases and other gaseous hydrocarbons (Dec. 2014=100)	D2711	4.1	1.88	11.6	3.09	31.0	9.67
Products of the chemical or allied industries	DVI	0.2	0.13	0.5	0.36	0.8	1.82
Inorganic chemicals	D28	0.6	0.29	1.9	0.90	7.1	3.75
Organic chemicals	D29	0.7	0.43	2.2	1.20	4.0	2.67
Pharmaceutical products	D30	0.1	0.07	0.9	0.87	1.2	2.52
Human and animal blood, prepared; other blood frctns (Dec. 2014=100)	D3002	0.1	0.06	0.5	0.59	1.2	1.93
Medicaments	D3004	0.2	0.16	0.8	1.39	1.9	5.27
Tanning or dyeing extracts, dyes, paints varnish, putty, & inks (Dec. 2015=100)	D32	1.2	0.53	1.2	0.90	2.3	1.88
Essential oils and resinoids; perfumery cosmetic or toilet preparations	D33	0.3	0.17	0.9	0.63	0.3	1.94
Soap; lubricants; waxes, polishing or scouring products; candles, pastes	D34	0.2	0.18	0.8	0.39	3.8	2.97
Miscellaneous chemical products	D38	0.2	0.26	0.4	0.56	2.1	1.04
Composite diagnostic or laboratory reagents (Dec. 2001=100)	D3822	0.1	0.16	0.6	0.67	0.9	1.70

Table 6. Variances for U.S. export price indexes for categories of goods: January 2019–December 2019

Description	Harmo- nized system	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12- month median absolute percent change	12- month median standard error
Plastics and articles thereof; rubber and articles thereof	DVII	0.0	0.23	0.6	0.47	1.5	0.96
Plastics and articles thereof	D39	0.1	0.27	0.6	0.57	1.2	1.04
Polymers of ethylene, in primary forms	D3901	1.4	1.31	4.0	1.63	12.3	5.73
Polyacetals, epoxide resins, alkyds, carbs in primary forms (Dec. 2017=100)	D3907	0.7	0.95	1.1	2.37	3.2	2.64
Articles of plastics, polymers, and resins, nes. (Dec. 2014=100)	D3926	0.0	0.06	0.3	0.25	1.2	1.08
Rubber and articles thereof	D40	0.3	0.31	0.5	0.86	2.7	1.38
New pneumatic tires of rubber (Dec. 2013=100)	D4011	0.2	0.18	0.4	0.44	2.9	2.19
Wood, wood charcoal, cork, straw, baskets and wickerwork (Dec. 2014=100)	DIX	0.8	0.47	2.5	0.87	7.7	1.79
Woodpulp, recovered paper, and paper products	DX	1.0	0.31	3.1	0.87	8.0	1.99
Paper and paperboard; articles of paper pulp, paper or paperboard	D48	0.2	0.34	1.3	0.90	3.3	2.62
Textile and textile articles	DXI	0.6	0.33	1.5	0.40	3.2	0.99
Cotton, including yarns and woven fabrics thereof	D52	2.1	0.99	5.1	0.77	11.8	1.15
Cotton, not carded or combed (Dec. 2018=100)	D5201	2.6	1.23	6.5	0.88	14.5	1.34
Stone, plaster, cement, asbestos, ceramics, glass etc.	DXIII	0.1	0.21	0.4	0.81	2.6	1.74
Pearls, stones, precious metals, imitation jewelry, and coins	DXIV	1.2	0.37	2.9	0.63	4.7	0.74
Diamonds, whether or not worked, but not mounted or set (Dec. 2013=100) ⁽²⁾	D7102	0.0	0.00	0.3	0.00	0.4	0.00
Gold (including gold plated with platinum), unwrought (Dec. 2001=100) ⁽²⁾	D7108	2.4	0.04	5.5	0.06	7.4	0.12
Base metals and articles of base metals	DXV	0.7	0.34	1.6	0.73	2.3	1.41
Copper and articles thereof	D74	2.1	0.56	3.7	0.77	6.3	1.66
Aluminum and articles thereof	D76	1.3	0.30	2.9	0.80	11.7	2.25
Miscellaneous articles of base metal	D83	0.2	0.10	0.3	0.35	0.8	0.51
Machinery, electrical equipment, TV image and sound recorders, parts, etc.	DXVI	0.1	0.09	0.2	0.20	0.4	0.42
Machinery and mechanical appliances; parts thereof	D84	0.1	0.11	0.4	0.32	0.9	0.68
Spark-ignition internal combustion piston engines (Dec. 2013=100)	D8407	0.0	0.11	0.1	0.38	1.1	1.39
Diesel & semi-diesel internal Cumbus. piston engines (Dec. 2018=100)	D8408	0.0	0.04	0.1	0.20	11.2	1.86
Pumps for liquids; liquid elevators; parts thereof	D8413	0.1	0.11	0.2	0.47	2.3	1.74
Air or vacuum pumps, compressors and fans; vent & recycling hoods; parts	D8414	0.5	0.64	1.3	0.92	4.4	1.35
Centrifuges & filtering/purifying machinery and parts	D8421	0.2	0.51	0.5	0.64	1.2	2.33
Parts for materials handling & construction machines	D8431	0.2	0.12	0.7	0.31	2.8	0.79
Printing mach., machines ancillary to printing; parts thereof (Dec. 2013=100)	D8443	0.2	0.09	0.4	0.19	1.0	0.61
Computer equipment	D8471	0.3	0.42	1.5	0.74	3.9	0.94

Table 6. Variances for U.S. export price indexes for categories of goods: January 2019–December 2019

Description	Harmo- nized system	1-month median absolute percent change	1-month median standard error	3-month median absolute percent change	3-month median standard error	12- month median absolute percent change	12- month median standard error
Machines & appliances having individual functions, n.e.s.o.i.; parts thereof	D8479	0.0	0.03	0.8	0.50	1.6	0.85
Taps, cocks, valves & similar appliances; parts thereof	D8481	0.1	0.12	0.3	0.36	3.8	1.28
Electrical machinery and equipment and parts and accessories thereof	D85	0.1	0.10	0.3	0.16	0.6	0.33
Electrical apparatus for line telephony or line telegraphy; videophones; parts	D8517	0.2	0.12	0.4	0.26	1.8	0.53
Electrical circuit switching, protecting or connection app of 1000 volts or less	D8536	0.1	0.11	0.3	0.24	1.0	0.56
Electric control or distribution equipment (Dec. 2016=100)	D8537	0.1	0.05	0.2	0.10	0.4	0.30
Semiconductors; L.E.D.s; mounted crystals; parts thereof (Dec. 2017=100)	D8541	0.1	0.18	0.8	0.56	1.5	0.66
Electronic integrated circuits and micro assemblies; parts thereof	D8542	0.0	0.13	0.3	0.65	1.0	1.13
Vehicles, aircraft, vessels and associated transport equipment	DXVII	0.1	0.04	0.2	0.10	1.4	0.24
Motor vehicles and their parts	D87	0.1	0.06	0.2	0.16	0.3	0.42
Automobiles and other motor vehicles inc minivans, 4-dr specialty vehicles	D8703	0.2	0.12	0.1	0.26	0.4	0.86
Motor vehicles for the transport of goods	D8704	0.1	0.05	0.3	0.16	1.2	0.32
Parts and access of tractors, buses automobiles, trucks, spec. vehicles	D8708	0.2	0.08	0.6	0.19	0.3	0.57
Parts, nesoi, of civil aircraft and spacecraft (exc. military)	D8803	0.1	0.06	0.6	0.30	3.3	0.99
Optical, photo, measuring, medical & musical instruments; & timepieces	DXVIII	0.2	0.11	0.3	0.35	0.5	0.68
Instruments/appliances used in medical surgical, dental, veterrarian sciences	D9018	0.2	0.17	0.6	0.33	1.0	0.63
Hearing aids; artificial body parts; and orthopedic app. (Dec. 2001=100)	D9021	0.4	0.09	1.9	0.42	3.3	2.66
Instruments and apparatus for physical or chemical analysis	D9027	0.1	0.11	0.1	0.22	1.9	0.36
Measuring or checking instruments, and appliances n.e.s. (Dec. 2001=100)	D9031	0.2	0.26	0.6	0.59	1.7	1.17
Miscellaneous manufactured articles	DXX	0.1	0.11	0.2	0.28	0.2	0.50
Furniture; stuffed furnishings; lamps and lighting fittings nesoi;	D94	0.1	0.09	0.2	0.29	0.8	0.64
Seats other than barber, dental and similar chairs (Dec. 2011=100)	D9401	0.0	0.00	0.0	0.01	0.6	0.29
Toys, games and sports equipment; parts and accessories thereof	D95	0.2	0.11	0.4	0.41	0.9	0.38

Footnotes

(1) Index calculated using strictly alternative price data from one or more secondary sources. Indexes calculated using this method will have standard error values of zero.

(2) Index calculated using a mix of directly collected price data and alternative price data from one or more secondary sources. Indexes calculated using this method will have low standard error values.