Supporting Statement

U.S. Import and Export Price Indexes

A. JUSTIFICATION

1. Necessity of the U.S. Import and Export Price Indexes

The U. S. Import and Export Price Indexes, together with the Consumer Price Index and the Producer Price Index, constitute the major outputs of the price programs of the Bureau of Labor Statistics. Although the International Price Program (IPP), which produces the U. S. Import and Export Price Indexes, is the Bureau of Labor Statistics' newest price program, it can trace its origins to the late 19th Century. In 1886, the Aldrich Committee of the U.S. Senate recommended the establishment of a Bureau of Labor to provide statistics on the condition of U.S. workers and the prices of imported goods in the U.S. and other countries. The committee sent staff members to other countries, principally in Western Europe, to collect prices and in 1889 published a report comparing prices in the U.S. with those of Western Europe. This report, which focused on prices for goods imported into the U.S., was the precursor of the Wholesale Price Index. Following World War II, the BLS again began a program to develop import and export price indexes. The program advanced to the point where hundreds of prices had been collected from importers and exporters and test indexes had been calculated. Because of a Bureau-wide 50 percent budget reduction, however, the program was terminated in 1948.

In 1961, a report on Federal Price Statistics prepared by the National Bureau of Economic Research (NBER) for Congress' Joint Economic Committee suggested that responsibility for compilation of import and export price indexes be assigned to a federal statistical agency "to obtain the attention and resources for these indexes that we believe are essential." A further study undertaken for the NBER by Irving Kravis and Robert Lipsey gave greater impetus to the project. In their study, eventually published as Price Competitiveness in World Trade, Kravis and Lipsey outlined both the need for such measures and the feasibility of producing them. In the meantime the BLS, largely because of its expertise in the development of other price measures, had also begun research on the feasibility of producing import and export price indexes. In 1970, Congress provided funds for the construction of import and export price indexes. The legal authority for the collection of import and export data is contained in Title 29, Section 2 of the United States Code (Attachment 1).

The first export price indexes, published in 1971, showed annual price changes for selected categories of goods, primarily machinery and transportation equipment for the period 1964-71. The first annual import price indexes were produced in 1973. Largely as a response to changing international economic conditions and the need on the part of both the government and the private sector to obtain these data on a more timely basis, collection and publication of the international price indexes were begun on a quarterly basis in 1974. A general index for all-import goods was published for the first time in the fourth quarter of 1982 and an index for all-exports was first available at the end of 1983.

The expansion of international trade and improvements in the design of the IPP survey led the Office of Management and Budget (OMB) in 1982 to place the IPP indexes on its list of Principal Federal Economic Indicators, alongside the Consumer Price Index (CPI) and the Producer Price Index (PPI). Economic indicators placed on this list must be released on schedule and are recommended for use in public and private sector economic analysis.

The increasing importance and value of the IPP's indexes led to requests for monthly indexes in 1988 from OMB and several other policy-making government agencies. To fill this need, the IPP initiated an effort in late 1988 to provide these agencies with monthly indexes for all-imports, all-exports, and certain highly-aggregated import and export product groupings. Using a subset of data from the regular quarterly sample, the Program began publishing these indexes in February 1989. Because of continuing interest from OMB and other government agencies and because of the need to deflate monthly GDP figures using IPP indexes, the IPP now collects all of its data for goods on a monthly basis.

In 1992, the IPP began publishing import price indexes delineated by locality of origin (LOO) and has substantially expanded this set of data from two country breakouts (Canada and Japan) and three regional breakouts (European Union, Latin America, and Asian Newly Industrialized Countries). In 2005, ongoing customer interest prompted the IPP to expand this list, adding LOO price indexes for France, Germany, the United Kingdom, Mexico, the Pacific Rim, China, the Association of Southeast Asian Nations, and Asia Near East countries. In 2009, the IPP began publishing data on commodities from Mexico in more detail, adding LOO price indexes for both non-manufactured and manufactured articles. Three years later, the Program expanded further, adding price indexes for select industry areas. In total, 249 LOO price indexes were added across the various localities, including 31 new price indexes for imports from China and 20 new price indexes for imports from the European Union.

In the realm of services, the IPP publishes indexes on import and export air passenger fares and air freight rates as well as indexes for inbound and outbound air freight rates. The tremendous growth of the international services sector over the last 20 years has created the need for more comprehensive, reliable, and timely information on price trends of international prices. (In 2014, services comprised approximately 16 percent of cross-border imports and approximately 29 percent of cross-border exports.[1]) . In an effort to further fulfill this need, the Program began publishing two new indexes covering Export Travel and Tourism and Export Education in 2007. However, these new series, along with the Inbound Crude Oil Tanker Freight, Inbound Ocean Liner Freight, and Inbound/Outbound Air Passenger Fares indexes can no longer be supported due to budget constraints. Consequently, these indexes were discontinued effective January 2008.

In producing monthly price indexes on goods and services traded between the U.S. and the rest of the world, the International Price Program remains the primary source of data on price changes in the foreign sector.

2. Uses of the U.S. Import and Export Price Indexes

The most critical uses of the IPP indexes are found in the public sector. Major public-sector uses of the IPP indexes include deflating monthly import and export trade statistics, deflating the foreign trade component of Gross Domestic Product, determining monetary and fiscal policy, determining trade and commercial policy, negotiating trade agreements, and escalating government contracts. The prices provided by respondents form the foundation of information necessary to assure that the IPP indexes accurately reflect conditions in the international marketplace. U.S. policy makers must have reliable, accurate statistics to insure that appropriate actions are taken, especially during periods of economic difficulty. When public policy makers have reliable statistics on international trade, they are in a better position to make sound decisions on the regulation and promotion of international trade. These decisions can benefit all internationally active companies.

[1] Excludes “Government goods and services n.i.e.”(Attachment 2)

The IPP produces monthly indexes in order to provide information with which to deflate the monthly merchandise trade data issued by the Department of Commerce. (Attachments 3 and 4 are examples of trade balances issued monthly in "United States Department of Commerce News: U.S. Merchandise Trade".) The resulting real trade flows, obtained by using monthly international price indexes as deflators, enable measurement of real output and provide a more comprehensive understanding of the underlying dynamics of international trade.

The Commerce Department also uses international price indexes to adjust for inflation in the foreign trade sector of its quarterly National Income and Product Account (NIPA). (Attachments 5 and 6 show the constant dollar tabulation of imports and exports from the U.S. Department of Commerce, Survey of Current Business.)

In addition to serving as a tool for the public sector, the Import and Export Price Indexes have a variety of other private sector uses by the media, bankers, financial analysts, academic researchers, and corporate managers. These uses include market analysis, forecasting future price trends, estimating for contract escalation and replacement cost accounting, measuring import price and income elasticity, and estimating exchange rate pass-through values and the effect of currency fluctuations on prices by specific countries or regions.

The Import and Export Price Indexes can also be used in various ways to measure a country's international competitiveness. One method for indicating international competitiveness is through the use of terms of trade indexes. A terms of trade index is defined as an export price index divided by the respective import price index. Because demand for imports and exports are tied to import and export prices, a change in the terms of trade will lead to a change in the trade balance. International competitiveness can also be studied by creating export price comparison indexes that compare one country's export prices against another country's export prices. A third way to look at international competitiveness is by expressing Import and Export Price Indexes in foreign currency terms. Foreign currency import price indexes measure fluctuations in the revenue for foreign sellers in the U.S., and foreign currency export price indexes illustrate how U.S. export prices vary from the perspective of buyers of U.S. goods.

3. Use of Electronic Collection Methods

Historically, the primary interaction between the Bureau and the respondents is through the repricing form:

Attachment 7A: a sample repricing form for exports.
Attachment 7B: a sample repricing form for imports.
Attachment 7C: the mail insert included with all repricing forms mailed to respondents.
Attachment 7D: the 'reminder to reprice' delivered to respondents via e-mail.
Attachment 7E: a 'thank-you' e-mail sent to respondents each year.
Attachments 10A/10B: the letter delivered to respondents when their items are scheduled to be phased out of the IPP survey.
Attachments 11A-11C: brochures detailing how to complete the repricing form, which are included with mailed repricing forms. Prior to the anthrax problems, which curtailed the mail service in October 2001, nearly all IPP repricing data were collected via the mail. Forms were mailed out to respondents and they were returned in BLS-supplied envelopes. As a result of the curtailment of incoming mail, the

program discontinued this method of data collection and switched entirely to mailout/fax back of nearly all forms.

In 2003, the IPP introduced a web application for monthly data collection. (Attachments 8A-8E contain instructions and temporary account/password e-mails for providing prices via the web. Attachment 8F is the 'time to reprice' e-mail sent to web respondents and Attachments 8G and 8H are the reminder e-mails for web respondents who have not yet provided data. Attachments 8I and 8J show screen shots of the web application.) This tool permits respondents to directly update their data online via the internet. Web collection has expanded rapidly since the IPP started soliciting respondents in 2003 and is now the primary repricing method. As of March 2015, 89 percent of IPP respondents were actually providing prices via the web application or had agreed to start using this method. Currently, Field Economists offer this option to all new respondents, and at initiation, it is the preferred method of collection offered to companies.

Of the remaining respondents, the majority reprice using the mailout/fax back process while a small percentage provide data via non-automated phone, special arrangements between the analysts and the respondents, or e-mail. The e-mail option was broadened in 2008 with the introduction of an e-mail repricing application which generates the repricing form in an Excel spreadsheet as an attachment in a corresponding e-mail prompting the respondent to provide prices. (Attachment 9A is the 'notification to reprice' e-mail sent to respondents using this repricing method and Attachment 9B is a sample Excel spreadsheet containing repricing data.) Respondents using this repricing method include their price information in the Excel document and return it via e-mail. This collection method is not offered to respondents by Field Economists during initiation but is used by Industry Analysts at the National Office as a last resort for securing respondent cooperation. However, e-mail repricing has the possibility of expanding, depending upon how data security issues are handled in the Bureau.

Over time, these various electronic data collection methods for repricing have permitted the Program to collect and publish monthly information more rapidly. Each month the IPP is the first BLS price series to be published.

Respondent Burden

The IPP has implemented several changes over the years to reduce burden on IPP respondents, especially those companies which are major traders and account for a significant portion of international trade.

In 2003, the Program implemented an enhanced refinement process that provides Industry Analysts the ability to reduce the burden for a respondent when it is needed, and in 2004, the IPP began providing Field Economists with more accurate information about the potential overlap between establishments that are in both the IPP and the Producer Price Index. This information allows the Field Economists to better coordinate visits to establishments to obtain new items for repricing, ensuring that the IPP is adhering to requests from establishments about the timing of visits. Also in 2004, the Program modified its second stage selection algorithm to lower the selection probability of infrequently traded Sampling Classifications Groups (SCGs) (since they are more likely to be out-of-scope for the IPP). SCGs which are frequently traded are easier for respondents to identify during initiation. In 2007, the IPP completed a study aimed at reducing Out Of Scope rates, which upon implementation of the various proposals have also helped to reduce respondent burden.

In 2009, the Program implemented changes to the web repricing application to reduce burden on IPP respondents providing prices via the internet. Rather than requiring the respondent to type in an account number, the system was modified to automatically display the account number upon accessing the log-on screen via the link in the 'time to reprice' email. (Attachment 8I shows the logon screen in the web repricing application and Attachment 8F is the 'time to reprice' e-mail sent to web respondents.) The IPP also added functionality for providing general comments which apply to all of a respondent's items (rather than the respondent having to retype the comment for all applicable items) and for having one related party copied on all e-mails sent to respondents using web repricing. (The latter enhancement prevents the respondent from having to forward repricing-related e-mails to other contacts within the company.)

In 2011, the Program implemented two new downtime messages for web repricing. One appears during 6:30-7AM daily and notifies the web respondents that the web survey is down for maintenance between 6:30-7AM and to return to the site in 30 minutes. (Attachment 8J) The other is for web respondents that are in the survey when the downtime occurs and notifies them that any data entered up until that point in the session has not been saved. (Attachment 8J) They are also asked to return to the site in 30 minutes.

More recently, the Program facilitated the registration process for respondents who are currently using web repricing to provide prices for the Producer Price Index (PPI) and who have also been initiated to provide prices (online) for the IPP. The new process allows these multi-program respondents to self-register following the steps outlined in a pamphlet (Attachment 8C). Under the old process, IPP staff had to work with PPI staff on technical changes before multi-program respondents could set up and start web repricing for the IPP. Respondents therefore had to wait (multiple days) for an IPP staff member to contact them and walk them through the web repricing set-up.

The IPP also continues to reduce burden for web respondents through system enhancements and recently implemented the following system updates:

- On the Edit Price Adjustments page, the display of values for amount and percent was changed from two to four decimal places (i.e. "x.xxxx"). Previously, some respondents had to round price adjustments (such as discounts) because of system limitations.

- If a respondent enters a price of zero, the system now blanks out the price and instructs them to enter a price greater than zero or to check the 'not traded' box. Previously, the system accepted zero prices but these instances required follow-up by an analyst.

The Program also continues its multi-year effort to develop a more effective sampling and collection strategy for companies that are considered major importers or exporters. Research has shown that, while hundreds of thousands of companies import and export goods into and from the United States each year, the volume of trade (in terms of dollar value) is heavily concentrated on a very small percentage of these companies. The IPP is developing a plan for conducting a pilot for a limited set of major companies. This approach would reduce burden by avoiding continual visits that are part of the current sampling strategy.

4. Efforts to Identify Duplication

The U.S. Customs and Border Protection collects data on the value of all U.S. imported goods and the U.S. Census Bureau collects data on the value of all U.S. exported goods. Until 1989, the Department of

Commerce used these data to construct unit value indexes. These indexes have been shown to be inadequate and were discontinued in October 1989. Since then, the IPP Indexes are the sole comprehensive price indexes for imports and exports.

In order to reduce costs and duplication, the Program uses secondary source data. For example, the IPP survey does incorporate Department of Agriculture, Department of Energy, and certain other published market data in selected areas of goods and services. Generally, similar data which exist in the field of international prices cannot be used in lieu of the data collected by the IPP survey because the only "similar" data (trade journal prices and the former Department of Commerce unit value indexes) are the same ones whose deficiencies prompted the creation of the IPP survey.

5. Impact on Small Businesses

The sampling procedures used by the IPP tend to select firms that are high-volume, regular traders in a product or service area. This technique minimizes the chances of small organizations being selected to report data for more than one or two items.

6. Consequences of Less Frequent Collection of the U.S. Import and Export Price Indexes

The International Price Program indexes are closely followed statistics which are viewed as a sensitive indicator of the economic environment. Federal policy-makers in the Department of Treasury, the Council of Economic Advisors, the Bureau of the Census, the Bureau of Economic Analysis, and the Federal Reserve Board utilize these statistics to form and evaluate monetary and fiscal policy and the general business environment. These agencies use the monthly index information to deflate trade statistics to produce real, as opposed to the current nominal, trade flows. These real figures help to improve the agencies' formulation and evaluation of monetary and fiscal policy and the general business environment. Failure to provide current data would tend to delay recognition and adaptation time to economic events.

7. Special Circumstances

All IPP data for goods and services are collected and published on a monthly basis. This monthly collection and publication of price data enables the Department of Commerce to produce monthly merchandise trade flow figures adjusted for inflation.

In order to meet our publication deadlines, the IPP requests that its respondents return the monthly price information forms within a week after receipt. Currently, the IPP Press Release is typically published during the second week of the month following the reference period.

The International Price Program does not request duplicates of any document.

The IPP does not require respondents to retain records of any kind, for a period of any duration.

The IPP is designed to produce valid and reliable results that can be generalized to the universe of study.

The IPP indexes are based on established classification systems.

The IPP collects confidential price data. These data are for internal BLS use only, to construct price indexes.

8. Efforts to Address Comments on Data Collection

Several comments were received as a result of the Federal Register Notice published in 80 FR 28011 on May 15, 2015.

The Bureau of Economic Analysis (BEA) commented that it supports the continuation of the International Price Program since it is the only data source for several key components of BEA's economic statistics. BEA uses information from the IPP indexes in preparing "real" estimates of most components of exports and imports of goods, imports of equipment and software, and imports in inventories in the national income and product accounts. The indexes available for services are used to prepare estimates of real exports and imports of services. Also, the end-use import price indexes are used to prepare annual estimates of real gross domestic product by industry.

The Friends of Labor Statistics (FLS), an informal network of organizations and individuals reliant on BLS statistics, expressed support for continuation of the IPP and commented on the necessity of the Import and Export Price Indexes for the proper performance of the functions of the BLS and of various other federal agencies and entities, including but not restricted to the Bureau of Economic Analysis and Bureau of the Census (Commerce Department), various agencies of the Treasury Department, the Board of Governors of the Federal Reserve Bank, the President's Council of Economic Advisors, and the Congressional Budget Office. The FLS further commented that the indexes and their purposes are "practical" and indispensable, noting that they are important components of the calculation of the Gross Domestic Product (GDP) and inflation-adjusted trade flows; critical to trade policy and monetary policy decision-making; and essential in calculating the U.S. Balance of Trade, the Terms of Trade for U.S. competitiveness, and the National Income and Product Accounts for the United States. In addition, the FLS remarked that there is no good substitute for the Import and Export Price Indexes, explaining that the indexes are unique because only the BLS survey permits construction of a *trade-specific* price index constructed from a traded set of goods and services that can be very different from the set of *all* goods and services produced in the U.S.

Dr. Andrew Reamer, a Research Professor at the George Washington Institute of Public Policy, commented that he supports an extension of the program, on the basis that the Import and Export Price Indexes provide information critical to federal decision-making on trade and economic policies and to the competitive strategies of U.S.-based establishments. In addition, Dr. Reamer inquired about innovative approaches to data collection, specifically if and when BLS plans to enhance its collection of import and export price data by expanding beyond surveys of importers and exporters to include non-survey forms of data collection, such as "web scraping." Currently, the BLS does not use any form of "web scraping" to collect data for the Import and Export Price Indexes. The IPP does use some non-survey data to collect information from secondary sources to price import petroleum, import air passenger fares, export grain, and select metals. There is research underway in the Bureau to investigate the feasibility of using "web scraping" data to enhance data collection. The IPP continues to monitor the results of that study to see if the process could be utilized to collect import and export price data. One complication is the ability to hold the item specifications constant from month-to-month in order to both quality adjust for any enhancements and to separate price changes from item specification changes.

Dr. Reamer also inquired about the value of the Import and Export Price Indexes to federal efforts to map global value chains (GVCs) and measure trade in value-added (TiVA). He asked that BLS identify the value provided by the current indexes to federal efforts to map GVCs and measure TiVA; the extent to which the current indexes are insufficient for the task of accurately mapping GVCs and measuring TiVA;

and the nature of steps required of BLS, the Department of Labor, OMB, and Congress, if they were to address any shortfalls. BLS staff are aware of the efforts by the International Trade Commission and the Bureau of Economic Analysis to map Global Value Chains and measure trade in value-added between the United States and other nations. We have not done any research into the potential use of import and export price index data towards those efforts. A related topic that BLS has looked into is the feasibility of producing input price indexes; however, resources are not currently available for a pilot study.

The IPP survey reflects inputs that have been provided by a wide range of organizations and individuals over the years. The original recommendations for the IPP survey grew out of the 1961 report sponsored by the Joint Economic Committee of the Congress. This information has been updated and maintained via regular contact with BLS's Business and Labor Research Advisory Councils, Federal Statistical Users Conferences, numerous international conferences, and ongoing meetings with the various Federal Agencies which use the IPP data for analysis. Users include offices of the Departments of Labor, Commerce, Treasury, and Energy, as well as the Congressional Budget Office and the Federal Reserve Board.

Since the Program involves a continuing rotation of industries and sampling units, contacts are conducted in person with trade groups and a number of individual businessmen. The IPP survey is voluntary and may be susceptible to nonresponse. It therefore requires that the ideas on survey design, survey operations and data presentation offered by these sources be studied carefully and instituted when possible.

9. Payment to Respondents

The IPP does not provide any payment or gift to its respondents.

10. Assurance of Confidentiality

The Confidential Information Protection and Statistical Efficiency Act of 2002 (CIPSEA) safeguards the confidentiality of individually identifiable information acquired under a pledge of confidentiality for exclusively statistical purposes by controlling access to, and uses made of, such information. CIPSEA includes fines and penalties for any knowing and willful disclosure of individually identifiable information by an officer, employee, or agent of the BLS.

Based on this law, the BLS provides respondents with the following confidentiality pledge/informed consent statement:

The Bureau of Labor Statistics, its employees, agents, and partner statistical agencies, will use the information you provide for statistical purposes only and will hold the information in confidence to the full extent permitted by law. In accordance with the Confidential Information Protection and Statistical Efficiency Act of 2002 (Title 5 of Public Law 107-347) and other applicable Federal laws, your responses will not be disclosed in identifiable form without your informed consent.

BLS policy on the confidential nature of respondent identifiable information (RII) states that "RII acquired or maintained by the BLS for exclusively statistical purposes and under a pledge of confidentiality shall be treated in a manner that ensures the information will be used only for statistical purposes and will be accessible only to authorized individuals with a need-to-know."

11. Justification for Collection of Sensitive Data

As part of the disaggregation process (conducted during initiation), Field Economists request company trade data (required to assign measures of size for disaggregation) which some respondents consider sensitive information. To alleviate their concerns, Field Economists explain that the purpose of the disaggregation process is to identify a single (or very few) specific goods or services for pricing and inform them of BLS' policies concerning confidentiality. In IPP's experience, these records and discussions with the Field Economists alleviate any serious concerns.

Additionally, price information and whether prices are representative of intracompany transfers (both requested during initiation and on form 3007D in repricing) are also considered sensitive information by some respondents. Again, Field Economists (during initiation) and Industry Analysts (during repricing) inform them of BLS' policies on confidentiality to alleviate any concerns. (Note also that the IPP conducted a study which found no significant difference in the trends for non-market based transfer prices and those at arm's length. This conclusion prompted the IPP to begin including all transfer prices in index calculation beginning with the February 1998 indexes.)

12. Estimate of Respondent Burden

Average person-hours per response is estimated separately for initiation and for repricing.

For initiation, which requires an interview with a BLS data collector, the information is entered directly into a laptop computer. (Attachment 12 contains screenshots from this application.) Form 3008 (Attachment 13), the B form (Attachment 14), and checklists based on the Harmonized manual are all used by BLS data collectors during initiation. (Attachment 15 is a sample checklist. The IPP has checklists covering all Harmonized and Schedule B product areas excluding chapters[2] 86, 97, 98, and 99. For import chapters and descriptions, go to http://www.usitc.gov/2015_htsa_basic_edition.htm. For export chapters and descriptions, go to http://www.census.gov/foreign-trade/schedules/b/2012/index.html. Note that the IPP plans to submit a non-substantive change request later this year for a revised checklist.) The response burden estimate is based on field collection experience. Response burden varies depending on the size of the company, the number and variety of goods or services traded in the establishment, and the types of records kept. Thus far in the survey, which has been carried out at small, medium, and large size establishments, the respondent burden for initiation averaged approximately one hour.

For repricing, which is an update to price data previously provided by the respondent (using either the online data collection application or completing the mailed form), the burden estimate is based on internal testing and BLS experience in earlier samples. (Attachment 7A is a sample repricing form and Attachments 8I and 8J show screenshots from the web repricing application.) The burden varies from one minute for routine updates of prices for unaltered goods or services, to thirty minutes for reporting changes in product or service specifications or substitution of models within a product or service line. The IPP estimates that it takes approximately 5 minutes, on average, to reprice one item.

Companies and establishments of all employment sizes, including those with fewer than 100 employees, are covered in the samples. This comprehensive coverage is necessary to avoid bias and assure that the sample is representative of the universe of exporters/importers. Small companies, collectively, have substantial weight in the price-forming universe, and the evidence suggests that the pricing behavior of

[2] The Harmonized Tariff Schedule and Schedule B are organized into sections and chapters. A chapter is a collection of similar products, aggregated at the two-digit level. For example, chapter 26 is reserved for 'Ores, slag and ash,' and chapters 25-27 make up section V ("Mineral Products").

small companies is different from that of large companies. Therefore, the smaller units need to be directly surveyed.

The sample sizes and estimated annual respondent burden for FY 2016, FY 2017, and FY 2018 are shown on the following pages. Data on exports and imports are calculated separately for analysis purposes.

EXPORTS

	Total Annual Responses					Estimated Total Hrs of Annual Burden				
	Number of Respondents (end of FY)[3]		**Frequency of Response Per Year**		**Total Annual Responses**	**Total Annual Responses**		**Estimated Avg # of Hrs Per Response**		**Estimated Total Hrs of Annual Burden**
Fiscal Year 2016										
Initiation[4]	1200	x	1	=	1200	1200	x	1	=	1200
Repricing[5]	1950	x	9.0[6]	=	17550	17550	x	0.4022[7]	=	7059
Total Burden	3150				18750	18750				8259[8]
Fiscal Year 2017										
Initiation	1200	x	1	=	1200	1200	x	1	=	1200
Repricing	1950	x	9.0	=	17550	17550	x	0.4022	=	7059
Total Burden	3150				18750	18750				8259
Fiscal Year 2018										
Initiation	1200	x	1	=	1200	1200	X	1	=	1200
Repricing	1950	x	9.0	=	17550	17550	X	0.4022	=	7059
Total Burden	3150				18750	18750				8259

[3] These numbers are estimates subject to change due to differing relative values of U.S. imports and exports and to variations in response rates.

[44] Initiation refers to the initial collection of data to be used in repricing. Totals include the Field Economist's visit to the company as well as the time spent to select items for repricing using the disaggregation sheet (form 3008, Attachment 13) .

[5][5] Repricing refers to the update of price information previously provided by the respondent. The web application (Attachments 8I and 8J) is the primary means of repricing but all collection types (mail out/fax back, telephone, e-mail, etc.) are included in these totals.

[66] During initiation, the respondent determines how many months data will need to be supplied in a given year based upon how often prices change. On average, export and import companies are requested to supply information 9.0 months/year and 8.8 months/year, respectively.

[77] The average burden to reprice is currently estimated at 5 minutes per item, based upon internal testing. On average, an export respondent submits price data on 4.826 items. Thus, the average response time is 5 minutes x 4.826 items = 24.130 minutes = 0.4022 hours.

[88] Rounded to the nearest hour.

IMPORTS

	Total Annual Responses					Estimated Total Hrs of Annual Burden				
	Number of Respondents (end of FY)		**Frequency of Response Per Year**		**Total Annual Responses**	**Total Annual Responses**		**Estimated Avg # of Hrs Per Response**		**Estimated Total Hrs of Annual Burden**
Fiscal Year 2016										
Initiation	1800	x	1	=	1800	1800	x	1	=	1800
Repricing	3000	x	8.8	=	26400	26400	x	0.4260[9]	=	11246
Total Burden	4800				28200	28200				13046[10]
Fiscal Year 2017										
Initiation	1800	x	1	=	1800	1800	x	1	=	1800
Repricing	3000	x	8.8	=	26400	26400	x	0.4260	=	11246
Total Burden	4800				28200	28200				13046
Fiscal Year 2018										
Initiation	1800	x	1	=	1800	1800	x	1	=	1800
Repricing	3000	x	8.8	=	26400	26400	x	0.4260	=	11246
Total	4800				28200	28200				13046

[9] The average burden to reprice is currently estimated at 5 minutes per item, based upon internal testing. On average, an import respondent submits price data on 5.113 items. Thus, the average response time is 5 minutes x 5.113 items = 25.565 minutes = 0.4260 hours.

[10] Rounded to the nearest hour.

Burden	

	Number of Respondents (Summary)			Burden summary		
	Initiation	Repricing	Initiation + Repricing	Initiation	Repricing	Initiation + Repricing
Imports	1800	3000	4800	1800	11246	13046
Exports	1200	1950	3150	1200	7059	8259
Total	3000	4950	7950	3000	18305	21305

Respondent burden costs for monthly data collection for the periods covered by this clearance package are as follows:

EXPORTS			
Fiscal Year	Total Hours Burden	Average Hourly Pay	Annualized Cost of Burden
2016	8,259	$52.76	$435,745
2017	8,259	$53.98	$445,821
2018	8,259	$55.23	$456,145

IMPORTS			
Fiscal Year	Total Hours Burden	Average Hourly Pay	Annualized Cost of Burden
2016	13,046	$52.76	$688,307

2017	13,046	$53.98	$704,223
2018	13,046	$55.23	$720,531

In the fourth quarter of 2014, the average hourly total compensation for management, professional, and related employees in private industry was $54.95. The average hourly total compensation for sales and office employees was $24.10. Thus, a weighted average hourly total compensation rate of $51.56 was derived[11]. This weighted average was then updated for the first quarter of 2015 using the quarterly percent change in the Employee Cost Index (ECI) of the BLS[12]. Estimates for 2016, 2017, and 2018 were derived by calculating the weighted average annual percent change in ECI for both categories and applying it to subsequent years[13]13. These numbers would make the hourly total $52.76 for 2016, $53.98 for 2017, and $55.23 for 2018.

13. Total Annual Cost to Respondents

Since the IPP offers mailout/fax back collection, respondents need no special equipment or technology for collection of this information; the company's methods for maintaining its records are incidental to the IPP survey. Respondents' total annual capital costs (both the total capital and start-up cost component and the total operation and maintenance and purchase of services component) relative to the IPP survey are $0.

14. Total Annual Cost to Federal Government

For FY 2015, the collection and publication for data for the IPP Survey (both imports and exports) will cost approximately $21 million. BLS spends approximately 70 percent of this amount on Federal employee compensation and benefit costs.

15. Explanation of Changes in Respondent Burden

The annual number of responses decreased slightly for both exports and imports because of fewer respondents in Repricing, mostly the result of smaller sample sizes in previous years. Budget cuts resulted in a reduction in Field Economists which forced IPP to scale back the number of companies selected for sampling. The resulting reduction in respondents at Initiation was captured with the calculations for FYs 2013-15 (submitted in the 2012 OMB clearance package). However, the number of respondents in Repricing is impacted by the past number of respondents in Initiation. Given this lag, we are only now capturing the decline in the number of respondents in Repricing resulting from smaller sample sizes in previous years.

Annual time burden increased because of an increase in the frequency of responses per year, for both imports and exports. Although IPP generally prefers to collect prices on a monthly basis, respondents

[11] Approximately 89 percent of IPP respondents can be categorized as a management, professional or related employee in private industry while about 11 percent can be categorized as a sales or office employee.

[1312] The three-month ECI for management, professional, and related employees in private industry was 0.5 and for sales and office employees in private industry was 0.8 percent. See footnote 11 for additional info related to the following calculation: (0.5 x .89) + (0.8 x .11) = 0.53 percent change in ECI of the BLS.

[13] The 12-month ECI for management, professional, and related employees in private industry in the last quarter of 2014 was 2.3 percent; the 12-month ECI for sales and office employees in private industry was 2.4 percent. See footnote 11 for additional info related to the following calculation: (2.3 x 0.89) + (2.4 x 0.11) = 2.31 (weighted avg percent change in ECI per year, for both categories).

set their own repricing schedules based upon how frequently and when price changes occur for their items, as well as how often they are willing to provide price information. The IPP believes that respondents are choosing to reprice more frequently because of the ease and convenience of web repricing (over submitting hard copies of the repricing form). In the 2009 OMB clearance package, IPP noted that 65 percent of respondents were using web repricing and by 2012, that number had jumped to 82 percent. It is now at 89 percent.

Annual cost burden also increased due mostly to higher average hourly pay rates (calculated by BLS' Employment Cost Index) for both management, professional, and related employees and for sales/office employees. Increased annual time burden also contributed.

Note that the IPP did not implement any new policies or collection procedures which contributed to the increases for annual time burden or annual cost burden.

16. Publication of U.S. Import and Export Price Indexes

The merchandise price indexes are published using three different classification systems: the Harmonized System (HS), the Bureau of Economic Analysis End Use System (End Use), and the Foreign Trade North American Industry Classification System (NAICS). Since services are not covered in the published classification systems used for merchandise trade, price indexes for internationally traded services are published using two other definitions: the Balance of Payments (BOP), which represents transactions between U.S. and foreign residents; and international services indexes, which represent transactions "inbound to" and "outbound from" the U.S.

The HS classification system is used for sampling, weighting, and the collection of data. Each published product group is composed of classification groups, constructed from homogeneous or related product categories in the Harmonized TSUSA or Schedule B classifications. Index aggregation weights are now revised on a yearly basis which reflects the constantly changing patterns of international trade more accurately. For the IPP's goods indexes, the aggregation weights at the stratum[14]14and detailed classification group levels consist of the universe trade dollar value totals that are published by the Bureau of the Census. Changes affecting the weights of products in the basket of goods bought and sold in foreign markets are now made every January, beginning in 2004, and reflect shifts in trade patterns from two years earlier. All services indexes are now also reweighted each January and reflect shifts in trade patterns from two years earlier. The IPP began annual reweighting of Air Passenger Indexes in January 2007 and of Air Freight Indexes in January 2009.

Repricing forms can be mailed to respondents who are using the mailout/fax back collection as early as one business day prior to the first day of the pricing month but no later than the first week of the pricing month. (Attachment 7A is a sample repricing form and Attachment 7C is the insert included with all mailed repricing forms.) Respondents providing data via the web receive a notification to reprice on the second business day of the reference month (Attachment 8F). Data collection continues for five weeks; the indexes are released approximately one week later. Schedules which are sent to the Regional Offices for initiation may remain in the Regional Offices for up to 15 months.

The IPP data are published in a monthly news release that includes a description of some of the highlights of import and export price movements over the past month. The release also includes tables

[14][14] IPP uses the term "stratum" (pl. "strata") to refer to a grouping of one or more classification groups which are homogenous with respect to some characteristic and may experience similar price trends.

that detail aggregate price indexes for each of the published classification systems. (An IPP news release is included as Attachment 16.) The release dates are announced in July of the previous year and are available online at http://www.bls.gov/schedule/news_release/ximpim.htm. In addition to the news release, the IPP publishes more detailed tables that contain indexes and percent changes over the past four months for each of the program's published indexes. The IPP also offers full historical tables (http://www.bls.gov/web/ximpim.supp.toc.htm#long_tables) that show the index values for each published stratum dating back to when the series was first published. IPP outputs are available to the public by e-mail (using the BLS News Service) or on the internet http://www.bls.gov/mxp/). Detailed analyses using international prices are also published periodically in the Monthly Labor Review and as *Beyond the Numbers* articles. (Attachment 17 is an article which references IPP data and which has been published in the Monthly Labor Review, accessible at http://www.bls.gov/opub/mlr/. Attachment 18 is a *Beyond the Numbers* article which references IPP data and which is available on the BLS website at http://www.bls.gov/opub/btn/.)

17. Request to Not Display Expiration Date

The International Price Program requests authorization to not display the expiration date for OMB approval on the disaggregation worksheet (form 3008). This exemption would result in substantial savings in printing costs.

18. Exception to Certification Statement

Since the IPP is a voluntary survey and it imposes no recordkeeping requirement for respondents, the IPP does not indicate a retention period for recordkeeping requirements.

B. DESCRIPTIONS OF INFORMATION COLLECTION EMPLOYING STATISTICAL METHODS

The following paragraphs summarize the primary features of the sampling and statistical methods used to collect data and produce estimates for the IPP Export and Import series. Additional technical details are provided in Chapter 15 of the BLS Handbook of Methods (http://www.bls.gov/opub/hom/homch15_a.htm) and the Sampling and Index Construction Concepts papers, which are internal BLS reports and are available upon request.

1. Universe and Sample Size

The target universe of the import and export price indexes consists of all goods and services sold by U.S. residents to foreign buyers (exports) and purchased from abroad by U.S. residents (imports). However, items for which it is difficult to obtain consistent time series for comparable products (such as works of art) are excluded, as are goods purchased specifically for military use.

The import and export price indexes are calculated from prices submitted on a monthly basis by sampled establishments that agree to participate in the IPP's Import/Export Price Index Survey at initiation. Thus, the IPP collects data from sampled establishments at initiation and during monthly repricing.

In the following, the unweighted response rates are presented for initiation and repricing.

The unweighted establishment quote response rate and frame error rate are equal to:

$$\text{Unweighted Response Rate} = \frac{\text{COOP}}{\text{COOP} + \text{REF}}$$

$$\text{Frame Error Rate} = \frac{\text{OOB} + \text{OOS}}{\text{OOB} + \text{OOS} + \text{COOP} + \text{REF}}$$

where:

COOP = the number cooperative quotes;
REF = the number of quotes coded as refusals;
OOS = the number of out-of-scope quotes; and
OOB = the number of out-of-business quotes

The unweighted establishment response rate and frame error rate are equal to:

$$\text{Unweighted Response Rate} = \frac{\text{COOP}}{\text{COOP} + \text{REF}}$$

$$\text{Frame Error Rate} = \frac{\text{OOB} + \text{OOS}}{\text{OOB} + \text{OOS} + \text{COOP} + \text{REF}}$$

where:

COOP = the number of establishments with at least one cooperative quote;
REF = the number of establishments with no cooperative quotes and at least one quote coded as a refusal;
OOS = the number of establishments with no quotes coded as cooperative or as refusals and with at least one quote coded as out-of-scope; and
OOB = the number of establishments with all quotes coded as out-of-business

EXPORTS

To meet the demanding requirements of the IPP in the environment of the constantly changing composition of international trade requires thoughtful statistical procedures. The universe consists of the total set of export prices. The number of establishments exporting products or services from the United States in the universe is approximately 500,000. In 2015, the overall sample for ongoing repricing of exports for the IPP is approximately 1,950 exporters with 17,550 annual prices/responses. Approximately 9.0 quotation prices are sampled within each exporter with a resultant average of 4.826 prices collected from each responding exporter. There are approximately 150 product category strata[12] in the export sample design.

[12] IPP uses the term "stratum" (pl. "strata") to refer to a grouping of one or more classification groups which are homogenous with respect to some characteristic and may experience similar price trends.

Export Response Rates at Initiation

This section summarizes IPP response rates at initiation for the last two export samples, at both the quote level and at the establishment level.

Unweighted Response Rate at Quote Level			
Outcome	**X37**	**X38**	**Overall**
Cooperative	63.7%	64.8%	64.3%
Refusal	36.3%	35.2%	35.7%

The table above presents unweighted quote response rates at initiation during the last two IPP export samples. The overall initiation response rate for both samples (combined) is approximately 64% excluding out-of-scope and out-of-business quotes. (Quotes considered out-of-scope or out-of-business are not included in the above table as the rates displayed simply indicate whether or not the IPP obtained cooperation.) Approximately 28% of the sampled quotes were either out-of-scope or out-of-business (as indicated in the following table).

Export Quote Counts				
Outcome	**X37**	**X38**	**Overall**	**Percent**
Cooperative	3474	3652	7126	46.6%
Refusal	1982	1980	3962	25.9%
OOB	118	164	282	1.8%
OOS	2145	1777	3922	25.7%
Grand Total	7719	7573	15292	100.0%

The Export Quote Counts table, above, displays the number of quotes from the last two IPP export samples by initiation outcome code. These numbers were used to calculate the unweighted response rates at the quote level.

Unweighted Response Rate at Establishment Level			
Outcome	**X37**	**X38**	**Overall**
Cooperative	79.0%	76.4%	77.7%
Refusal	21.0%	23.6%	22.3%

Unweighted establishment response rates at initiation are presented for the last two IPP export samples in the table above. The overall initiation response rate for both samples (combined) is approximately 78% excluding out-of-scope and out-of-business units. (Units considered out-of-scope or out-of-business are not included in the above table as the rates displayed simply indicate whether or not the IPP obtained cooperation.) Approximately 22% of the sampled units were either out-of-scope or out-of-business (as indicated in the following table).

Export Establishment Counts				
Outcome	**X37**	**X38**	**Overall**	**Percent**
Cooperative	773	744	1517	61.0%
Refusal	205	230	435	17.5%
OOB	22	30	52	2.1%
OOS	289	192	481	19.4%
Grand Total	1289	1196	2485	100.0%

The Export Establishment Counts table, above, displays the number of establishments from the last two IPP export samples by initiation outcome code. These numbers were used to calculate the unweighted response rates at the establishment level.

Export Response Rates for Repricing

Once an establishment agrees to provide price data to the IPP at initiation, each unique item to be repriced for the establishment is loaded into the repricing and estimation portions of the IPP Unified Database. In most cases an item represents a single quote from one sample, but in some cases an item represents multiple quotes from a single sample, or one or more quotes from more than one sample. IPP repricing rates are calculated based on the unique items being repriced.

The following table displays unweighted response rates for the repricing stage from January 2012 – October 2014.

Export Response Rates for Repricing Stage				
Reference Period	**1st Closing**	**2nd Closing**	**3rd Closing**	**4th Closing**
201201	72%	74%	75%	75%
201202	75%	76%	77%	77%
201203	75%	77%	77%	77%
201204	76%	76%	76%	77%
201205	77%	78%	78%	78%
201206	74%	75%	75%	75%
201207	72%	73%	74%	74%
201208	75%	77%	77%	77%
201209	73%	75%	75%	75%
201210	72%	73%	75%	75%
201211	73%	74%	75%	75%
201212	73%	74%	75%	75%
201301	73%	74%	75%	75%
201302	74%	75%	76%	76%
201303	74%	75%	75%	76%
201304	74%	75%	77%	77%
201305	76%	78%	78%	78%

201306	75%	76%	76%	76%
201307	72%	73%	74%	74%
201308	74%	75%	75%	75%
201309	75%	77%	77%	78%
201310	71%	73%	74%	75%
201311	73%	75%	75%	75%
201312	72%	74%	74%	74%
201401	73%	74%	75%	75%
201402	73%	74%	75%	75%
201403	73%	75%	75%	75%
201404	72%	74%	74%	75%
201405	73%	75%	76%	76%
201406	74%	75%	75%	76%
201407	*	*	*	*
201408	*	*	*	*
201409	74%	75%	76%	76%
201410	75%	77%	78%	78%

* The IPP collected and published price indexes for 201407 and 201408. However, data are not available for this report due to system-related problems internal to the IPP.

In the above table, the data for the 1st closing shows the percentage of items for which repricing data had been returned as of the time the index for that reference period was first published. The data for the 2nd closing shows the return rate for the following month—when the data for that period was published for the second time. The response rate for the second closing includes all of the responses from the first closing and all the responses received after the first closing and before the second closing. Data for the 3rd and 4th closings show return rates for the 3rd and 4th (or final) closings when the index for these periods were computed and published. The IPP finalizes the indexes for each time period at the time of the 4th closing, so this is the final rate for the period.

IMPORTS

To meet the demanding requirements of the IPP in the environment of the constantly changing composition of international trade requires complex statistical procedures. The universe consists of the total set of import prices. The number of establishments importing products or services into the United States is approximately 500,000. In 2015, the overall sample for ongoing repricing of imports for the IPP is approximately 3000 importers with 26400 prices/responses. Approximately 8.8 quotation prices are sampled within each importer with a resultant average of 5.113 prices collected from each responding importer. There are approximately 150 product category strata in the import sample design.

Import Response Rates at Initiation

This section summarizes IPP response rates at initiation for the last two import samples, at both the quote level and at the establishment level.

Unweighted Response Rate at Quote Level			
Outcome	**M37**	**M38**	**Overall**

Cooperative	66.1%	66.3%	66.2%
Refusal	33.9%	33.7%	33.8%

The table above presents unweighted quote response rates at initiation during the last two import samples. The overall initiation response rate for both samples (combined) is approximately 66% excluding out-of-scope and out-of-business quotes. (Quotes considered out-of-scope or out-of-business are not included in the above table as the rates displayed simply indicate whether or not the IPP obtained cooperation.) Approximately 23% of the sampled quotes were either out-of-scope or out-of-business (as indicated in the following table).

Import Quote Counts				
Outcome	**M37**	**M38**	**Overall**	**Percent**
Cooperative	6145	6296	12441	51.3%
Refusal	3157	3197	6354	26.2%
OOB	109	254	363	1.5%
OOS	2779	2312	5091	21.0%
Grand Total	12190	12059	24249	100.0%

The Import Quote Counts table, above, displays the number of quotes from the last two IPP import samples by initiation outcome code. These numbers were used to calculate the unweighted response rates at the quote level.

Unweighted Response Rate at Establishment Level			
Outcome	**M37**	**M38**	**Overall**
Cooperative	79.1%	78.9%	79.0%
Refusal	20.9%	21.1%	21.0%

Unweighted establishment response rates at initiation are presented for the last two IPP import samples in the table above. The overall initiation response rate for both samples (combined) is approximately 79% excluding out-of-scope and out-of-business units. (Units considered out-of-scope or out-of-business are not included in the above table as the rates displayed simply indicate whether or not the IPP obtained cooperation.) Approximately 17% of the units sampled are either out-of-scope or out-of-business (as indicated in the following table).

Import Establishment Counts				
Outcome	**M37**	**M38**	**Overall**	**Percent**
Cooperative	1256	1194	2450	65.8%
Refusal	331	320	651	17.5%
OOB	22	46	68	1.8%
OOS	317	239	556	14.9%

Grand Total	1926	1799	3725	100.0%

The Import Establishment Counts table, above, displays the number of establishments from the last two IPP import samples by initiation outcome code. These numbers were used to calculate the unweighted response rates at the establishment level.

Import Response Rates for Repricing

Once an establishment agrees to provide price data to the IPP at initiation, each unique item to be repriced for the establishment is loaded into the repricing and estimation portions of the IPP Unified Database. In most cases, an item represents a single quote from one sample, but in some cases, an item represents multiple quotes from a single sample, or one or more quotes from more than one sample. IPP repricing rates are calculated based on the unique items being repriced.

The following table displays unweighted response rates for the repricing stage from January 2012 – October 2014.

Import Response Rates for Repricing Stage				
Reference Period	1st Closing	2nd Closing	3rd Closing	4th Closing
201201	73%	74%	75%	76%
201202	75%	76%	76%	76%
201203	75%	76%	77%	77%
201204	74%	75%	76%	76%
201205	76%	77%	77%	77%
201206	75%	76%	76%	76%
201207	73%	75%	76%	76%
201208	75%	77%	77%	77%
201209	75%	76%	77%	77%
201210	72%	73%	74%	75%
201211	74%	75%	76%	76%
201212	74%	75%	75%	75%
201301	75%	76%	77%	77%
201302	75%	76%	76%	77%
201303	75%	76%	77%	77%
201304	75%	76%	77%	77%
201305	76%	77%	77%	78%
201306	76%	77%	77%	78%
201307	74%	76%	76%	77%
201308	77%	78%	78%	78%
201309	76%	78%	78%	78%
201310	73%	74%	75%	75%
201311	74%	75%	75%	76%

201312	72%	73%	73%	73%
201401	73%	74%	74%	74%
201402	73%	74%	75%	75%
201403	74%	75%	75%	75%
201404	74%	75%	76%	76%
201405	74%	76%	76%	78%
201406	76%	77%	78%	78%
201407	*	*	*	*
201408	*	*	*	*
201409	75%	77%	77%	77%
201410	75%	76%	77%	77%

* The IPP collected and published price indexes for 201407 and 201408. However, data are not available for this report due to system-related problems internal to the IPP.

In the table above, the data for the 1st closing shows the percentage of items for which repricing data had been returned as of the time the index for that reference period was first published. The data for the 2nd closing shows the return rate in the following month—when the data for that period was published for the second time. The response rate for the second closing includes all of the responses from the first closing and all the responses received after the first closing and before the second closing. Data for the 3rd and 4th closings show return rates for the 3rd and 4th closings when the index for these periods were computed and published. The IPP finalizes the indexes for each time period at the time of the 4th closing, so this is the final rate for the period.

2. Collection Procedures

a. Description of Sampling Methodology

The import merchandise sampling frame is obtained from the U.S. Customs and Border Protection (USCBP). This frame contains information about all import transactions that were filed with the USCBP during the reference year. The frame information available for each transaction includes a company identifier (usually the Employer Identification Number), the detailed product category (Harmonized Tariff number) of the goods that are being shipped, and the corresponding dollar value of the shipped goods.

The export merchandise sampling frame is obtained from the U.S. Census Bureau for exports to the world except Canada. These exports are filed on an electronic computer system known as the Automated Export System (AES). Since exporters trading with Canada no longer need to file export documentation, the IPP uses the Canadian import documents provided to the U.S. Census Bureau from the Canadian Customs Service. The constructed frame contains information about all export transactions that were filed during the reference year. The frame information available for each transaction includes a company identifier (usually the Employer Identification Number), the detailed product category (Harmonized Tariff number) of the goods that are being shipped, and the corresponding dollar value of the shipped goods.

The IPP divides both its import and export universes into two halves referred to as panels based on trade dollar value. The program samples one import panel and one export panel each year. Those samples are sent to the field offices for collection, so that both universes are fully re-sampled every two years. The sampled products are priced for approximately five years until the items are replaced by a newly drawn sample from the same panel. As a result, each published index is based upon the price changes of items from up to three different samples.

For exports, the two panels consist of the following major product groupings, as defined by the Harmonized System:

Export Product Panel A: Food and beverages
Minerals, chemicals, and rubber
Crude materials; related goods
Miscellaneous manufactures

Export Product Panel B: Machinery
Vehicles and transportation equipment

For imports, the two panels consist of the following major product groupings, as defined by the Harmonized System:

Import Product Panel A: Food and Beverages
Crude materials; related goods
Vehicles and transportation equipment
Miscellaneous manufactures

Import Product Panel B: Minerals, chemicals, and rubber
Machinery

Each panel is sampled using a three stage sample design. The first stage selects establishments independently proportional to size (dollar value) within each broad product category (stratum) identified within the Harmonized classification system (HS).

The second stage selects detailed product categories (classification groups) within each establishment using a systematic probability proportional to size (PPS) design. The measure of size is the relative dollar value adjusted to ensure adequate coverage across all classification systems, and known nonresponse factors (total company burden and frequency of trade within each classification group). Each establishment-classification group (or sampling group) can be sampled multiple times and the number of times each sampling group is selected is then referred to as the number of quotes requested.

In the third and final stage, the Field Economist, with the cooperation of the company respondent, performs the selection of the actual items for use in the IPP indexes. Using the entry level classification groups selected in the second stage, a list of items can be provided by the respondent to the Field Economist. Using a process called disaggregation, items are selected from this list with replacement to satisfy the number of quotes requested for each entry level classification group.

b. Description of Estimation Methodology

The IPP uses the items that are initiated and repriced every month to compute its price indexes. These indexes are calculated using a modified Laspeyres index formula. The modification used by the IPP differs from the conventional Laspeyres index by using a chained index instead of a fixed-base index. Chaining involves multiplying an index (or long term ratio) by a short term ratio (STR). This is useful since the product mix available for calculating price indexes can differ over time (Bobbitt, 2007).

The conventional Laspeyres index and the modified index are identical as long as the market basket of items does not change over time and each item provides a usable price in every period. However, due to nonresponse, the mix of items used in the index from one period to the next is often different. The benefits of chaining over a fixed base index include a better reflection of changing economic conditions, technological progress, and spending patterns, and a suitable means for handling items that are not traded every calculation month.

Below is the derivation of the modified fixed quantity Laspeyres formula used in the IPP.

$$
\begin{aligned}
LTR_t = & \left(\frac{\sum p_{i,t} q_{i,0}}{\sum p_{i,0} q_{i,0}}\right)(100) \\
& \text{¿} \left(\frac{\sum p_{i,0} q_{i,0} \left(\frac{p_{i,t}}{p_{i,0}}\right)}{\sum p_{i,0} q_{i,0}}\right)(100) \\
& \text{¿} \left(\frac{\sum w_{i,0} r_{i,t}}{\sum w_{i,0}}\right)(100) \\
& \text{¿} \left(\frac{\sum w_{i,0} r_{i,t}}{\sum w_{i,0} r_{i,t-1}}\right)\left(\frac{\sum w_{i,0} r_{i,t-1}}{\sum w_{i,0}}\right)(100) \\
& \text{¿} \left(\frac{\sum w_{i,0} r_{i,t}}{\sum w_{i,0} r_{i,t-1}}\right)(LTR_{t-1}) \\
& \text{¿} (STR_t)(LTR_{t-1})
\end{aligned}
$$

where:

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

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

$w_{i,0} = p_{i,0} q_{i,0}$ the total revenue in base period 0

$r_{i,t} = \frac{p_{i,t}}{p_{i,0}}$, or the long term relative of item i at time t

$LTR_t =$ long-term ratio of a collection of items at time t

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

For each classification system, the IPP calculates its estimates of price change using an index aggregation structure (i.e. aggregation tree) with the following form (Powers, 2006):

Upper Level Strata
Lower Level Strata

Classification Groups
Weight Groups (i.e. Company-Index Classification Group)
Items

A stratum may have several middle-level-strata or none, between itself and the classification group level. The number of middle-level-strata from the classification group to each stratum varies depending on which stratum the specific CG belongs. Similarly, the number of middle-step-strata from a stratum lower to an overall index varies. The following general formula is used until the desired aggregation level index is obtained.

Let *Child*[*h*] to be the set of all strata or classification groups in the aggregation level directly below Stratum *h* in an aggregation tree. Let $STR_{h,t}$ be a short-term ratio of stratum, h , at time t :

$$STR_{h,t} = \frac{\sum_{c} w_c LTR_{c,t}}{\sum_{c} w_c LTR_{c,t-1}}$$

where:

$c \in stratum[h]$;
w_c =weight of child c;
LTR_t =long-term ratio of child c at time t.

As mentioned previously, at any given time, the IPP has up to three samples of items being used to calculate each stratum's index estimate. Currently the IPP combines the data from these samples by 'pooling' the individual estimates.

Pooling refers to combining items from multiple samples at the lowest level of the index aggregation tree. These combined sample groups are referred to as a weight group. Different sampling groups can be selected for the same weight group across different samples, so it is possible that multiple items from different sampling groups can be used to calculate a single weight group index. This weight group level aggregation is done primarily so the Industry Analysts within IPP can perform analyses on the index information across samples.

3. Methods to Maximize Response Rates

Several techniques are used to ensure maintenance of adequate sample sizes for estimating IPP indexes. Initial sample sizes are sufficiently larger than desired sample sizes to allow for nonresponse (which includes out-of-business, out-of-scope, and refusal outcomes). An export analysis and an import analysis were conducted to identify the causes of out-of-scope nonresponse, which resulted in the methodology changes below. (For additional details, see the Out-of-Scope Export and Import Analysis reports which are internal BLS reports available upon request.)

- A paneling approach was implemented whereby a new sample is introduced each year across half the product categories, re-establishing the distribution of the sample and incorporating changes in the distribution of exports/imports.

Frequency of trade of exporters/importers in products is measured from the sampling frame and incorporated in the sample design to reduce the out-of-scope rate.

- For exports, the IPP receives name and address information for each export shipment from a company and has revised its matching process for determining the correct name and address of each sampled unit.

- The Program has implemented linking the Employer Identification Number (EIN) to additional data sources and using the linked information for identifying the correct name, address, and other pertinent information of each sampled unit.

- Additionally, other variables on the sampling frame were examined for aid in identifying out-of-scope trade. As a result of this analysis, the IPP now screens (from its sampling frame) transactions that contain values for these variables that identify out-of-scope shipments.

- In 2011, the IPP began a pilot study to examine the productivity of allowing initiation of a sampled product area to occur at a broader (six-digit Harmonized) level when the original initiation at the more detailed ten-digit Harmonized level resulted in an out-of-scope situation. Following the implementation of these changes into production (in 2012), the IPP observed a decline in out-of-scope rates at both the quote level and at the establishment level.

To improve the response rate of respondents, the IPP has devised strategies to reduce respondent burden while increasing or at least maintaining their level of participation. The strategies which the IPP has implemented include the following:

- capping the burden for a respondent within a sample

- enhancing the sampling refinement process so that Industry Analysts have more freedom to reduce the burden for a respondent when needed; and

- repricing current items for a longer period of time rather than initiating new items.

4. Testing Procedures and Plans

The Program has implemented several changes to reduce respondent burden (discussed under number 3 in parts A and B of the Supporting Statement) and has identified proposals which upon implementation, may further reduce burden. However, the IPP has no testing related to reducing respondent burden scheduled for the foreseeable future.

The Program is planning to implement changes to its checklists, which are currently being revised and undergoing internal testing within BLS. A nonsubstantive change will be submitted when these checklists are ready for use.

5. Statistical Contacts

The responsibility for the statistical aspects of the International Price Program as well as collection and processing of price information, resides with Jim Thomas, (acting) Assistant Commissioner for International Prices, Office of Prices and Living Conditions, Bureau of Labor Statistics.

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