NWX-US DEPARTMENT OF COMMERCE
Moderator: Kim Brown
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12:00 pm CT

Coordinator: Good morning and good afternoon, thank you for standing by. As a reminder your lines have been placed on a listen-only mode until the question-and-answer segment of today's conference call. This call is being recorded. If you have any objections, you may disconnect at this time. I would now like to turn the call over to Mr. John Sperry. Thank you, sir, you may begin.

John Sperry: Good afternoon and welcome to the economic indicator Webinar series. I'm John Sperry and I will be the host of this Webinar. This Webinar series was created by the Economic Directorate of the United States Census Bureau to help you discover the wide range of data we have to offer.

Through this series, you will learn about each of our economic indicators and the role the data plays in our economy. This Webinar and others that have already taken place will be archived on our Website www.census.gov/econ/webinar.

Here with me today is Joe Huesman, the Chief of the Construction Expenditures Branch in the United States Census Bureau's Manufacturing and Construction Division. He will be talking with you about the value of construction put in place for VIP statistics as well as how his area collects these data and presents them to you.

If you have any questions for Joe, there will be a question-and-answer session following his presentation so without further ado, I will hand things over to Joe.

Joe Huesman: Thanks, John. The goal of today's Webinar is to familiarize you with the definition of construction spending, the construction progress reporting surveys and the data collection process and the available data products.

First we will talk about survey definitions and the survey process followed by a few technical points about the data and the available data products. We will conclude by going through the Website together so I can point out various data and resources available to you.

First what is VIP? The acronym VIP stands for value of construction put in place. Some agencies like BEA often refer to this data series as VPIP for value put in place. Many other call this series simply construction spending.

The VIP series provides monthly and annual estimates of the value of construction work done on all projects being constructed in the United States, both building and non-building.

The Census Bureau began collecting these data in 1964. From 1915 to 1964 the data were collected by the Department of Labor and there are still some publications that contains these data annually.

In 1993 there was a major revamping of our classification coding and we stopped using the 1964 classifications in 2002. Data prior to 1993 are no longer comparable to the current data series that we provide on a monthly basis.

Data is shown as the U.S. level in current dollars, both unadjusted and at seasonally adjusted annual rates. Prior to the 1993 reclassification, we were able to provide constant dollar estimates but we are no longer able to do that.

The Bureau of Economic Analysis does rebase many of our large aggregate series into constant dollars when they compile the quarterly gross domestic product or GDP.

Most data are collected using a set of four surveys called the construction progress reporting surveys or CPRS. Other data are obtained from secondary sources such as regulatory agencies and trade associations and are used to benchmark the data that are collected from the CPRS surveys.

On July 1st of each year, data for the previous two years are revised for the release of the May data. Sometimes there are new benchmark data that will require us to revise more than two years but we will notify the public of these changes through our Website and on our press release so what does the value of construction include?

It includes the cost of materials installed or erected, the cost of labor, a proportionate share of the cost of construction equipment rental, any contractor's profit, the cost of architectural and engineering work, miscellaneous overhead and office costs and interest and taxes paid during construction although this does not apply to state or locally-owned projects.

What kind of projects are considered construction? Well construction includes all new buildings and structures as well as non-building projects such as roads, bridges, power lines and erosion jetties.

It includes additions, alterations, expansions and major replacements such as a new roof or a new heating system, mechanical or electrical installations, all site preparation and outside construction of fixed structures, installation of major equipment such as boiler and blast furnace and fixed largely site fabricated equipment not housed in a building such as a petroleum refinery or a chemical plant so what's not included in construction spending estimates?

Construction spending estimates include all maintenance and repairs such as the patching of a road. It excludes the installation of production machinery and equipment such as printing presses or bottling machines, drilling of oil and gas well, the construction of off-shore drilling platforms as well as the digging and shoring of mines are excluded.

We exclude land acquisitions and we do not include projects that only involve demolition. If the demolition of a structure is part of the site preparation for another new construction project, we would include that as part of the new construction project costs.

The construction spending data are broken down by ownership type, privately-owned construction, state and locally-owned construction and federally-owned construction. Classification of construction is based on ownership during the construction phase and/or the primary use of the structures on the property.

Private-public partnerships are classified based on who is responsible for the contracting the work during the construction phase. What types of construction are published? In our monthly press release we show 17 total major types of construction.

We then show these categories broken down by the ownership of the projects. Some of these categories are not displayed due to either a low number of projects or ineligibility such as state or local government-built religious buildings.

We show residential construction and these 16 categories of non-residential construction. Some of these categories we only show if the project is privately-owned such as logic. Others we only show if the project is publicly-owned such as water supply.

We also show more detailed categories for each of these ownership types, for example the privately-owned projected we show the amount spent each month for new single-family housing and new multi-family housing. We also include the amount spent for residential improvements to private residential buildings but that estimate is only shown on an annual basis.

Here is an example of the detail we provide on a monthly basis. Our private-owned commercial construction are broken down into five subcategories which are further broken down. These data are listed on our Website but are not considered part of the official press release.

Note that there are some types that are not shown on a monthly basis such as farm non-residential construction but they are available on an annual basis so who uses the data? The Bureau of Economic Analysis or BEA uses the construction spending data to prepare estimates of the structures component of the GDP and as a benchmark for the entire construction industry.

The Department of Housing and Urban Development HUD uses the residential data to measure the state of the nation’s housing. Other government agencies such as the Federal Reserve Board, Fannie Mae and the Council of

Economic Advisors use the data to analyze the industry and develop public policy.

Private firms use the data for economic and financial analysis and market research. Currently construction spending is more than 5% of the gross domestic product or GDP. In 2006 when construction spending was at its highest, the proportion was almost 9% of the GDP. Most of the change was in the private residential structures of GDP so how are the data collected?

Most of our data are collected through the construction progress reporting surveys or CPRS. We gather information on specific multi-family, private non-residential, state and local and federally-owned construction projects using a monthly form. There are other sources used to gather the remaining series or to benchmark the CPRS data too.

The survey of construction is used for our single-family estimates. The consumer expenditure survey is the source of the private residential improvement estimate.

Annual estimates from regulatory agencies and trade organizations are used to benchmark some of the private non-building categories and estimates from federal agencies are used as a benchmark for the federal CPRS estimates.

Each of the construction progress reporting surveys requests the dollar value of construction put in place each month until the project is completed. The surveys are voluntary. Data are collected from the project owner or someone designated by the owner to answer the questionnaire.

Data can be submitted by mail, fax or online. If a respondent does not respond to the mailing, they are contacted by telephone to obtain the information.

Imputations are made for projects that have not reported at the time of the monthly tabulation based on estimated total construction value and the month of start of the project.

Projects are selected each month from the McGraw Sales Corporation's Dodge Reports. These projects are stratified by type of construction and the estimated project costs. Each stratum is assigned a sampling rate. Here is the Form C-700 used to collect the private non-residential construction. There are only a few questions involved in the CPRS questionnaire.

We inquire about the start date of the project, the estimate total cost of the project broken down by contractor cost and the owner-supplied materials and labor, the architectural, engineering and miscellaneous costs associated with the project, any capital expenditures for equipment on the project and the amount of additional square footage that will be added.

We also confirm the ownership of the project. If it is in error, we will contact the owner via phone to assign the correct ownership. We also ask for the amount of money spent each month on the project. This information will be printed on all future forms so the respondent can see what has been reported in the past and can make any corrections if the data were reported in error.

When the project is completed or only has minor work or retainage remaining, we ask the respondent to report the completion month and year in Question 10. The state and local and federal forms ask for the exact same information.

The weight of each project is based on three components. The basic weight which is the reciprocal of the probability of selecting the project or projects selected with certainty, this value is one.

For a project that was selected one in 40, the value would be 40. The second component is an adjustment factor for architectural, engineering and miscellaneous costs. This is the ratio of the total cost of the project including the estimates for architectural and engineering services and miscellaneous costs divided by total costs of the project excluding these costs.

These additional costs are in effect spread out over the life of the project. The last component is an outlier adjustment factor. This reduces the influence of an extreme non-certainty observation.

Private multi-family residential data are also collected through a CPRS form but there are a few differences for how we collect data for this sector. The sampling frame for multi-family is a list of new residential building projects with two units or more selected from permits listed for the survey of construction.

The survey of construction is a monthly survey conducted by the Census Bureau to obtain the amount of new residential construction that is occurring in the United States. Monthly construction progress reports are requested from the project owner until the project is completed.

Data are ratio-adjusted to the total number of units authorized as estimated by the building permit survey. The building permit survey is a monthly survey conducted by the Census Bureau to collect the number and value of residential building permits given in all permit-issuing jurisdictions in the United States.

The multi-family CPRS form asks for two additional pieces of information that are not on the other CPRS forms: the number of residential units and the number of buildings. This information is needed for reconciliation of the data

to the survey of construction as well as used in calculation of the final weight of the project.

Estimates for new privately-owned single-family residential construction are based on the monthly housing starts estimates from the survey of construction. Monthly construction costs of new single-family houses are estimated using housing starts and price data.

Housing price data are aggregated separately for units built to be sold or rented and units built by the owner or for the owner on contract. The price are adjusted to remove non-construction costs such as raw land, marketing costs, closing costs and movable appliances for those units built to be sold or rented and to add-in the value of land development that was included in projects built by the owners.

Total value of new single-family housing started in a particular month is the number of units started times the average construction cost for those homes. This monthly value of starts is distributed into monthly VIP by applying the fixed patterns of monthly construction progress as shown below.

Estimates of private residential improvements to owner-occupied properties are based on data from the consumer expenditure survey, the CE which is conducted by the Census Bureau for the Bureau of Labor Statistics or BLS.

The CE data are collected from households through a rotating panel survey design with three panels interviewed per quarter. The CE data collection for expenditures in a particular month is not complete until three months later.

But the VIP estimates for owner-occupied residential improvements are forecasted until the reported data are available so the data are subject to

substantial revisions. No estimates are made for non-owner-occupied properties.

Estimates for new farm non-residential construction are extrapolated from the annual U.S. Department of Agriculture's report on income and balance sheet statistics. Monthly and quarterly estimates are not available.

Monthly estimates for railroad construction are obtained by distributing surface transportation board quarterly construction expenditure estimates into monthly values. Investor-owned utilities includes communication, electric, gas and oil. Monthly estimates are published only for communication and electric which is a subcategory under power.

Estimates for the other utilities are included in the appropriate totals but are not shown separately. We obtain monthly telephone construction estimates directly from individual telecommunication companies. We do not ask about specific projects from these companies.

We obtain all of their expenditures for structures during the month. Monthly cable construction estimates are based on annual forecasts from SNL Kagan, a company that compiles data on media and communications.

Monthly estimates for gas and electric are based on CPRS data that has been benchmarked to annual estimates from the American Gas Association, the Edison Electric Institute and the Lawrence Berkeley National Laboratory. Wind power is now included in the total power category and within the electric subcategory.

This was added in 2010 with historic added going back to 2004. The wind power data are estimated from quarterly reports from the American Wind

Energy Association. Estimates for oil pipeline construction are projections from the latest year of data from the Federal Energy Regulatory Commission or FERC.

The private non-residential estimates are adjusted for undercoverage based on a comparison study of non-residential building permits that are gathered by the Census Bureau for the study and then were compared to a list of private non-residential projects from McGraw Hill Construction.

Data for the non-residential CPRS for the manufacturing category are further adjusted by benchmarking the tabulated estimates to the latest detailed structures data from the Census Bureau's annual capital expenditure survey or ACES.

With our release on July 1st, 2014, we will be revising the manufacturing category back to 2008 since we have now received data from the 2012 annual capital expenditures survey.

The state and local undercoverage adjustment factors resulted from a 2006 comparison study of projects provided to the Census directly from state and local agencies with a list of state and local projects from McGraw Hill.

The federal CPRS data are further adjusted by benchmarking the tabulated estimates to monthly data supplied to the Census Bureau by most federal agencies involved in construction activities. For agencies that cannot supply monthly data, totals from federal budget documents are prorated over the fiscal year to derive monthly estimates.

Research has shown that seasonality is present in many of our series so we present our data both not seasonally-adjusted as well as the seasonally-

adjusted annual rate. Purpose of seasonal adjustment is to remove seasonal effects from the time series. A few examples of seasonal effect include weather, the school year and holidays.

Here is what the state and local highway and street construction estimates look like not seasonally-adjusted and here is what the state and local highway and street construction estimates look like seasonally-adjusted and then annualized by multiplying the estimates by 12.

As you can see in the chart, the seasonally-adjusted estimates do not have the large peaks and valleys that were present in the not seasonally-adjusted numbers. To calculate the seasonally-adjustment factors we use a program called X-13-AREMA-SEATS which is a seasonal-adjustment software package produced, distributed and maintained by the Census Bureau.

Now that you have an understanding of the VIP, let's delve in further to take a look at what's available on our Website. For that, I'd like to switch over to the Census Website and walk you through how to get to the construction spending Website.

So from the www.census.gov site, select the business header and then construction and then under the monthly frequency area, you will see a link for construction spending. Click on that. Now we are at the construction spending Website. You can also go directly to this page from www.census.gov/constructionspending, all one word.

On this page you can see the most recent data for the seven main aggregate series both seasonally-adjusted rate and not seasonally-adjusted. By clicking on the (sose) to the right of the series name, you can obtain the most recent

five months as well as the prior year's months for that series and any subcategories we show for that ownership.

On the left side of the page we have links to the most recent press releases and below that are links to pages that will allow the review of previous-released press releases going back to 2003. The press release page for 2014 can be found on the left side as well. Now let's look at a recent press release.

The press release is released at 10:00 am on the first workday of each month. The data are for two months ago. For example on March 3rd the first workday of March, we release data for the month of January.

The text in the press release makes comparisons from the current month to the previous month as well as the same month in the previous year for the total amount of construction, the total for private and public construction and some of the larger subcomponents like private residential and state and local highway. The tables contain only data for the 17 major categories of construction on the construction spending Website.

At the top of the construction spending page are tabs to allow users to see some documentation regarding the survey, forms and introductory letters used in the survey, a more detailed description of our survey methodology, survey definitions and a tab showing all the announcements of major changes to the data series. There is also a tab to review historic data.

From this page you can get Excel files of the data going back to 1993 both annually and monthly. There are also Excel tables of private non-residential construction broken down into geographic areas. As the geography gets smaller, so does the number of subcategories so we are only able to publish state-level data for the total private non-residential category.

On the right side is a link to our data (unintelligible). On the right side of the main construction page, there are links for related studies including some of our special studies into the length of time of construction, documentation on the reliability of our estimates and a link to the data from 1964 to 2002 using the old classification system.

On the top right side is a link to our data tool that will allow users to immediately grab some of our monthly time series. You first select your indicator which defaults to construction spending since you came here from our Website but all the indicators are available from this site. Then you select a time period and the series you want.

Since we only have U.S. data on a monthly basis, the geographic level is always U.S. total so let's look at the series seasonally-adjusted so that is selected and then we click get data. These are the monthly values of total construction spending seasonally-adjusted annual rate and by clicking line chart, we get a chart that can be saved.

Now let's look at some other geographic presentations of our data. Here is a graph of the total construction spending broken down into residential and non-residential. The gray bars are the periods of time that the National Bureau of Economic Research NBER has designated as recessions in our economy.

You can see how and when each of the construction sectors reacted to each of the recessions in the last 20 years and here is the data broken down by ownership type and that wraps up the presentation. Before we move to the question-and-answer portion of the Webinar, John is going to tell you more about the upcoming Webinars on the Census Bureau mobile app.

John Sperry: Thank you Joe. Be sure to check out our mobile app called America's Economy available on iPhone, iPad and Android devices. This app will provide you with quick and easy-to-access data and information on all of the economic indicators in this Webinar series.

Before moving on to our Q&A session, we are going to post a link to a short survey. Please fill this out and let us know how we're doing. We like to know what we can improve, what you like and if there's anything in general to make our future Webinars even better.

Coordinator: Would you like to take questions at this time, sir?

John Sperry: Not quite yet. While you're filling-out the survey, I'd like to tell you about the final Webinar in this series. The quarterly services survey will take place on March 26th at 1:00 pm Eastern Daylight Time.

The quarterly services report is the only source of service industry indicator performance providing estimates of revenue for selected service industries, source of revenue estimates for a subset of industries, estimates of total operating expenses from tax-exempt firms and industries that have a large not-for-profit component as well as estimates of inpatient days and discharges for hospital services.

You can view the complete list of upcoming Webinars as well as recordings of our past Webinars on our Website www.census.gov/econ/webinar. At this point we will give you about five minutes to complete the survey.

We've experienced a technical difficulty and if you can just log back in, we will be able to resume. At this point we will now open the Webinar for questions. The operator will provide instructions on how to ask a question.

We want to give everyone an opportunity to ask a question so we will only allow one question and one follow-up. Operator, can you please provide the instructions?

Coordinator: Thank you, sir. At this time if you'd like to ask a question, please press star 1 on your touch-tone phones. Again please press star 1 if you'd like to ask a question and state your first and last name when prompted. One moment, please. (Ken Simonson), you may go ahead.

(Ken Simonson): Hi. Is it possible to provide any additional breakout on some of the categories for instance pipeline work is getting to be a much bigger part of construction, other things related to the so-called shale gale or on the federal side, breakout hospitals so that we can see what the total hospital market is and not just private and state and locals.

Joe Huesman: Hold on just a second, sir. With regards to the federal categories, at this point we just don't have enough cases to breakdown the healthcare category which we do publish as a federal subcategory but we do plan to look at all of our series in upcoming years to see if there's additional breakouts that possibly could based on the number of cases that are coming in that are selected.

In terms of the oil pipeline number since that is number that we're getting from FERC and if it's a gas pipeline we're getting it from the American Gas Association, they do not break it down into subcategories other than just total gas or oil pipeline so we are unable to breakdown our oil or gas number into smaller subcategories.

(Ken Simonson): If I can follow-up, I didn't realize that you have oil and gas separate from the total power. I thought that under power on a monthly basis all we get to see is total power and then electric power.

Joe Huesman: That is correct on a monthly basis but on the annual basis you can see the breakout of gas, oil and electric separately.

(Ken Simonson): Right, thank you.

Coordinator: Thank you. Our next question comes from (Manning Trayley). You may go ahead. (Manning Trayley), you may go ahead. Our next question comes from (Diane Miller). You may go ahead.

(Diane Miller): My question is along the same lines but for the manufacturing category. Is there a warehouse to further breakdown that category so you can see the construction spending components for that?

Joe Huesman: Well, the manufacturing category we breakdown into the type of product that's being manufactured. There are some categories that do not have enough projects so that we cannot show that detail nor can we breakdown to a five or six-digit (nix) code type of detail.

We do have some additional series that we do not show monthly. We have them shown annually but was there something specific in the manufacturing construction that you were inquiring about?

(Diane Miller): Specifically microchip manufacturers. I was looking to breakdown that five or six-digit (nix) code to see how much construction spending is in the private sector there.

Joe Huesman: Yes, unfortunately we cannot break our series down into that fine granularity. We kind of do it at a two-digit or three-digit I guess (nix) code and I think that would be in electronic so it's included in that estimate which we do show on a monthly basis.

(Diane Miller): Thank you.

Coordinator: Once again if you'd like to ask a question, please press star 1 on your touch-tone phone. Sir at this time I'm showing no further questions.

John Sperry: If there are no further questions, this will conclude the VIP Webinar but if you have any questions at a later time, please feel free to contact the branch at 301-763-1605. On behalf of Joe and everyone who worked hard on this Webinar, thank you for joining us today and have a wonderful day.

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