

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

Coordinator: Welcome and thank you for standing by. At this time all participants are in a listen only mode. During today's Q and A session, if you'd like to ask a question, please press star one. Today's call is also being recorded. If you have any objections, you may disconnect at this time. Now I'd like to turn the meeting over to Mr. Lam Nguyen. Sir, you may begin.

Lam Nguyen: Thank you. Good afternoon everyone. Thank you so much for joining us and welcome the Economic Indicator Webinar Series. My name is Lam and I will be your host for the Webinar today.

Just a quick background before we begin though. This webinar series was created by the Economic Directorate of the US 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.

Now if this Webinar sounds familiar to you, that's because we have presented this Webinar back in July of 2013. Due to some technical difficulties last time, we need to record this Webinar again.

However, it is a good opportunity to refresh on the quarterly services survey and what it has to offer. Or if you missed it last time, this will give you another chance to learn all about this SIPP report and ask us some questions.

We will have a Q and A session following the Webinar. This Webinar and others that have already taken place as well as the complete presentation file will be archived on our Website for later viewing at www.census.gov/econ/webinar.

And now I would like to hand things over to Aidan Smith who will talk with you about the Quarterly Services Survey.

Aidan Smith: All right. Thanks Lam. Welcome everyone. I'm Aidan Smith, Chief of the Services Indicators Branch at the U.S. Census Bureau. I'm excited for this opportunity to share with you an in depth look at the Quarterly Services Report. We have a lot to cover to let's jump right in.

We'll be covering a number of topics today so I wanted to give you a brief overview of what to expect. The Quarterly Services Report is a product of the Quarterly Services Survey. So we'll start off providing some background on the survey itself.

From there, we'll take a behind-the-scenes look at how we produce the estimates from survey design all the way through our standard estimate review practices. We'll also cover the variety of available products and tools for accessing the estimates and highlight our primary data users.

Finally, we'll present a few visual examples of the data available and switch over to a live demo of our Website and time series tool to offer a more

interactive look at the quarterly services data. Remember we will address any questions you may have at the end of the presentation during the call in question and answer period.

So let's start where all good stories start - the beginning. In order to produce the Quarterly Services Report, the United States Census Bureau conducts the Quarterly Services Survey otherwise known as the QSS. The survey was developed as the centerpiece of a multifaceted statistical initiative to address long-standing deficiencies in federal statistics covering the service sectors of the economy.

Until the QSS, no economic indicator had existed for the services sector despite its importance and increasing share of total economic activity. As it stands now, over 50% of all U.S. economic activity is accounted for by service industries.

Prior to the QSS, measures of service industry performance were only available on an annual basis by the Annual Services Report or on a five year basis through the Economic Census. With its first release in 2004, the QSS became the first new U.S. federal government economic indicator in nearly 30 years.

From that initial release forward, the QSS has produced estimates of revenue for service industries, source of revenue for a subset of industries, total operating expenses from tax-exempt firms and industries that have a large not-for-profit component, as well as inpatient days and discharges for hospital services each quarter.

Let me preface this next section with a quick overview of our classification system. The Quarterly Services Survey uses the North American Industry

Classification System, or NAICS for makes, to classify business establishments for the purpose of collecting, analyzing and publishing statistical data related to the U.S. service economy.

We often describe the scope or coverage of the QSS in terms of its constituent make sectors and subsectors. While the survey began with a relatively narrow scope back in 2004, it has expanded over the last several years to cover a more complete picture of the U.S service economy.

At the time it was launched the QSS produced estimates for just three NAICS sectors, representing roughly 15% of gross domestic products. The included sectors are highlighted on the slide.

Between 2005 and 2010, additional sectors and subsectors were phased into the survey ultimately increasing the total coverage to 11 sectors, which together account for over 50% of GDP. And with the latest release, earlier this month, QSS included for the first time, quarterly estimates of revenue for the accommodation subsector, NAICS 721.

Now that we have a better picture of the scope of the survey, let's take a look at one of the first major steps in building this principal economic indicator - survey design. In its current state, the QSS is designed as a sample of approximately 19,000 businesses selected from the larger Service Annual Survey sample of 72,000 businesses.

The Service Annual Survey or SAS is selected as a sample from a much broader - from the much broader five year Economic Census. Sampling units for both the QSS and SAS are businesses with paid employees. When we use the term business, we're referring to groups of one or more establishments owned or controlled by the same entity.

The sample size of the QSS is specifically designed to meet reliability constraints on estimated quarterly revenue totals for specified industries. The QSS sample is primarily stratified by industry with the specific parameters driven by the level of industry detail required for the Quarterly Services Report.

Sampling units are sub-stratified by measure of size related to their annual revenue. Sample selection is performed independently within each measure of size category using a systematic probability proportional to size scheme. Sampling weights from the - for the QSS range from one to 750. These samples are reselected every five to seven years to redistribute reporting burden and introduce sampling and processing efficiencies.

The Quarterly Services Survey, Service Annual Survey and Economic Census work together to produce the most comprehensive data available from the service economic - on service economic activity in the United States. Now let's take a look at how those data first enter the indicator process.

Collection - currently, survey questionnaires are mailed on the last business day of the referenced quarter. We ask that businesses respond within two weeks using any one of the multiple supported methods including our internet reporting option, mailing or faxing the completed form, or simply providing data over the phone.

If a business is not able to report by the due date, we either fax a reminder, or have one of our analysts contact the business by phone.

This slide highlights the key pages from a typical QSS form. The questionnaires mailed to businesses are primarily focused on revenue

generated within the referenced quarter. We also ask that respondents verify the type of business activity performed, indicate any organizational changes, and supply beginning and ending dates for the reporting period.

Businesses classified in certain industries may also be asked to report source of revenue data. For example, a business classified in NAICS 7131, amusement parks and arcades, will receive a form with the standard questions, as well as an additional question asking for the percentage of revenue generated specifically from admissions.

Business classified in industries that have a large not-for-profit component may be - may be asked to also report expenses for the quarter. And as I hinted to earlier in the presentation, hospitals in the sample also report their total inpatient days and discharges for the reference quarter.

Mailed or faxed back paper forms currently account for approximately 20% of our total survey response. The vast majority of our response comes via another method which we'll highlight next.

We introduced our internet reporting option with the start of the survey back in 2004 and it now accounts for nearly 75% of our total response. The system was built with similarity and ease of access in mind. And once a business receives their login information from the physical form, they can access and report data for the current quarter in much the same way they would report on a paper form.

Of course this reporting option does offer a few advantages over the paper form, such as field validation, error checking and the ability to save an electronic copy of the completed form as a pdf.

In upcoming quarters, we will begin mailing only login information as opposed to the paper - as opposed to a paper form in an effort to reduce cost and operate more efficiently. Now that we've seen how the data are collected, let's turn our attention to the processes used to go from micro data to macro level estimates.

Firms responding to the Quarterly Services Survey account for approximately 75% of the combined revenue estimates found in the Quarterly Services Report. For units that have not responded, missing values are replaced by predicted values obtained from an appropriate model for non-response.

This procedure, referred to as imputation, uses survey data and administrative data as input. Estimates of total revenue for the most detailed industry levels are computed using a Horvitz-Thompson estimator.

For each unit in the survey, we multiply the unit's revenue, whether reported or imputed, by the reciprocal of its probability of selection into the survey to produce - to produce that unit's weighted revenue.

We then sum the weighted revenue of all units within each industry to produce the corresponding national level estimates found in the Quarterly Services Report. Total estimates for broader industries are in turn computed as the sum of the detailed industry estimates.

For some of our estimates, this would be the last stop. However, for a portion, there is one more transformation that takes place on the road to the Quarterly Services Report - seasonal adjustment.

So, why do we seasonally adjust estimates? Seasonal movements are often large enough that they mask other characteristics of the data that are of

interest to analysts who track current economic trends. Season adjustment estimates and removes the season effects from a time series in order to better reveal certain non-seasonal features.

Many data users prefer seasonally adjusted data because they want to see characteristics that seasonal movements tend to mask, especially changes in the direction of the series. Seasonal affects can take the form of any consumer-drive service trend, such as the tax season leading up to April 15th each year, or increased demand for travel services over the summer.

As the QSS is a relatively new indicator, only a few time series are long enough and exhibit the level of stable seasonality necessary to justify publication of a seasonally adjusted version. These series are listed in the table on the right of the slide.

Furthermore, seasonal adjustment is limited to revenue estimates only. We should note that currently the QSS only produced nominal estimates. That is, our estimates are not adjusted for price changes.

For those interested in additional technical information on our seasonal adjustment procedures and programs, I encourage you to visit www.census.gov/SRD/www/x13as. Or you can enquire about the specific seasonal adjustment topics during the question and answer session at the end of the presentation.

Before we move on to the final product, let me first touch on a few of the policies and procedures that result in planned revisions to the published estimates.

For the first, second and third quarter releases, revisions to previously published, not seasonally adjusted estimates are limited to only the prior quarter. These revisions are typically driven by data too late to incorporate into the preliminary estimates or respondents providing corrections to previously reported data.

Revisions to seasonally adjusted estimates are constrained to the six most recent quarters and are a result of introducing both the new quarter and revisions to the prior quarter into the seasonal modeling.

For fourth quarter releases, estimates in the quarterly services report are additionally revised to reflect the latest results of the Service Annual Survey through the reconciliation and benchmarking process.

Each year, when annual data become available, we compare and resolve difference between the data collected not the quarterly and annual surveys. We refer to this process as reconciliation.

At the same time, we modify the quarterly estimates within each year to ensure they sum to the corresponding annual estimates from the Service Annual Report in a systematic process referred to as benchmarking.

Annual estimates are in turn benchmarked to data maintained by the economic census. For more technical details on the benchmarking process, please visit the link shown on the slide.

This process of benchmarking service data over all three programs ensures consistency in the estimates presented in our data products. And on that note we'll move right on to highlight the core data products available to our users.

The Quarterly Services press release is probably the most visible of our products and is released approximately 75 days after the close of the reference quarter.

This release contains preliminary estimates for the current quarter and revised estimates for the previous quarter by industry. Our current release provides national level estimates of revenue for 11 sectors, 36 subsectors and 84 detail industries.

The report also contains simple text write ups for each of the 11 sector totals plus the accommodation subsector total following, allowing for easier incorporation into external publications.

Because the estimates presented in the report are based on a sample survey, they contain sampling error and non-sampling error. To account for this we also include in the release a table of the estimated measures of sampling variability.

While the Quarterly Services press release is focused on a more grab-and-go approach, there are a variety of other products which cater to users who want a bit more depth.

The full Quarterly Services report contains all the estimates and measures of error found in the press release but provides more depth for those interested to explore a bit further.

The full report contains additional break outs of revenue by taxable and tax exempt status, source of revenue detail, expense estimates, as well as inpatient days and discharges for hospitals. The full report is available in Excel format and is released simultaneously with the main press release.

For users wanting a more hands on access to the available data we provide the time series and trend charts tool. This Web based system allows users to create custom time series sourcing data directly from a repository of all published Quarterly Services estimates. This includes estimates and measures of error for periods prior to the six most recent quarters of the press release and full reports are limited to.

It also features integrated graphing capabilities to help quickly build visualizations and with the click of a button time series data can be instantly exported to a text or Excel file. We'll demo this live for you in just a bit.

Finally for our power users out there we offer a flat file download containing the complete collection of data published by the Quarterly Services Survey. This is updated and released each quarter just after our 10 am press release and contains just about everything that we publish to date.

As they say, with great power comes reduced readability. Users should note these files have been formatted specifically for use as input to programs and automated processes as opposed to an easy to read report.

Now that we're up to speed on the variety of available data products, everyone is probably wondering where they can get their hands on them. If you take only one thing away from this Webinar I hope it's the link at the top of this slide. This is the portal to all available Quarterly Services data products.

Here you'll find links to the latest press release, the full Quarterly Services report, as well as the time series and trend chart, Web app and flat file download. Important announcements related to our services data will also be

posted to this page keeping you in the loop on any changes or upcoming events.

In addition to the core products the Web site also provides a wealth of supplemental information by the tabs at the top of the page. You can access information about our related services, surveys, forms related to those surveys, historical releases, documentation on methodology, definitions, or browse our frequently asked questions.

We'll go live to the Web site in just a moment but let me first take a minute to highlight a few of the Quarterly Services surveys biggest data users. This economic indicator is widely used throughout, academic and business communities.

The Bureau of Economic Analysis uses Quarterly Services data as input to what is probably the most closely watched of all economic statistics, the gross domestic product or GDP. Third estimates of quarterly GDP source heavily from the QSS to help refine and replace approximations used in the advanced and second estimates.

In addition, Quarterly Services will be a vital component in BEAs formulation of quarterly GDP by industry statistics schedule for regular release beginning next month.

The Federal Reserve Board and Council of Economic Advisors use our estimates to gain a clearer picture of the current economic conditions, estimate near term growth and consumer expenditures, track business investment in various service industries and inform future policy.

The Quarterly Services report is also used by the Centers for Medicare and Medicaid Services as a reasonability check for the National Health Expenditure projections. CMS makes use of the hospital utilization data, that is inpatient days and discharges, to help explain trends in the spending estimates.

Financial analysts and market research firms leverage our data to analyze service industry movement while businesses use the estimates to measure their performance within the industry and better understand the changes in demand for their services.

Academia use our times series data to supplement research on a variety of topics such as the effects of specific policy, the impact of a recessionary period or the fluctuations in industry output following a natural disaster.

With the Webinar we're open to both inform and expand our base of data users and while it's one thing to talk about the value of Quarterly Services data, it may be more meaningful to show you. This first example highlights one of the key reasons why the Quarterly Services Survey was launched in the first place.

Without timely sub-annual measurements of the service economy our understanding of the duration and magnitude from a recessionary period are particular service industries is diminished. In this example featuring seasonally adjusted total revenue for NAICS 5613: Employment Services, major turning points are clearly identified.

Following from the previous example the estimates can also reveal any lagging relationship between the overall U.S. economy and performance within specific service industries. In this example featuring not seasonally

adjusted total revenue for NAICS 5413, architectural, engineering and related services, major turning points in the industry are shown to materialize somewhat later than the defined start and end points of a recessionary period.

At this point I'd like to take this over to the live Web site to demonstrate a few more examples interactively. So here we have the main Website for the Quarterly and Annual Services reports.

As we described earlier, the press release and full Quarterly Services report are available here for download in either Excel or PDF. For the sake of time I'll leave it to our audience to explore those in more detail.

I would, however, would like to showcase our time series and trend charts tool as a way of highlighting a few more examples of the interesting things you can find within the Quarterly Services data.

If you navigate here from the Services page as I did, you'll see that the Quarterly Services Survey is already selected. Note, however, that all of our indicators can also be accessed here.

We'll leave the date range as it is and for step three we'll select the industry of interest. If it wasn't clear from the earlier slide, this drop down should give you a sense of the vast number of industries that this report covers.

For now, we're going to go ahead and select NAICS 5111, newspaper publishers and we're going to go ahead and extract this data. So you may ask yourself how do we think this industry has fared given the broader consumer transition from print to digital media? We'll extract our data. Now it might not be immediately obvious from the data table that is generated but with our handy charting tool we see the decline as expected.

All right, let's do another. Go back up and select another industry. This time let's pick NAICS 5412, accounting and tax prep, bookkeeping and payroll services. We'll go ahead and also pull out the seasonally adjusted data.

So again you might ask how much of an effect do we think the April 15 tax deadline has on the particular industry. Again the data tables may not make this immediately obvious. Let's go ahead and graph some of this.

So this is our not seasonally adjusted time series and as you can see, the time series is definitely influenced by that increase in business leading up to the tax deadline so for each Q1 you'll see the spike here.

Now this is a good example of how seasonal adjustment can help us discover some of the underlying movement within the industry. So let's go ahead and graph the seasonally adjusted data.

So here we get a clearer picture by estimating and removing the season effect we do discover that more nuanced movement within the industry which can aid in researching real movement.

I think we've got time for maybe one more here. Let's pick something pretty interesting here - one of my favorites 512, motion picture and sound recording industries. Go ahead and pull that data out. Again we get our not seasonally adjusted data. Let's go ahead and graph this. Again we do see a seasonal pattern here.

So to discover that underlying movement we're going to graph our seasonally adjusted series. And here we do notice a little bit more - some more

interesting pieces of the time series. So one point of interest is the decline in the first quarter of 2011 which does stand out a little bit here.

And, you know, just as a bit of trivia, market research firms that track box office revenue actually cited the first quarter of 2011 as the lowest grossing quarter for movies since 2005.

On top of that, they also reported that it was the least attended first quarter for theaters since 1995. So the Quarterly Services data that we've produced does appear to reflect the result of this phenomena that are going on in the economy.

Okay, and with that, we're going to wrap things up. We'll open the lines for questions in a moment but for those of you whose questions spring to mind on the commute home today or hit you in the middle of the night next month, know that you can contact us via phone, fax or email and that we look forward to hearing from you.

I'd like to thank you for your time today. It's been a pleasure to present and share this information and I hope we've been able to provide some insight into the value of the Quarterly Services economic indicator. Thanks again.

Lam Nguyen: Thank you, Aidan. I hope that was informative for you as it was for me. Now 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 a quick and easy to access data and information on all of the economic indicators in this Webinar series.

Now before moving on to our Q&A session, we are going to post a short survey. Please fill this out and let us know how we're doing. Your feedback is

very important to us. And we'll give you about three to four minutes to complete that. I'll post it shortly.

So the survey should pop up on your screen right now. Please take a moment to fill this out and we'll resume in about three minutes.

Thank you for filling that out. At this point we will now open the Webinar up for questions. The operator will provide instructions on how to ask the question. We want to give everyone an opportunity to ask a question so we will allow one question and one follow up. Operator, can you please provide the instruction.

Coordinator: Yes. At this time if you'd like to ask a question please press star one. Remember to unmute your phone and record your name clearly when prompted. If you'd like to withdraw your question press star two. Once again, if you'd like to ask a question please press star one.

One moment for our first question. Our first question comes from (Bob). Your line is open.

(Bob): Thank you very much for a very worthwhile presentation. I was curious as to the kinds of geographical break outs that are available.

Aidan Smith: Okay. Thanks for your question, (Bob).

For the Quarterly Services report and for the Service Annual report, those both only provide estimates at the national level. To start getting into the geographic break down you'd have to go to that five year Economic Census program as far as for the data that we collect.

And most of that typically is driven by constraint on to produce more detailed geographies and starts to increase sample sizes and costs very quickly. So the focus is really at that national level.

But we do get a lot of questions about geographic break downs so it's definitely on our radar and something that we can continue to look at, you know, as something for the future.

(Bob): Thank you very much.

Aidan Smith: Okay.

Coordinator: Currently showing no further questions in queue but as a reminder, if you'd like to ask a question please press star one.

Our next question comes from (Michael Davenport). Your line is open.

(Michael Davenport): Yes. I just wanted to know are there any scheduled follow ups to this Webinar expanding some of the things that you spoke about today.

Aidan Smith: At this time - so you're referring to additional, say, Webinars that may come down the road? Is that what...

(Michael Davenport): Yes.

Aidan Smith: Okay. At this time we don't have any scheduled but it's something that we've been starting up talks since this was the last in the series. We've been - the various indicator areas have been talking about what to sort of present next. Or like you said a follow up as things change or a different angle to take a look at the indicators from maybe a more specific viewpoint.

So that's something I would definitely stay on the Web site, you know, check back in. We also use GOV delivery of course to announce these Webinars or any future series that are coming up. So I would just sort of try to keep in touch through that and, you know, hopefully we'll have something down the road.

(Michael Davenport): Thank you very much.

Lam Nguyen: And if you're interested in more information on any of the economic indicators feel free to contact the branches and let them know what you would like to see in future Webinars as well.

(Michael Davenport): Yes, I will. Thank you.

Coordinator: Showing no further questions in queue at this time.

Lam Nguyen: Okay. If there are no further questions, on behalf of Aidan and everyone who worked hard on this Webinar, thank you for joining us and if you have any additional questions you can feel free to contact Aidan and his branch at 301-763-2960 as well as the email address on the slide and the Web site. Have a good day.

Coordinator: Thank you and that concludes today's conference. All parties may disconnect at this time.

Speakers, please stand by for post conference.

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