

Comparing Response Rates Across Surveys

John Dixon, Office of Survey Methods Research
Presenting for the
Public Access Response Rate Team (Benjamin
Cover, John Dixon, Kirk Hagemeyer, Nicholas
Johnson, Andrew Kato, Randall Powers,
Demetrio Scopelliti, Jason Tehonica)

FCSM

March 8, 2018

Draft Version

Introduction

- BLS has published individual survey response rates in various locations.
- A new report showing response rates for BLS surveys in a single place has been proposed.
- Looking at response rate patterns across BLS surveys can give insights into issues or trends facing all surveys.
- This is a work in progress, we hope to make it public “soon”.



Organization

- Overall Introduction
- With Each Chart:
 - ▶ Title
 - ▶ Table showing key features of each survey presented
 - Frequency, Collection Mode, Collection Period, Other
 - Link to each survey on BLS.gov
 - ▶ Chart notes



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Household and establishment survey response rates

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Introduction

Historically, survey response rates have been used as a measure of how representative a survey is of the sampled population¹. Response rates differ among surveys in many ways, including the content of the survey, the amount of time available to collect data, the mode of data collection, and constraints on who can respond. Research has shown an inconsistent relationship between survey response rates and nonresponse bias, but changes in response patterns can be informative. For example, changes in patterns that are similar between surveys might indicate a common cause, while rate changes unique to a survey might point to a change in methods, a change in business procedures, or operational constraints. This summary groups similar surveys to allow for comparisons. Response rates from surveys collected from randomly sampled households are shown together on one graph while those collected from establishments are together on subsequent graphs. Date ranges will vary from chart to chart, depending on the most recent month for which data are available. Response rates are usually calculated as:

Response Rate = $(\# \text{ units responding}) / ((\# \text{ units eligible}) + (\# \text{ of units with eligibility undetermined}))$

Different surveys have different definitions of what is and isn't eligible. Refer to [survey response rate calculations](#) for more detail.

Note

¹Groves, R.M. & Peytcheva, E. (2008). "The impact of nonresponse rates on nonresponse bias: a meta-analysis." *Publ.Opin. Q.*, 72(2), 167-189.

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Glossary

Designated person (American Time Use Survey)

One individual age 15 or older who is randomly selected from each sampled household to participate in the American Time Use Survey. The designated person is interviewed by telephone once about only his or her activities on the day before the interview. No other household member may respond for the designated person.

Diary day (American Time Use Survey)

The day about which the designated person reports his or her activities for the American Time Use Survey. The diary day of a designated person interviewed on Tuesday is Monday.

Computer-assisted telephone interviewing (CATI)

A structured system of microdata collection by telephone that speeds up the collection and editing of microdata; it also permits the interviewer to educate the respondents on the importance of timely and accurate data.

EDI - The Electronic Data Interchange (EDI) Center

Located in Chicago and collects data files from the nation's largest employers for the CES (Current Employment Statistics) and MWR (Multiple Worksite Report) programs.

Eligible

Potential respondents who match the target sample.

Final closing

Last chance for an establishment to report data. This additional data may affect revisions to the estimates.

First closing

The first deadline to report data. There are many reasons for not reporting. (Examples: payroll patterns, shortage of administrative staffing, reluctant respondents.)

Initiation

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Survey response rate calculation

Introduction

ResponseRate = (# units responding)/((# units eligible) + (# of units with eligibility undetermined)), where different surveys have different definitions of what is and isn't eligible.

American Time Use Survey (ATUS)

- ResponseRate = (# responding)/((# eligible) + (# with eligibility undetermined))
- ATUS uses the American Association for Public Opinion Research's (AAPOR's) Response Rate 2 formula for determining the ATUS response rates: $(C) / (C + R + NC + O + UE)$ Where: C = Completes (complete or sufficient partial interview) R = Refusals NC = Noncontact (uncompleted callbacks; never contacted) O = Other (respondent absent, ill, or hospitalized; language barrier, etc.) UE = Unknown Eligibility (phone number incorrect for household, unconfirmed number, etc.).
- The ATUS sample is a stratified, three-stage sample. In the first stage of selection, the CPS (Current Population Survey) oversample in the less-populous States is reduced. In the second stage of selection, households are stratified based on these characteristics: the race/ethnicity of the householder, the presence and age of children, and the number of adults in adults-only households. Sampling rates vary within each stratum. In the third stage of selection, an eligible person from each household selected in the second stage is randomly selected to be the [designated person](#) for ATUS. An eligible person is a civilian household member at least 15 years of age. All eligible persons within a sample household have the same probability of being selected as the ATUS designated person.
- Examples of those not eligible for the ATUS include a deceased person, designated person underage, designated person who is not a household member, and household that moved since last contact.

Annual Refiling Survey (ARS)

- ResponseRate=(Received Response + Response from a non-refile source)/(Nonresponses + Unusable Responses + Pending Response + Refusal + Received Responses + Response from a non-refile source)

Consumer Expenditure Survey (CES)

Charts

1. Household Surveys
2. Establishment Surveys – Overall Response Rates
3. Establishment Surveys – Price Initiation
4. Establishment Repricing/Collection at 1st Release
5. Establishment Repricing/Collection at Final Closing



Household surveys



⁴Groves, R.M. & Peytcheva, E. (2008). "The impact of nonresponse rates on nonresponse bias: a meta-analysis." *Publ.Opin. Q.*, 72(2), 167-189.

Household surveys

Household survey response rates, October 2007–October 2017



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

[View data](#)



Note

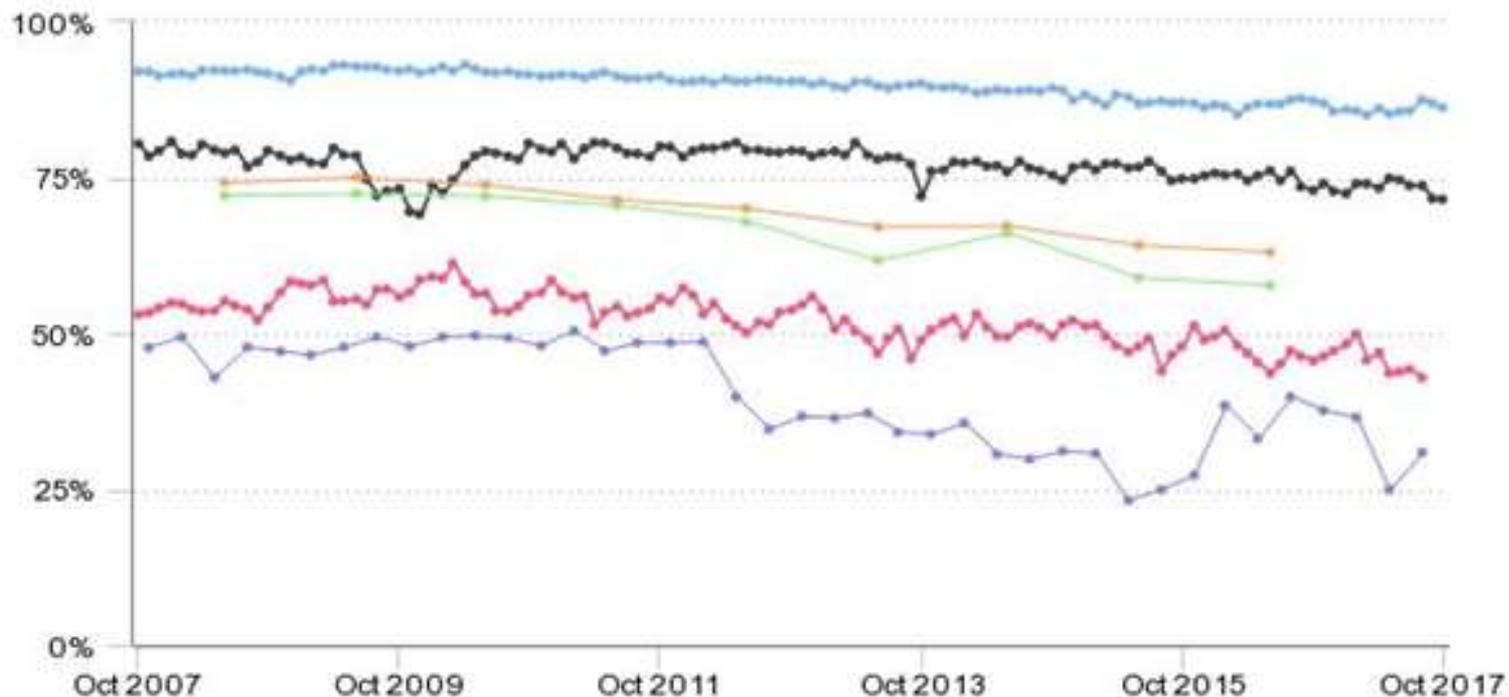
Telephone Point of Purchase Survey (TPOPS)

The drop in TPOPS response rates in 2012 is the result of the conversion from a landline only sample frame to a dual frame sample design containing both landlines and cell phones.

Downloadable chart

Household survey response rates, October 2007 - October 2017

ATUS CE-Diary CE-Interview CPI-Housing CPS TPOPS



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Highlight a particular survey

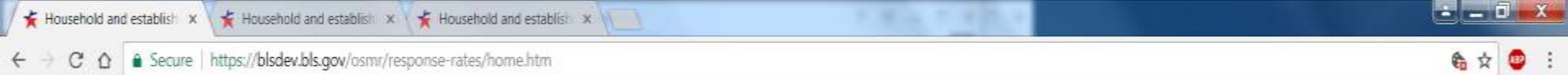
Household survey response rates, October 2007 - October 2017

→ ATUS → CE-Diary → CE-Interview → CPI-Housing → CPS → TPOPS



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

Household surveys



⁴Groves, R.M. & Peytcheva, E. (2008). "The impact of nonresponse rates on nonresponse bias: a meta-analysis." *Publ. Opin. Q.*, 72(2), 167-189.

Household surveys

Household survey response rates, October 2007–October 2017



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[View data](#)



Note

Telephone Point of Purchase Survey (TPOPS)

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Table of response rates

Household survey response rates

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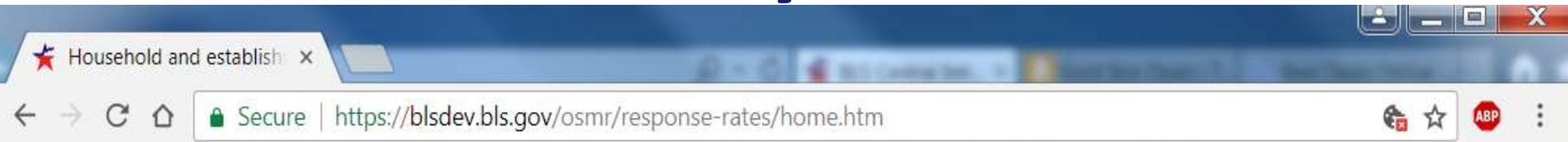
Household survey response rates

Household survey response rates, October 2007–October 2017

Date	ATUS	CE-Diary	CE-Interview	CPI-Housing	CPS	TPOPS
Oct 2007	53.0%	(1)	(1)	80.4%	92.0%	(1)
Nov 2007	53.3	(1)	(1)	78.4	92.0	47.7%
Dec 2007	54.1	(1)	(1)	79.3	91.3	(1)
Jan 2008	54.9	(1)	(1)	80.8	91.6	(1)
Feb 2008	54.7	(1)	(1)	78.8	91.7	49.4
Mar 2008	53.9	(1)	(1)	78.6	91.3	(1)
Apr 2008	53.5	(1)	(1)	80.3	92.2	(1)
May 2008	53.6	(1)	(1)	79.4	92.2	42.9
Jun 2008	55.2	72.1%	74.2%	78.9	92.1	(1)
Jul 2008	54.4	(1)	(1)	79.4	92.1	(1)
Aug 2008	53.8	(1)	(1)	76.7	92.3	47.8
Sep 2008	52.1	(1)	(1)	77.5	91.9	(1)
Oct 2008	54.2	(1)	(1)	79.3	91.7	(1)
Nov 2008	56.6	(1)	(1)	78.5	91.2	47.1
Dec 2008	58.3	(1)	(1)	77.8	90.5	(1)
Jan 2009	58.0	(1)	(1)	78.2	92.0	(1)
Feb 2009	57.7	(1)	(1)	77.4	92.4	46.5
Mar 2009	58.5	(1)	(1)	77.2	92.1	(1)
Apr 2009	55.1	(1)	(1)	79.7	93.0	(1)
May 2009	55.2	(1)	(1)	78.6	93.0	47.8
Jun 2009	55.5	72.4	75.0	78.5	92.8	(1)
Jul 2009	54.6	(1)	(1)	74.7	92.7	(1)
Aug 2009	57.0	(1)	(1)	72.1	92.7	49.4
Sep 2009	57.1	(1)	(1)	72.8	92.3	(1)
Oct 2009	55.8	(1)	(1)	73.2	92.1	(1)
Nov 2009	56.6	(1)	(1)	69.5	92.4	47.9
Dec 2009	58.6	(1)	(1)	69.1	91.8	(1)
Jan 2010	59.1	(1)	(1)	73.8	92.2	(1)
Feb 2010	58.8	(1)	(1)	72.5	92.8	49.4
Mar 2010	61.2	(1)	(1)	74.6	92.1	(1)
Apr 2010	58.2	(1)	(1)	77.0	93.1	(1)



Household Surveys Features Table



Oct 2007 Oct 2009 Oct 2011 Oct 2013 Oct 2015 Oct 2017

Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.



[View data](#)

Note

Telephone Point of Purchase Survey (TPOPS)

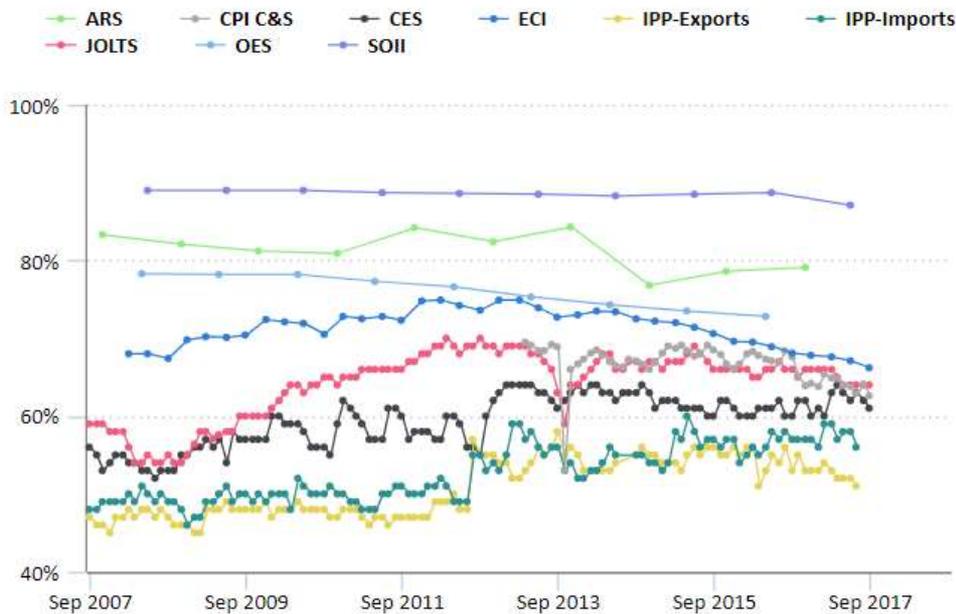
The drop in TPOPS response rates in 2012 is the result of the conversion from a landline only sample frame to a dual frame sample design containing both landlines and cell phones.

Household survey features

Survey	Sample size	Mandatory/Voluntary	Frequency	Collection methods	Collection period	Approximate survey length	Nonresponse bias
American Time Use Survey (ATUS)	2,060 households	Voluntary	Monthly	Phone	8 weeks	18 min	Info
Consumer Expenditure Surveys (CED)—Diary	20,400 households	Voluntary	Monthly	Diary	2 weeks	250 min	Info
Consumer Expenditure Surveys (CE) — Interview	40,375 households	Voluntary	Monthly	Personal visit, Phone	1 month	65 min	Info
Consumer Price Index — Housing (CPI—Housing)	7,800 housing units	Voluntary	Monthly	Personal visit, Phone	1 month	5 min	Info
Current Population Survey (CPS)	60,000 households	Voluntary	Monthly	Personal visit, Phone	10 days	10 min (varies by month)	Info
Telephone Point of Purchase Survey (TPOPS)	33,000 households	Voluntary	Quarterly	RDD , Phone	7 weeks	13 min	Info

Establishment surveys: overall unit response rates

Establishment surveys unit response rates, September 2007–September 2017



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.



[View data](#)

Notes

Annual Refiling Survey (ARS)

In order to achieve the necessary savings for the funding level allocated to BLS in the Consolidated Appropriations Act, 2014, the BLS reduced the scope and frequency of collection for select units in the ARS. For more information, refer to [2014 Budget Enacted for Bureau of Labor Statistics](#).

Consumer Price Index — Commodities & Services (CPI C&S)

The drop in CPI C&S and JOLTS response rates in October 2013 was due to the Federal Government Shutdown.

Select surveys to compare (CES and JOLTS)

Establishment surveys unit response rates, September 2007 - September 2017



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

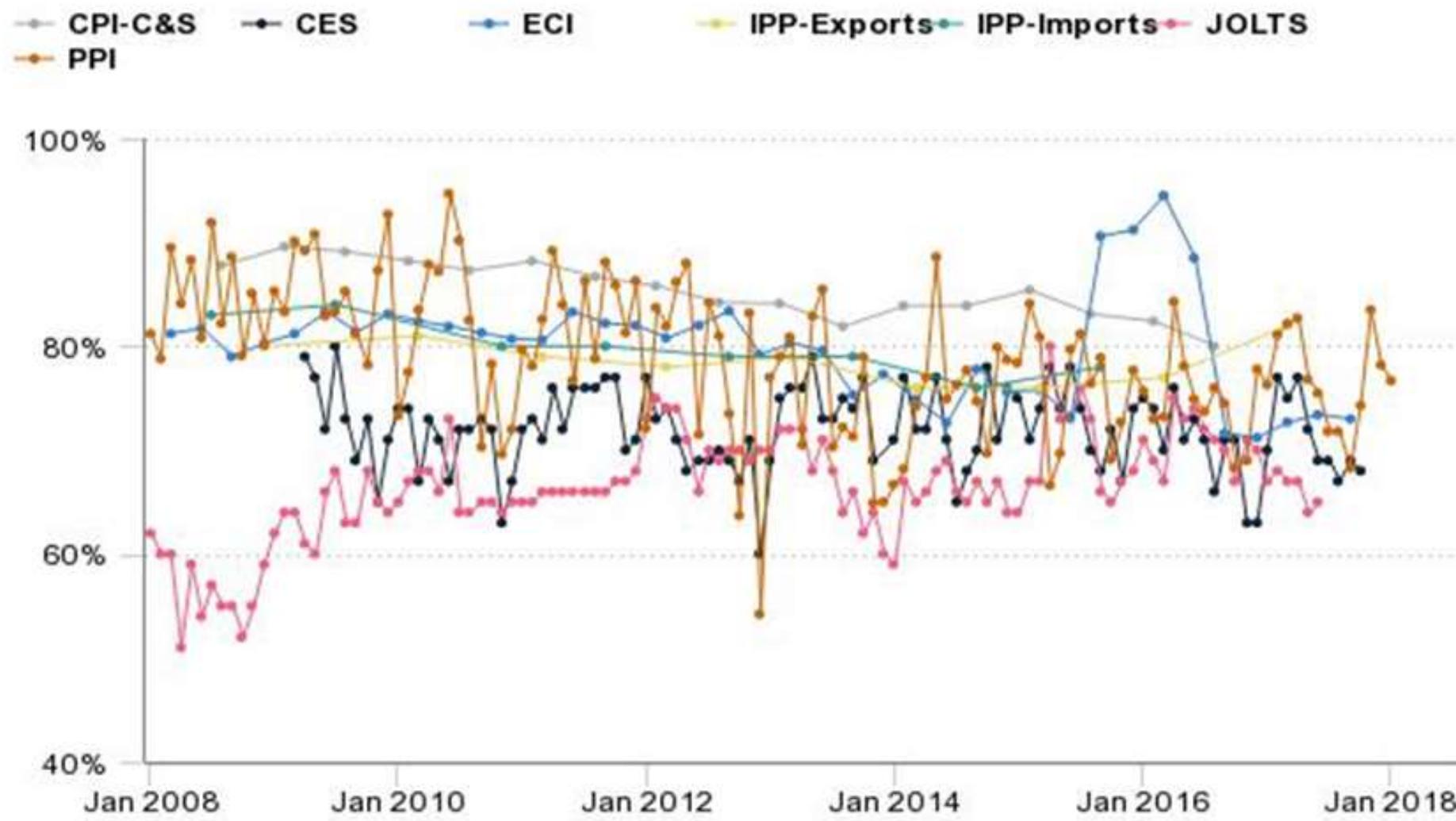


Establishment Survey Features

Establishment survey features

Survey	Sample size	Mandatory/Voluntary	Frequency	Collection methods	Collection period	Nonresponse bias
Annual Refiling Survey (ARS)	1,200,000 establishments	Mandatory in 26 states	Annual	Mail, Web	12 months	Info
Consumer Price Index – Commodities & Services (CPI C&S)	138,000 price quotes	Voluntary	Monthly	Personal visit, Web, Phone	20-22 business days	NA
Current Employment Statistics Survey (CES)	147,000 establishments	Voluntary	Monthly	CATI , EDI , Web, Fax, TDE, Other	10-16 business days	Info
Employment Cost Index (ECI)	15,000 establishments	Voluntary	Quarterly	Personal visit, Web, Fax, Phone, Mail, E-mail	45 days	NA
International Price Program – Exports (IPP-Exports)	5,400 price quotes	Voluntary	Annual	Personal visit	1 year	Info
International Price Program – Imports (IPP-Imports)	9,175 price quotes	Voluntary	Annual	Personal visit	1 year	Info
Job Openings and Labor Turnover Survey (JOLTS)	16,000 establishments	Voluntary	Monthly	CATI, Web, E-mail, Fax	11-17 business days	Info
Occupational Employment Statistics Survey (OES)	1,200,000 establishments	Voluntary in most states	Annual	Mail, Fax, Phone, Web, E-mail	About 6 months	NA
Survey of Occupational Injuries and Illnesses (SOII)	240,000 establishments	Mandatory	Annual	Mail, Fax, Phone, Web, E-mail	7 months	Info

Establishment surveys unit initiation rates, January 2008 - January 2018



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.

The features change for the phases

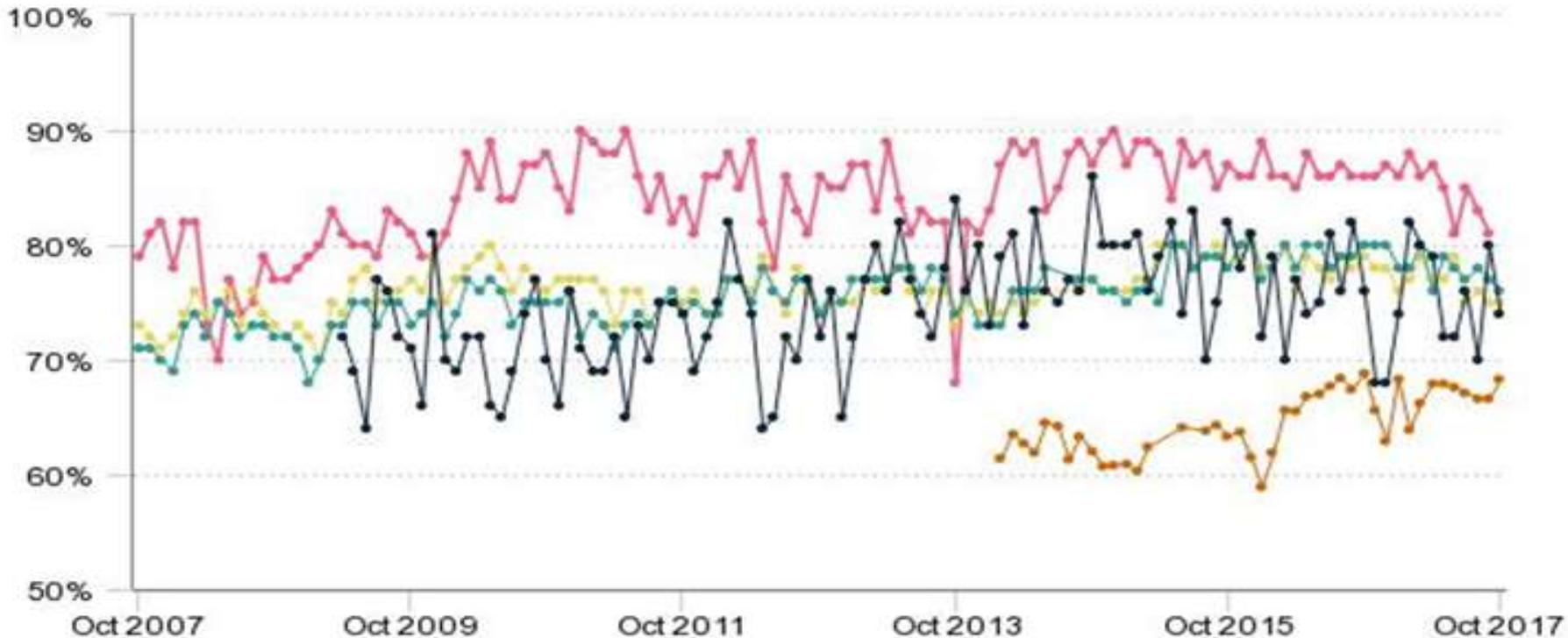
Establishment survey features

Survey	Number of initiations attempted annually	Mandatory/Voluntary	Collection methods	Collection period
<u>Consumer Price Index – Commodities & Services (CPI C&S)</u>	10,500 establishments	Voluntary	Personal visit, Web	February-July and August-January
<u>Current Employment Statistics Survey (CES)</u>	70,000 establishments	Voluntary	CATI	3 months
<u>Employment Cost Index (ECI)</u>	3,300 establishments	Voluntary	Personal visit, Web, Fax, Phone, Mail, E-mail	45 days
<u>International Price Program – Exports (IPP-Exports)</u>	950 establishments	Voluntary	Personal visit	1 year
<u>International Price Program – Imports (IPP-Imports)</u>	1,500 establishments	Voluntary	Personal visit	1 year
<u>Job Openings and Labor Turnover Survey (JOLTS)</u>	7,200 establishments	Voluntary	CATI	3 months
<u>Producer Price Index (PPI), Initiation</u>	4,500 establishments	Voluntary	Personal visit, phone	24-30 months



Establishment surveys repricing/collection unit response rates at first closing October 2007 - October 2017

→ CES
 → IPP-Exports
 → IPP-Imports
 → JOLTS
 → PPI

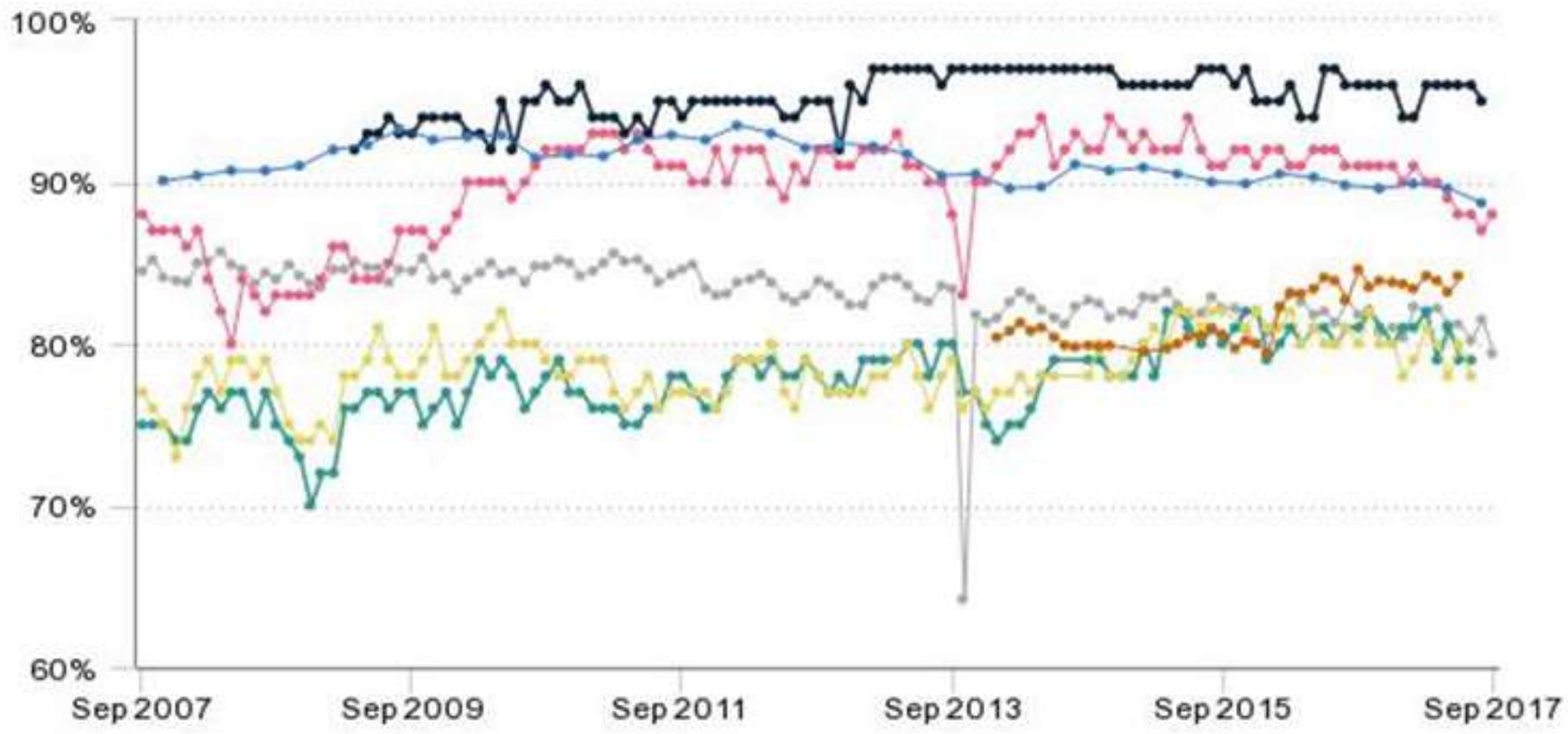


Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.



Establishment surveys repricing/collection unit response rates at final closing September 2007 - September 2017

- CPI-C&S
- CES
- ECI
- IPP-Exports
- IPP-Imports
- JOLTS
- PPI



Click legend items to change data display. Hover over chart to view data.
Source: U.S. Bureau of Labor Statistics.



Future plans

- Add nonresponse bias bibliography and links.
- Modernize graphical features (control of dates, choice of color schemes)
- Add new surveys (Occupational Requirements Survey?)
- More frequent updates?



Contact Information

John Dixon
**(Presenting for the Public Access
Response Rate Team)**

dixon.john@bls.gov