

# Weighting in the 2010's

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# CE Weighting is Dynamic NOT Static



# Major Changes This Decade

- ▶ 2010 Redesign
- ▶ Annual Sampling vs. a 10 year Sample
- ▶ State Level Weighting
- ▶ NonResponse (Unit) Variable revisions: 2014
- ▶ Calibration Variable Revisions: 2017



# The Impact of Weighting can be very

# LARGE



# Impact of Weighting

- 11,539 = Average of all Base Weights from Interview Survey 2016Q4 for all good interviews
- 20,575 = Average of all FINLWT21 from Interview Survey 2016Q4 for all good interviews



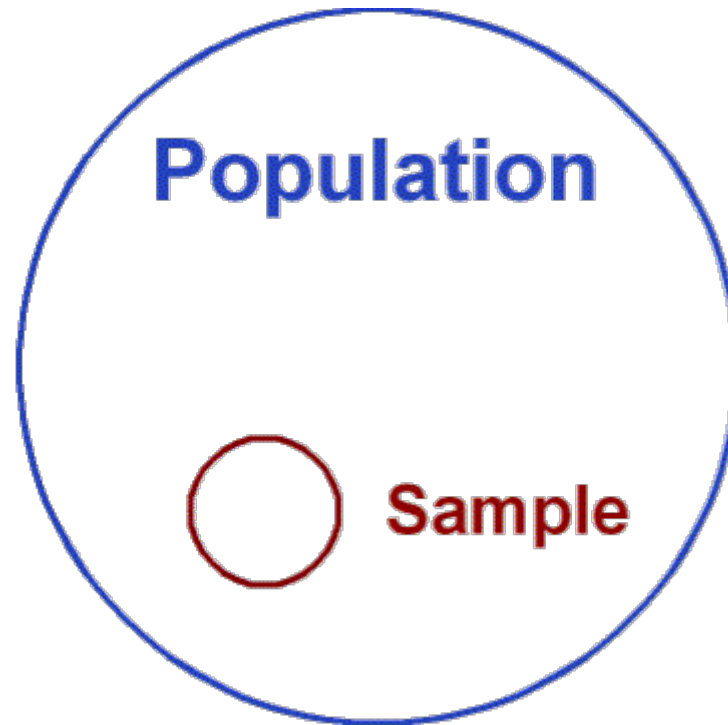
# 2010 Redesign



# 2010 Redesign

- New sample of PSUs was introduced in 2015
  - ▶ Based on 2010 census
  - ▶ 21 → 23 Self Representing PSUs
  - ▶ 54 → 52 Non Self Representing PSUs
  - ▶ 16 → 16 Rural PSUs

# Annual Sampling





# Annual Sampling of Households Within PSUs

- Sample of households was chosen for an entire decade in previous designs
  - ▶ For 2000 design, the sample was chosen for 2005-2014
- Selecting annually has advantage of being responsive to latest housing data
  - ▶ Resulting in more accurate lists of addresses

# State Level Weighting



# State Level Weighting

- Can be provided for states with sufficient sample size and representative PSUs
- Experimental weights have been published for NJ, CA, and FL



# Nonresponse Adjustment



# Nonresponse Variable Background

- Adjusts weights of respondents to compensate for nonrespondents
- Aim is to reduce nonresponse bias which can be large when respondents and nonrespondents are different
- Success depends on having variables for **both respondents and nonrespondents**

# Nonresponse Variables Before 2014

- Region of Country (4 Regions)
- Consumer Unit Size (4 Size Groupings)
- Tenure (2 Groupings)
- Race (2 Groupings)
- Rotation Group: Interview Survey Only:  
(4 Groupings)

# Nonresponse Variables Starting in 2014

- Region of Country (4 Regions)
- Consumer Unit Size (4 Size Groupings)
- **IRS Adjusted Gross Income by zip code which is publically available (3 Groupings)**
- Number of Contact Attempts (4 Groupings)



# Calibration Adjustment





# Calibration Background

- ▶ Adjust weights to known population totals from external source, Current Population Survey (CPS) in order to account for non-residential addresses and frame under coverage
- ▶ CPS is largest BLS survey and is used to calculate the unemployment rates
- ▶ Minimizes the change from Stage1 weight = Base weight\*Noninterview adjustment and FINLWT21 while satisfying the population totals constraints



# Calibration Weighting Variables

- CPS controls are used for the following characteristics:
  - ▶ Total number of CUs
  - ▶ Homeowner CUs
  - ▶ 14 age/race combinations
  - ▶ Census Region (4) -> Census Division (9) (starting in 2017)
  - ▶ Census Urban\*Region (4) -> Census Urban\*Division (9) (starting in 2017)



**What  
Next**

# Weighting Beyond the 2010's

- Linking address level information from alternative data sources
  - ▶ Potential use in Nonresponse Adjustment

# Thank You!

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