

Earnings in the U.S. Economy

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Disclaimer

Any opinions and conclusions expressed herein are those of the author and do not necessarily represent the views of the U.S. Census Bureau.

All results have been reviewed to ensure that no confidential information is disclosed.

Goals of this Presentation

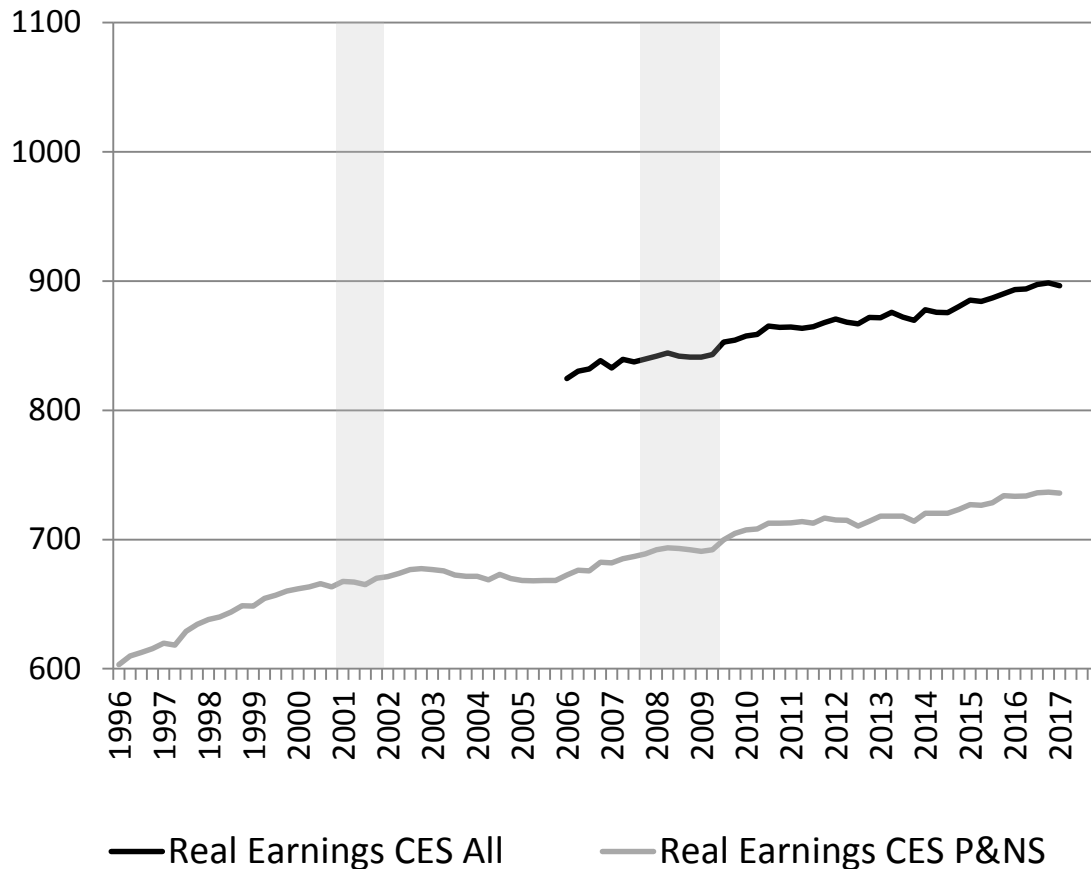
- (1) Review publicly available earnings statistics from CES & QWI
 - Discuss the similarities of the two series
 - Discuss the tradeoff between timeliness versus detail

- (2) Present some new LEHD earnings distribution statistics
 - Ask potential users about the value of these new statistics

Earnings Data

- Employment and earnings are two of the most timely indicators of economic conditions
 - National CES estimates published first Friday of the month
 - State estimates published about two weeks later
 - Local area estimates published about two weeks after
- Earnings data provides information about:
 - Inflation monitoring
 - Tax revenue forecasts
 - Industry wage differentials, male-female wage differentials, returns to education, firm-size wage differentials, ...

CES National Earnings, 1996 - current

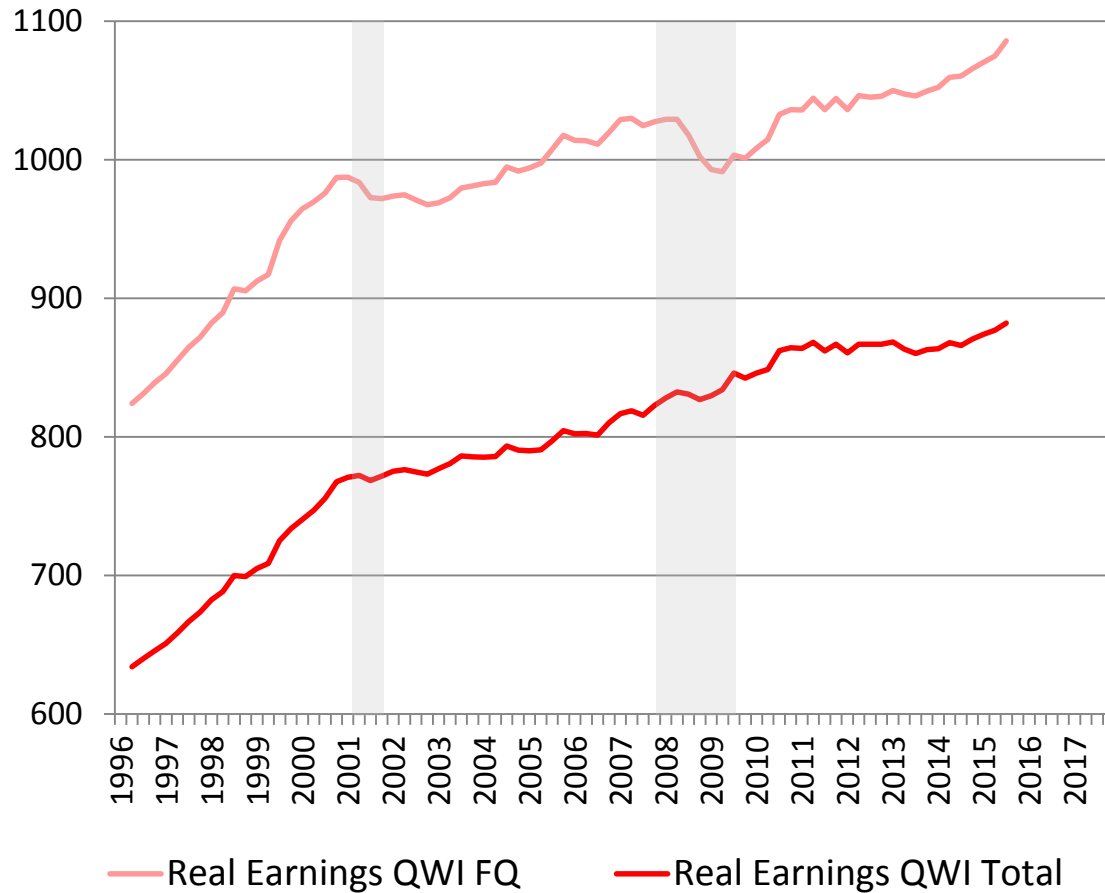


1) Current Employment Statistics (CES) average real weekly earnings of production and non-supervisory workers

2) CES average real weekly earnings of all workers (available since 2006)

Both series downloaded from the BLS website (no manipulations)

QWI National Earnings, 1996 - current

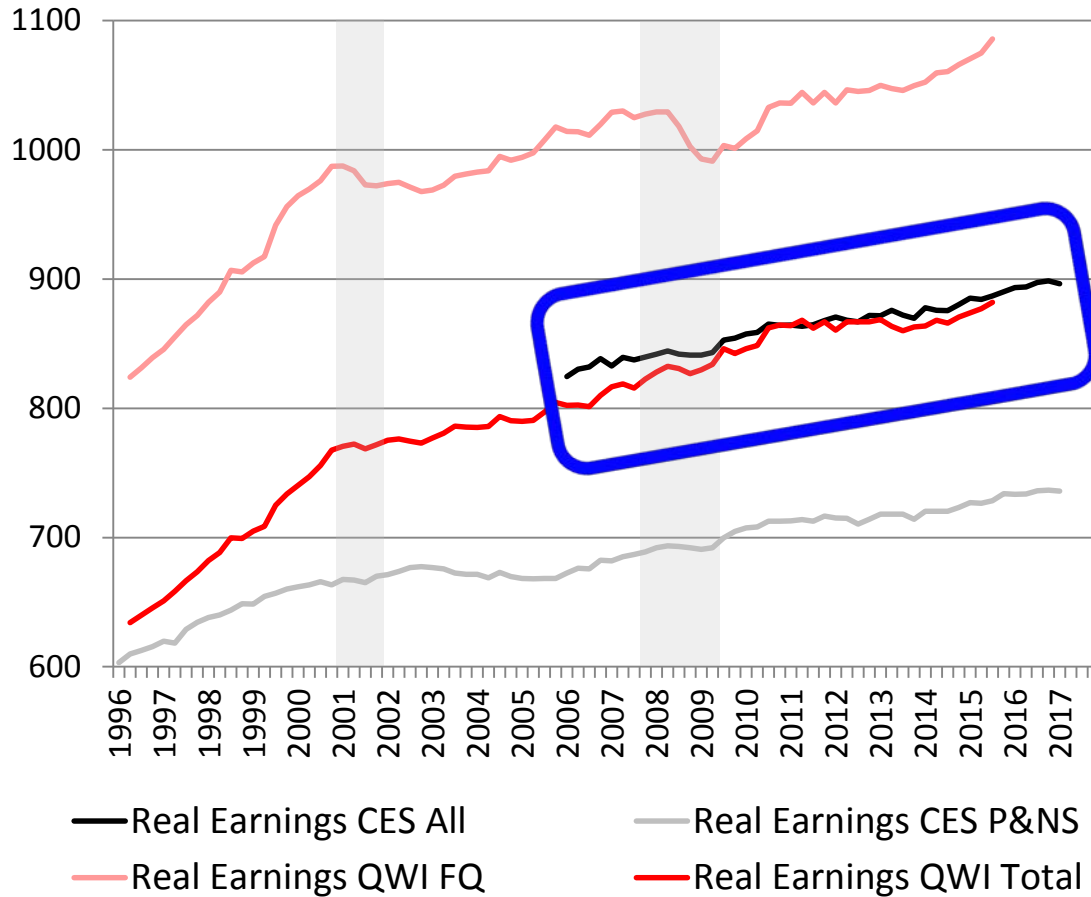


1) Quarterly Workforce Indicators (QWI) real earnings of all workers

2) QWI real earnings of stable (full-quarter) workers

Both QWI series downloaded from the Census Bureau website, converted to weekly, seasonally adjusted, and converted to real

National Earnings, 1996 - current

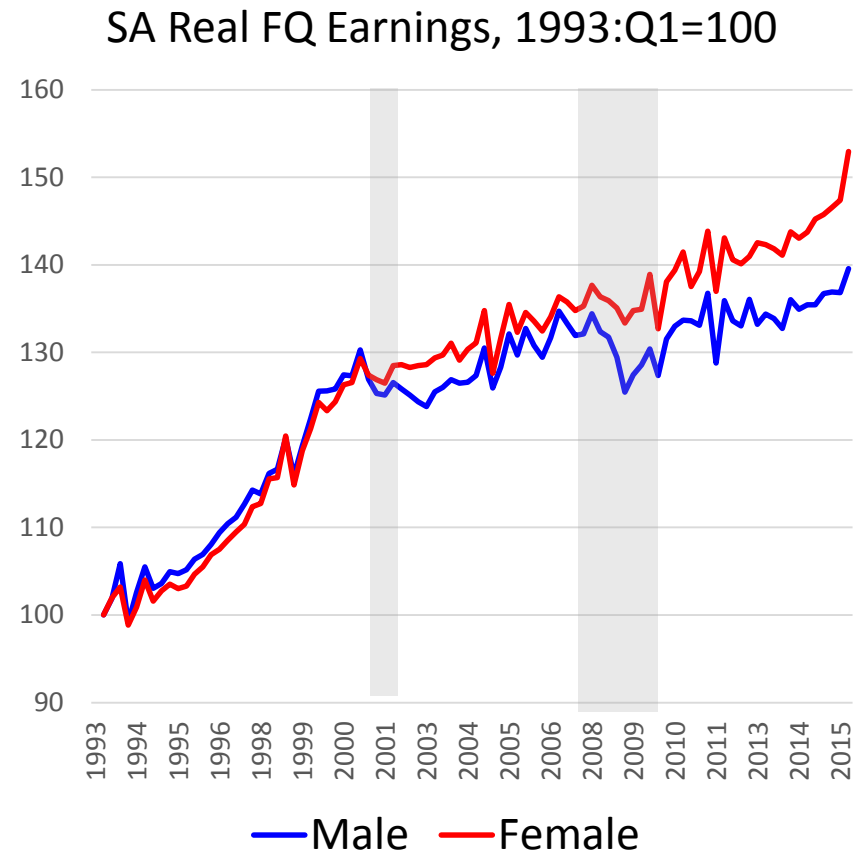
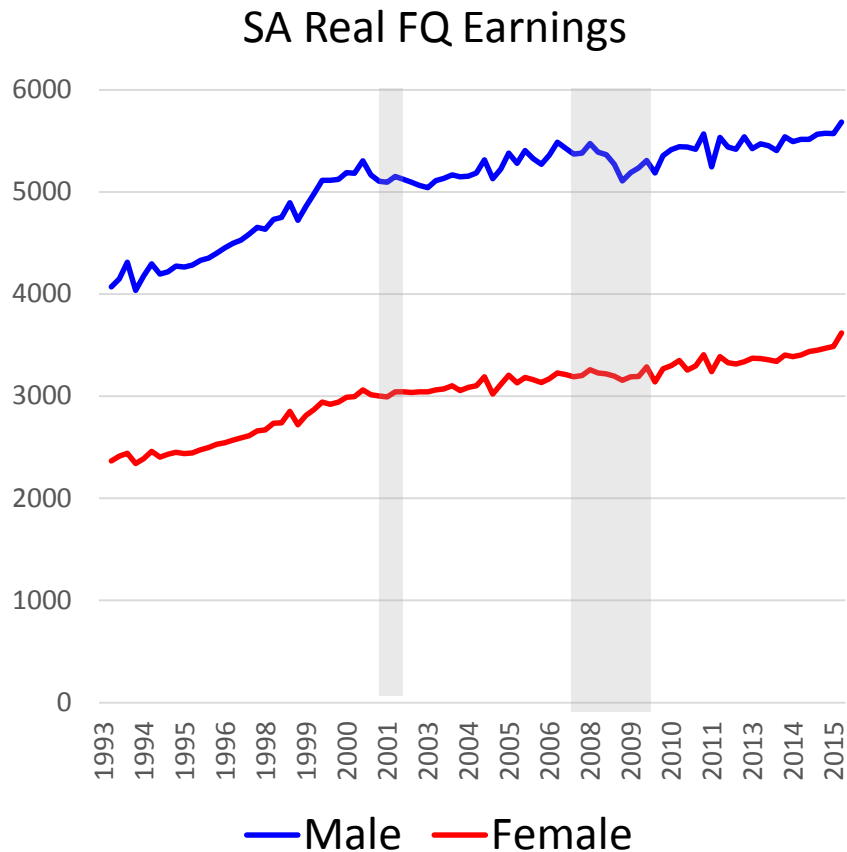


The CES All Workers and the QWI earnings series are very similar in levels and trends

Earnings Data: CES and QWI

CES	QWI
Timely (about one month lag)	2016:Q3 is most recent
By industry	By industry
By MSA (CES), by county (QCEW)	By county
Seasonally adjusted, Real	---
---	By demographics (age, gender, education, race & ethnicity)
---	By firm age and firm size

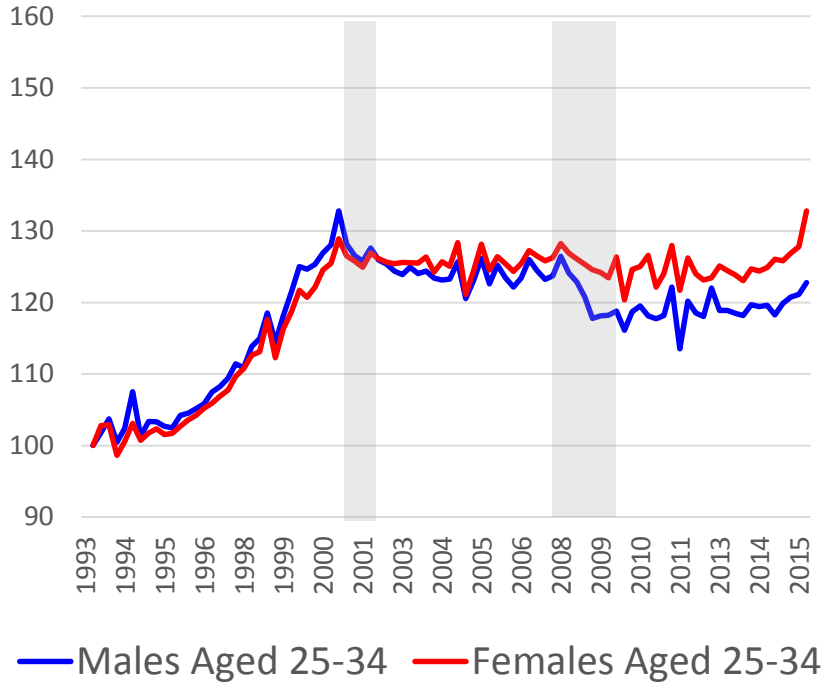
QWI Earnings by Demographics



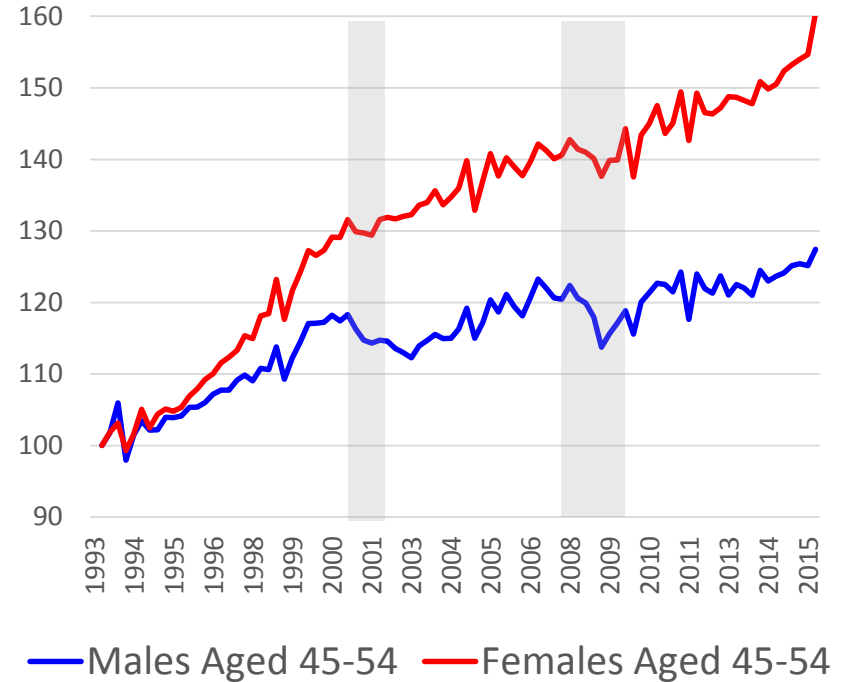
QWI Earnings by Demographics (II)

Drill down from Gender to Gender * Age

SA Real FQ Earnings, 1993:Q1=100

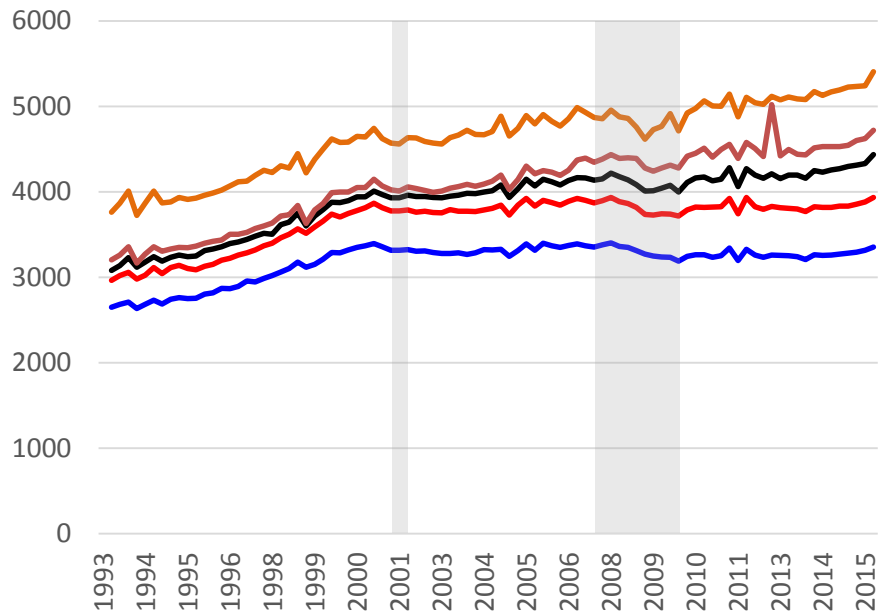


SA Real FQ Earnings, 1993:Q1=100



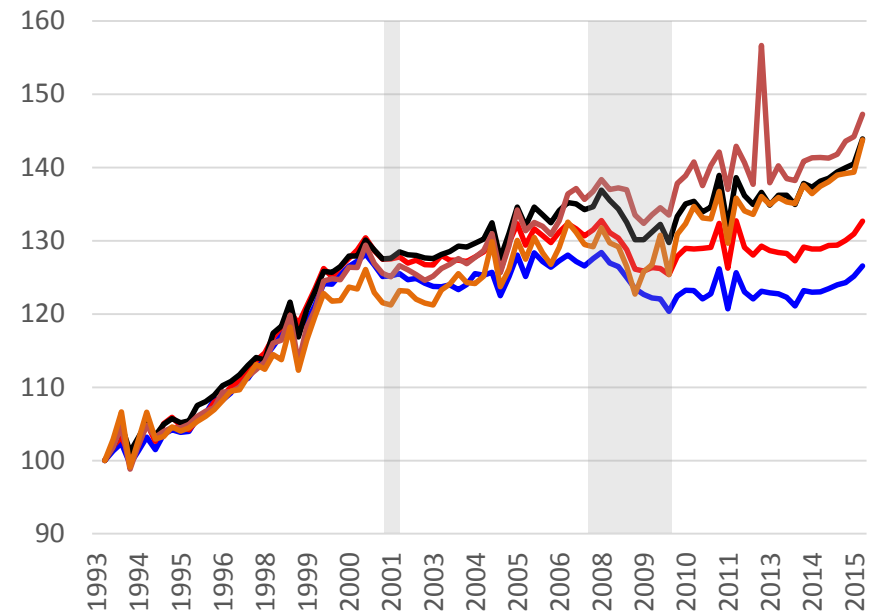
Earnings by Firm Characteristics

SA Real FQ Earnings



- Firm Size 0-19
- Firm Size 50-249
- Firm Size 500+
- Firm Size 20-49
- Firm Size 250-499

SA Real FQ Earnings, 1993:Q1=100



- Firm Size 0-19
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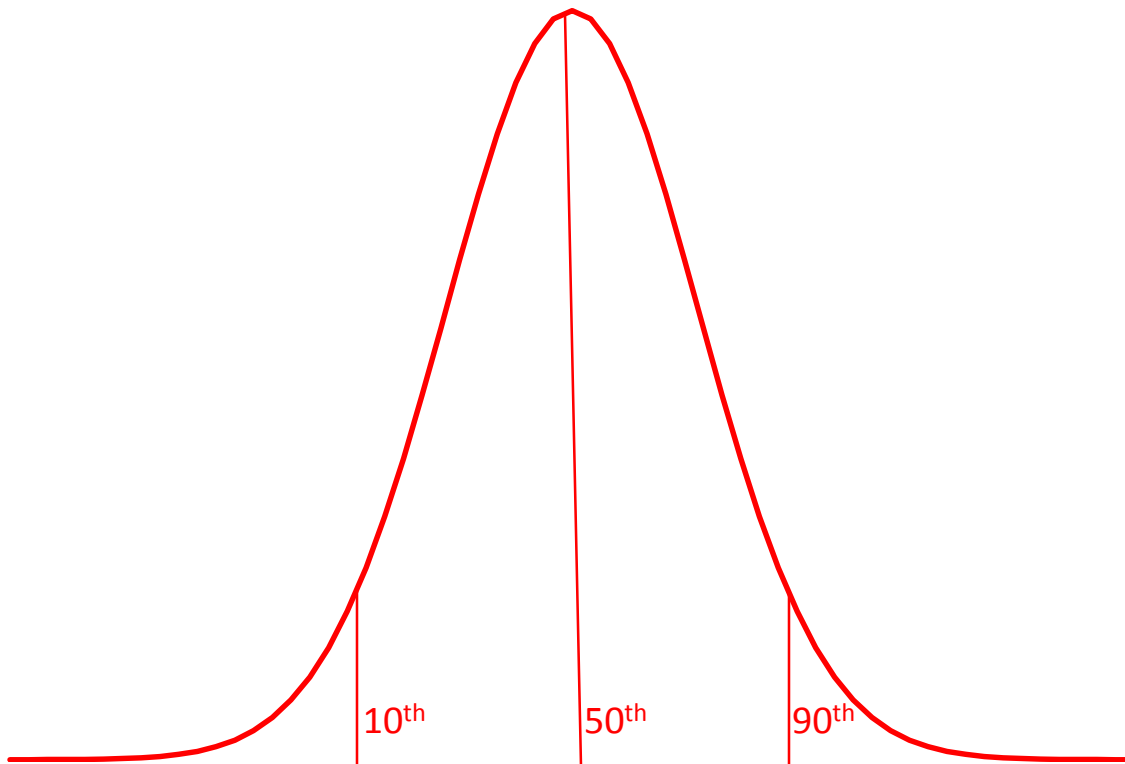
Earnings Data

A question for Keith, Mark, and the audience: How do you view the tradeoff between timeliness versus detail?

- When do you use the timely CES data?
- When do you use the detailed QWI data?

Is there anything the LEHD program can do to make the published QWI data more relevant and/or easier to use?

Earnings Distribution

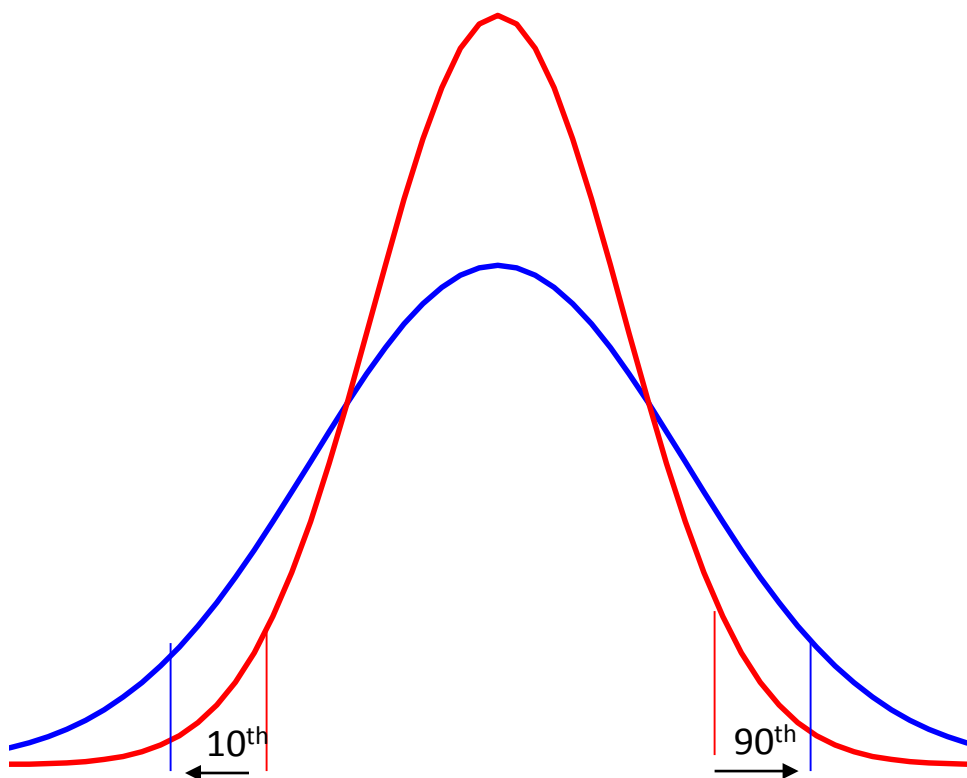


The natural log of earnings is almost always distributed as a normal distribution.

Mean earnings (published by CES & QWI) is a summary statistic of this distribution.

Other summary statistics are the median, or the 10th and 90th percentiles.

Changes in the Earnings Distribution



Increasing inequality refers to a widening distribution of earnings (from red to blue)

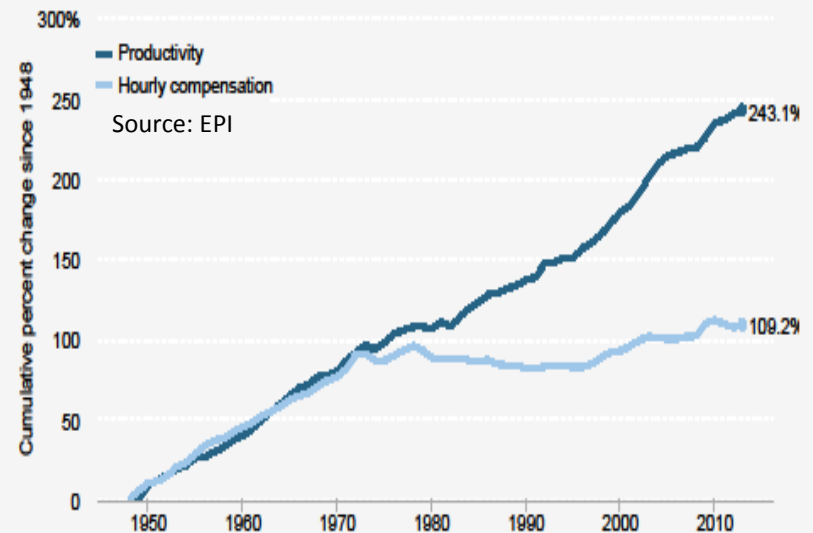
Increasing inequality is often measured using:

- the 90/10 ratio
- the amount of mass in the tails

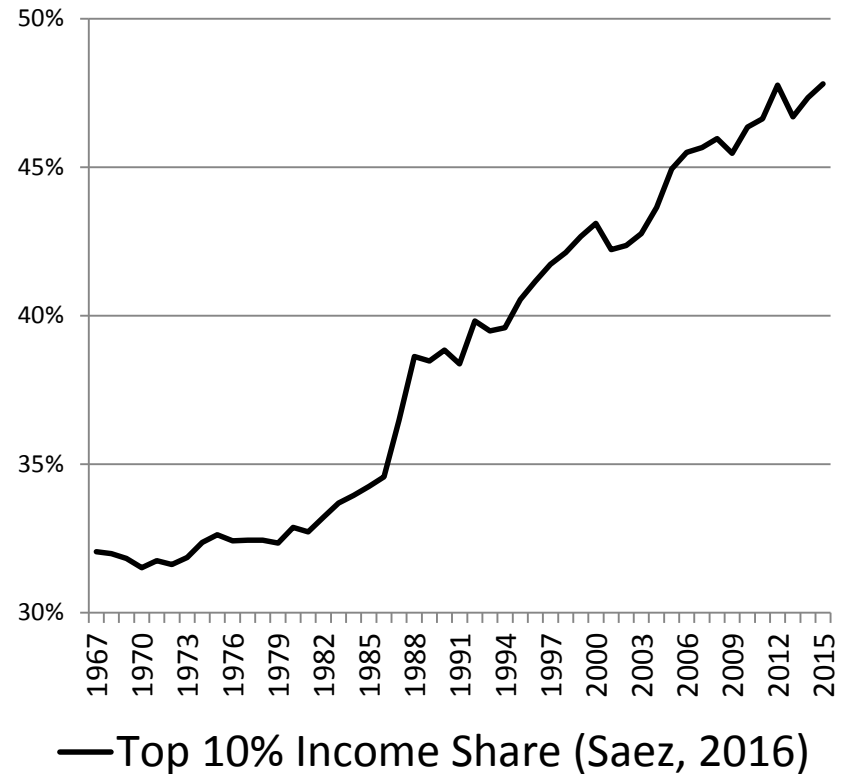
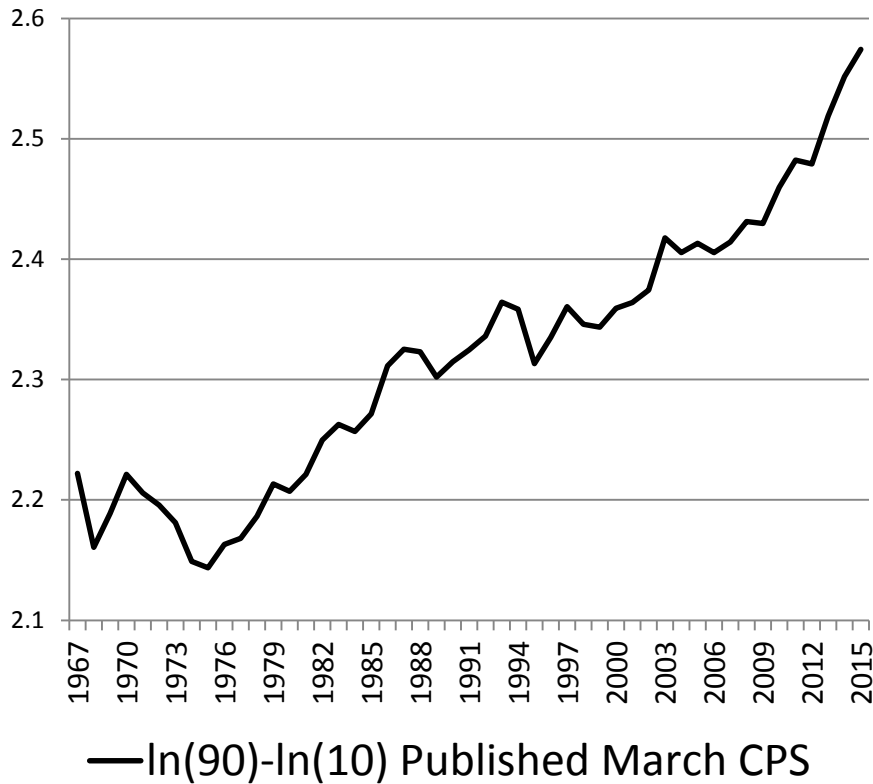
Why do we care about increasing inequality?

- 1) “The rich getting richer, the poor getting poorer”
- 2) Economic growth is not being shared across the earnings distribution

Disconnect between productivity and typical worker compensation,* 1948-2013



What do we know about increasing inequality (1967-2015)?



Published Earnings Distribution Statistics

- 1) Almost everything we know about increasing inequality in the U.S. comes from published CPS and IRS data
 - Time series of 90-10, 90-50, and 50-10 from CPS
 - Earnings shares of top 10%, top 5%, and top 1% from IRS
 - **Why not add LEHD statistics to the nation's data infrastructure?**

- 2) The LEHD can produce comprehensive earnings distribution statistics by demographics, by firm characteristics, and by geography

LEHD Research: Earnings Distribution Statistics

- 1) 10th, 50th, 90th, 95th, 99th percentiles of earnings
 - By Demographics, by Firm Characteristics, and by State
- 2) Share of earnings above 90th, 95th, 99th percentiles
 - By Demographics, by Firm Characteristics, and by State

Both of these statistics will allow us to observe:

[a] the distribution of earnings at a point in time

[b] how the distribution of earnings is moving over time

Quick technical point

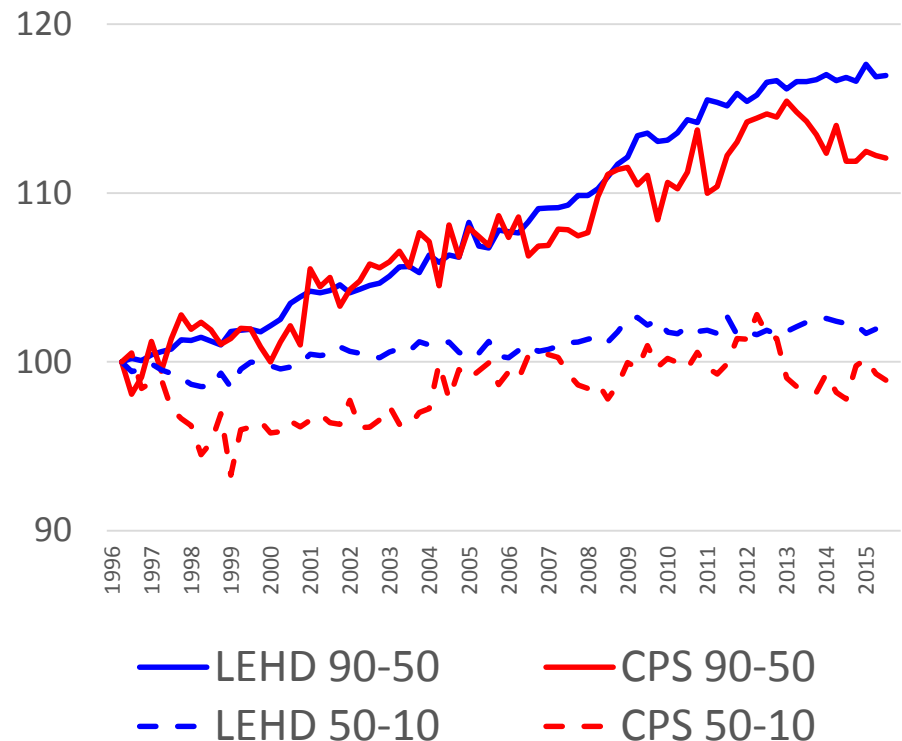
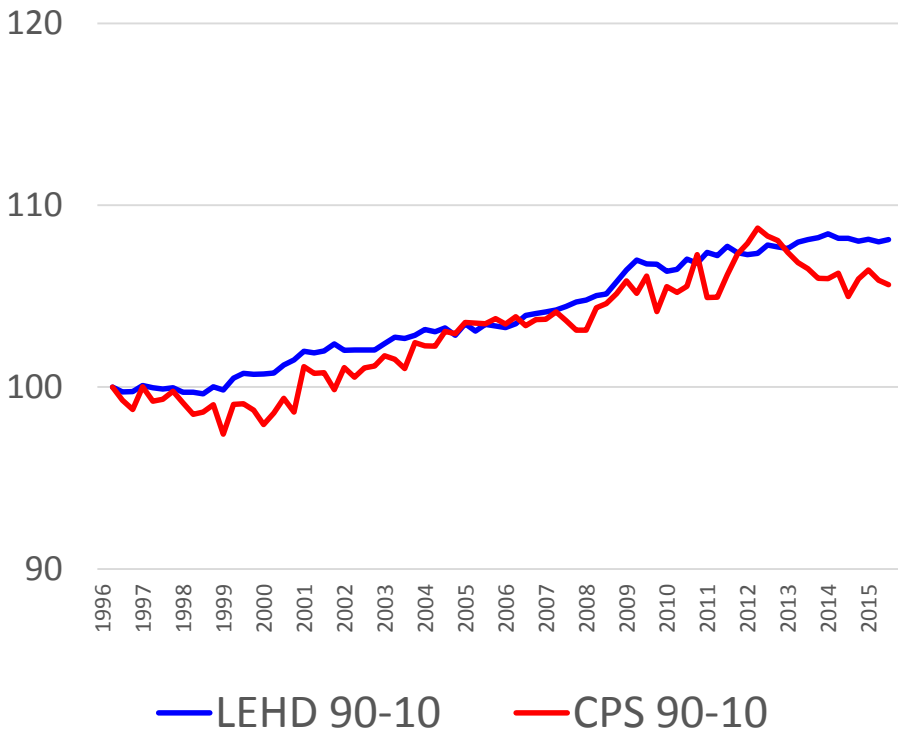
- ❖ How can the LEHD program publish earnings percentiles? The median earnings (or the 10th or 90th percentile earnings) is the earnings of a given individual in the data, which is a disclosure.
- ❖ The median (and other percentiles) is “modeled” in the sense that we determine the 49½th percentile and the 50½th percentile in the data, and we re-define the median as the average of all observations between these two values.

A First Look at LEHD Earnings Distribution Statistics

- ❖ The following statistics use stable (full-quarter) earnings from 20 states with data from 1996:Q2 – 2015:Q3
 - Using full quarter jobs mimics the CPS-ORG earnings concept of usual weekly earnings of full time wage & salary workers at their main job
- ❖ All quarterly time series are in real terms and seasonally adjusted

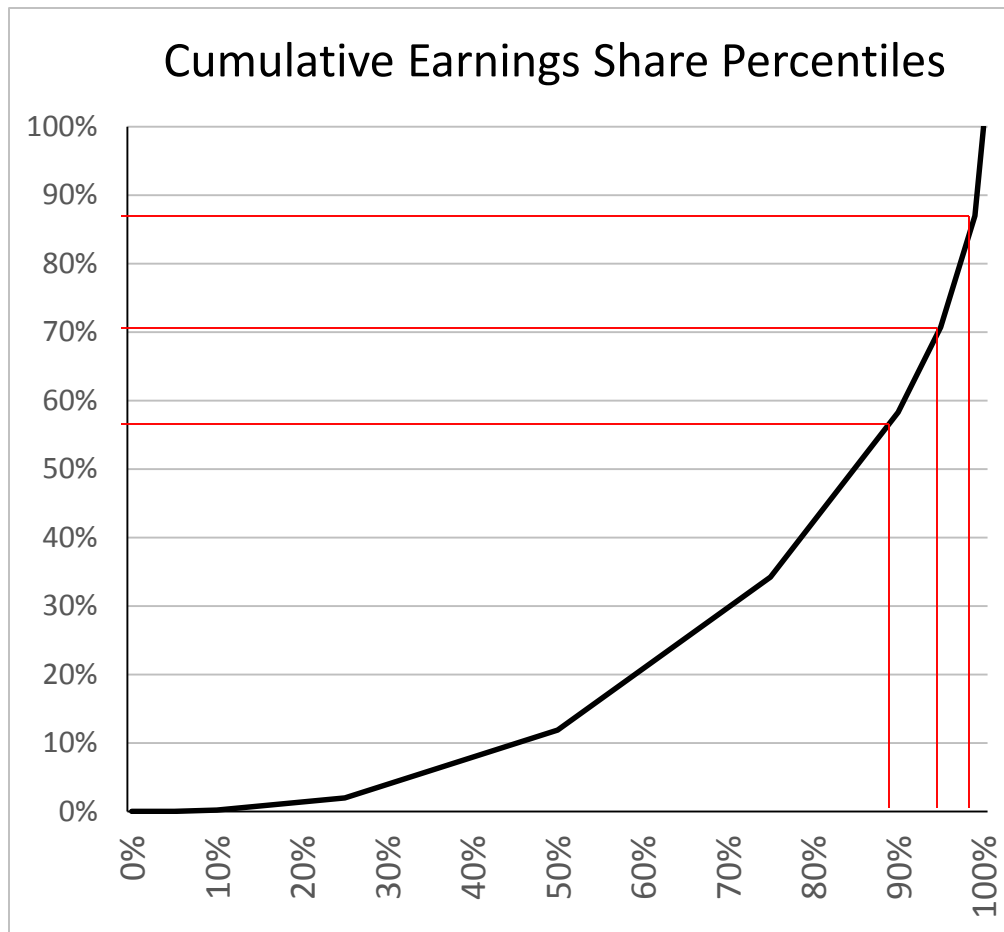
LEHD mimics published CPS

CPS-ORG and LEHD FQ earnings, real 2015:Q3 \$, quarterly SA



LEHD Top Percentile Shares

(The amount of mass in the tails)



The highest earning 10% of individuals account for 41% of earnings

The highest earning 5% of individuals account for 29% of earnings

The highest earning 1% of individuals account for 13% of earnings

Summary

1) Earnings

- QWI earnings are very similar to published CES
- Tradeoff between timeliness and detail

2) Earnings Distribution Statistics

- LEHD research statistics are very similar to published CPS
- Tradeoff between timeliness and detail

3) Two key questions for discussion:

- Do you use the QWI earnings series? If not, why not?
- Would you use the proposed earnings distribution statistics?

Comments appreciated

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