

Earnings in the U.S. Economy

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Disclaimer

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

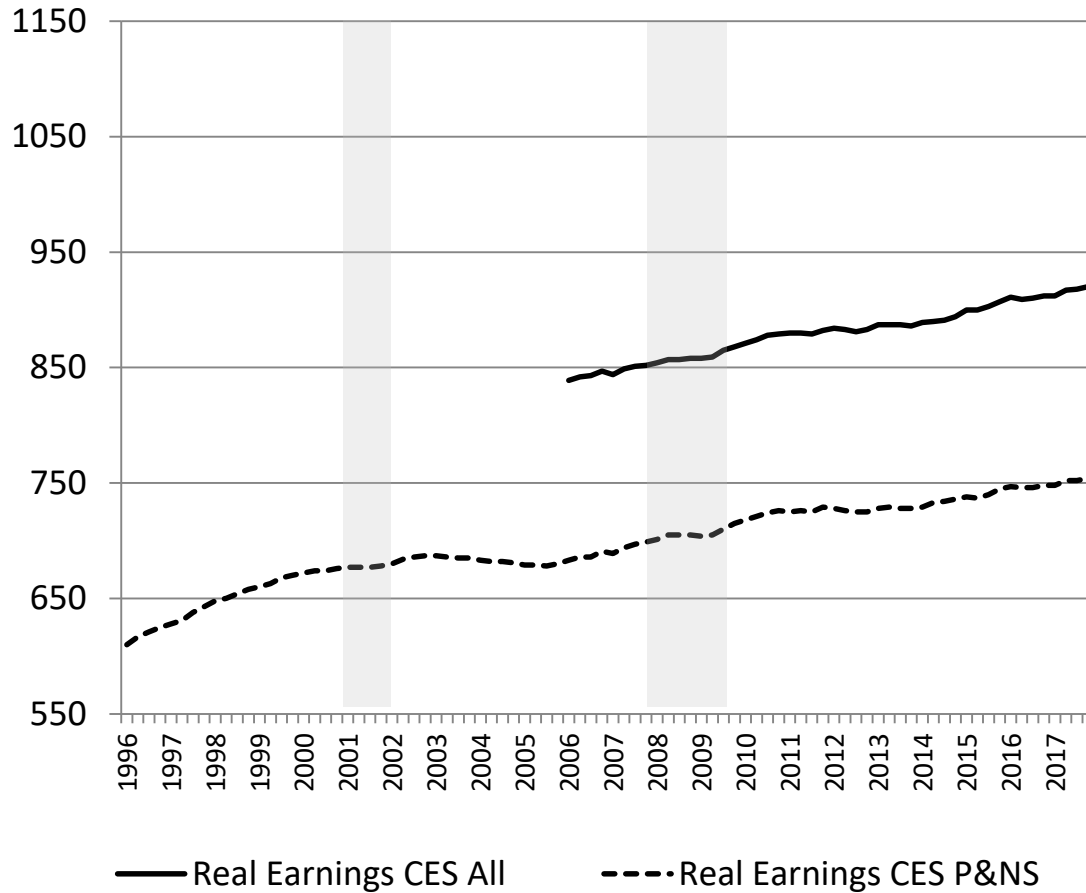
Goals of this Presentation

- (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
 - Show the increasing earnings distribution
- (3) Discuss earnings trends during the past 20 years
 - stagnation
 - increasing inequality

Economic Data

- Employment and earnings are two of the most timely indicators of economic conditions
 - National estimates published by BLS first Friday of the month
 - State estimates published by BLS about two weeks later
 - Local area estimates published by BLS about two weeks after
- Mean earnings statistics 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 - 2017

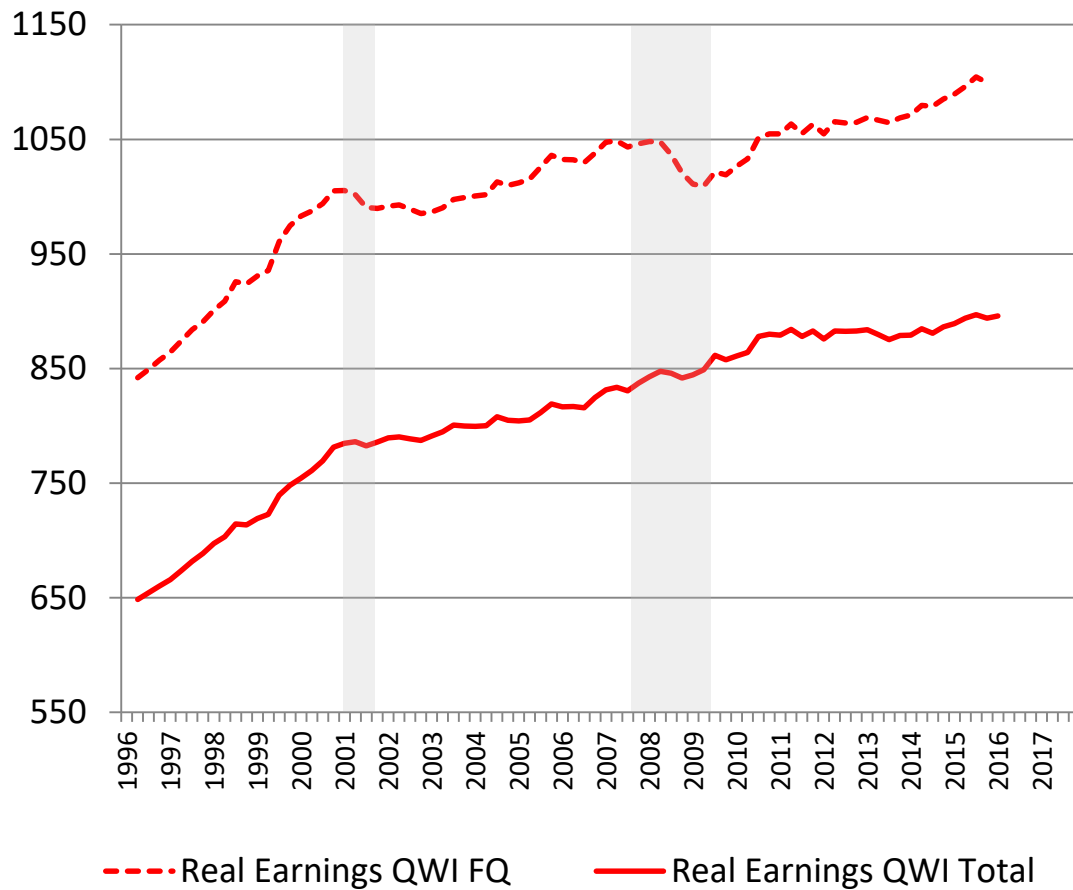


1) Current Employment Statistics (CES) average real weekly earnings of production and non-supervisory workers

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 - 2017

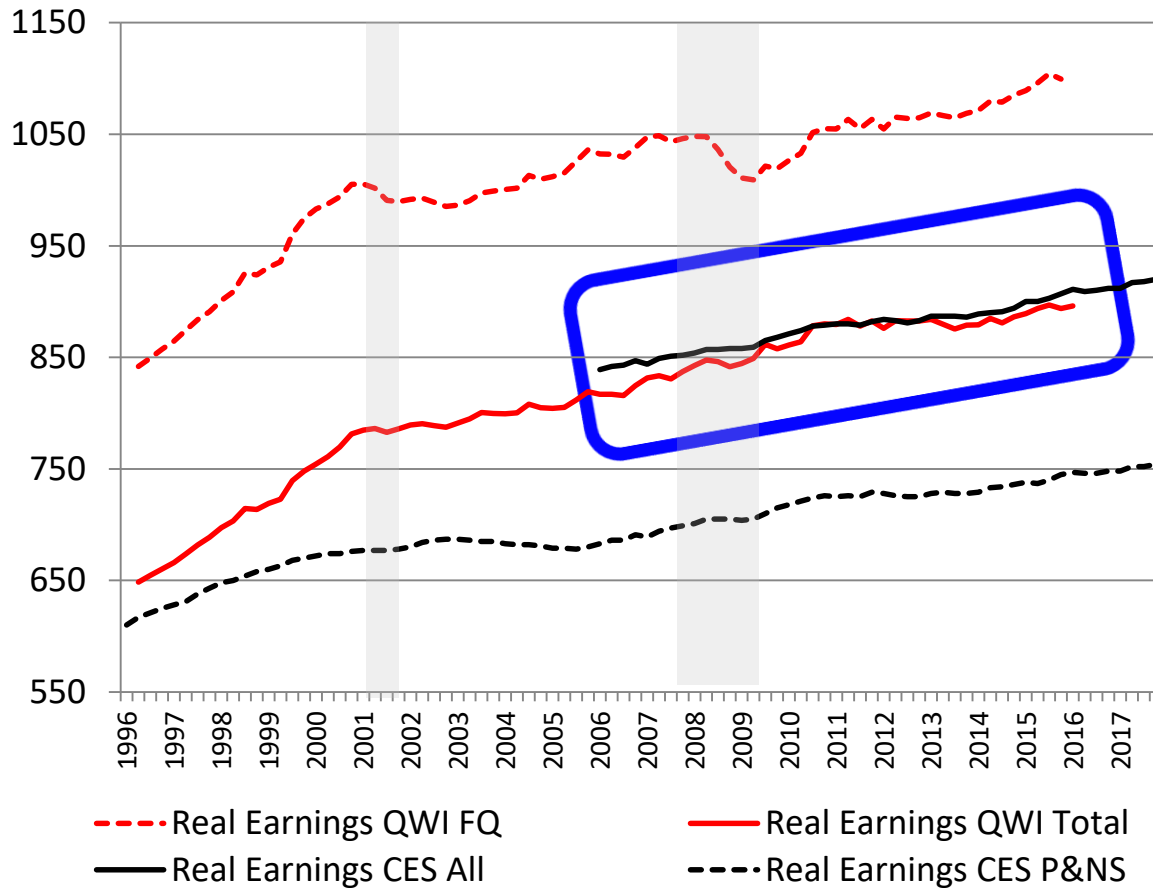


1) Quarterly Workforce Indicators (QWI) real earnings of all workers, National

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

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

National Earnings, 1996 - 2017

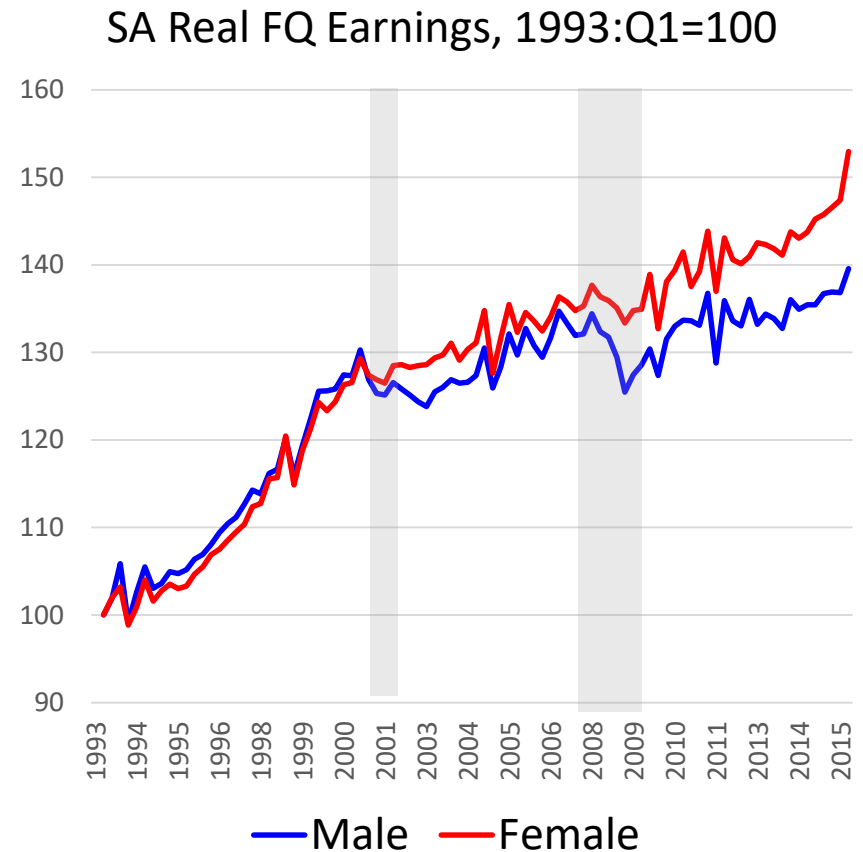
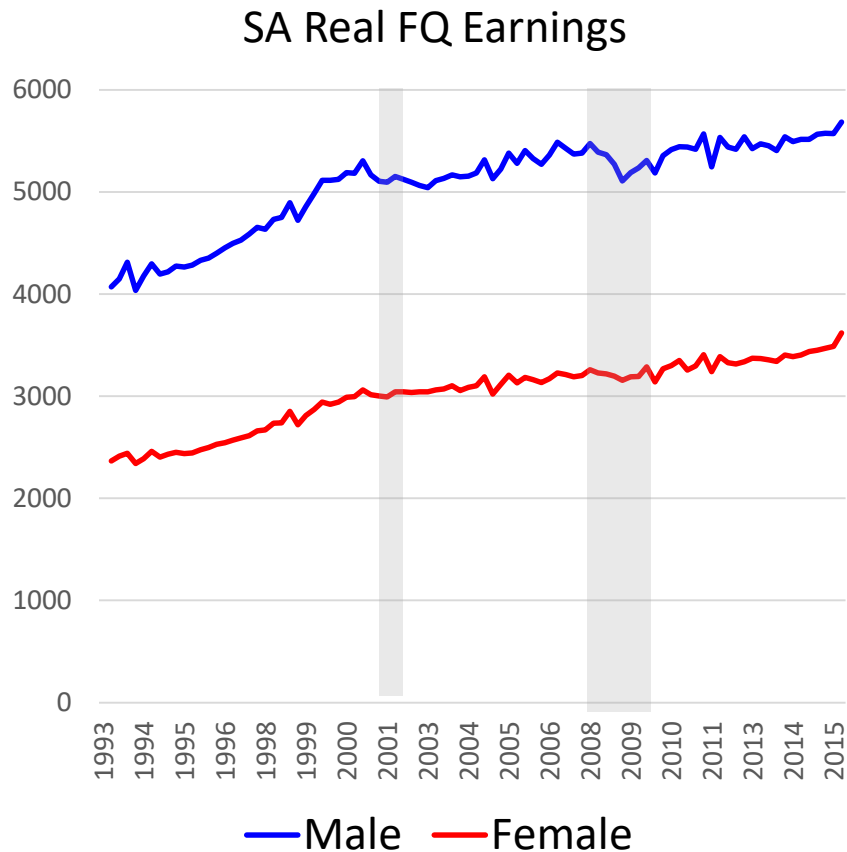


The CES All Workers and the QWI earnings series are very similar in levels and trends

Earnings Data: CES and QWI

CES	QWI
Timely (about one month lag)	2017:Q3 is most recent (2016:Q2 for National)
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

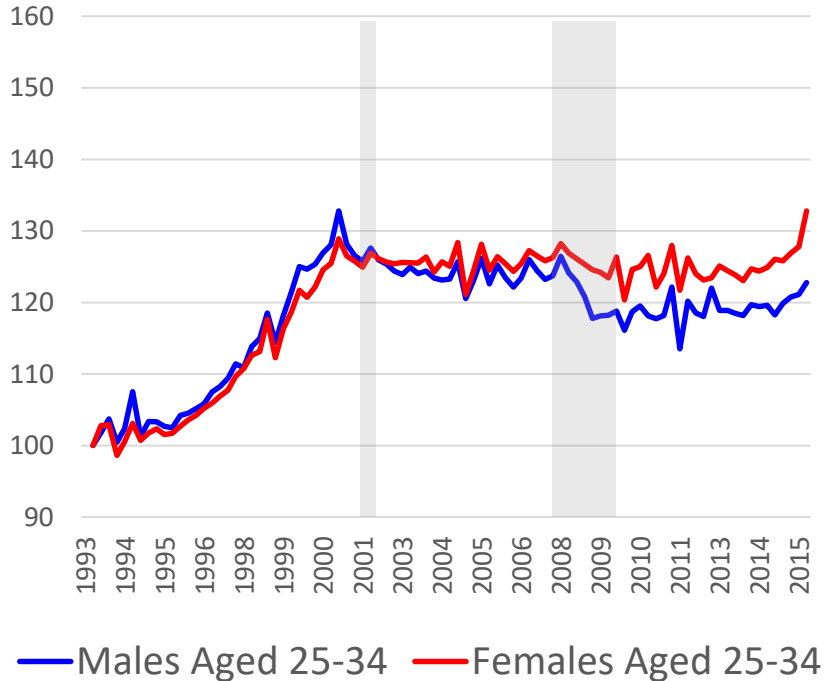
QWI Earnings by Demographics



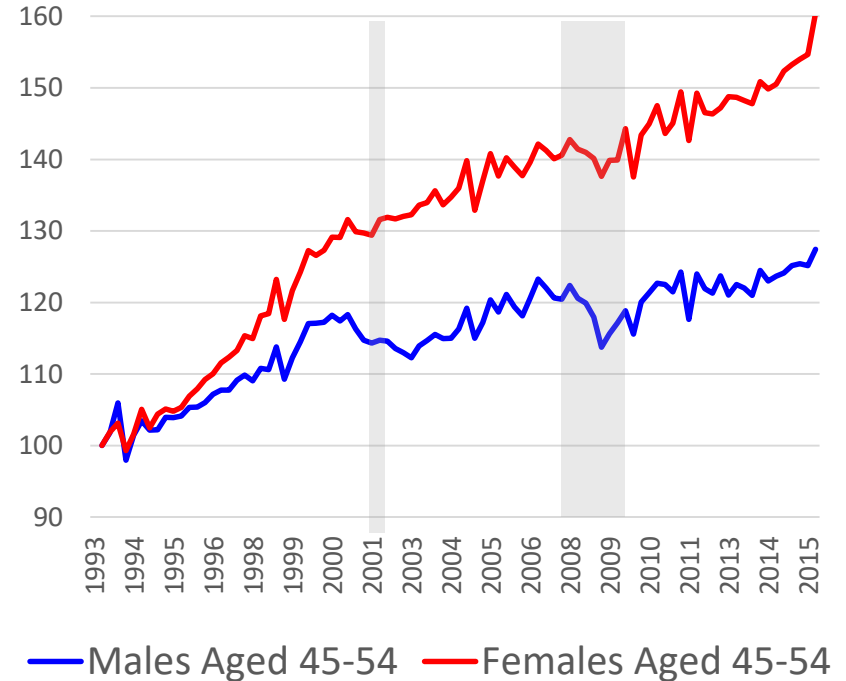
QWI Earnings by Demographics

Drill down from Gender to Gender * Age

SA Real FQ Earnings, 1993:Q1=100

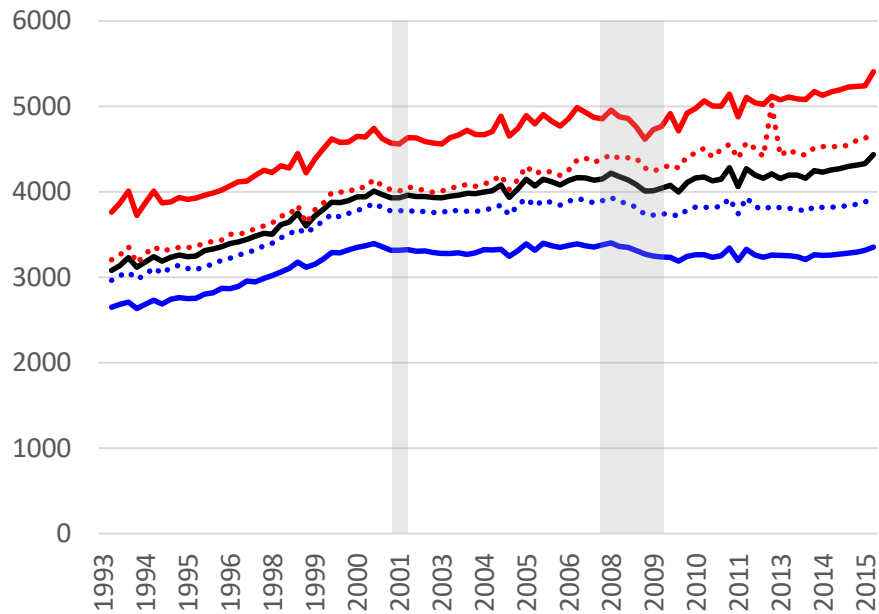


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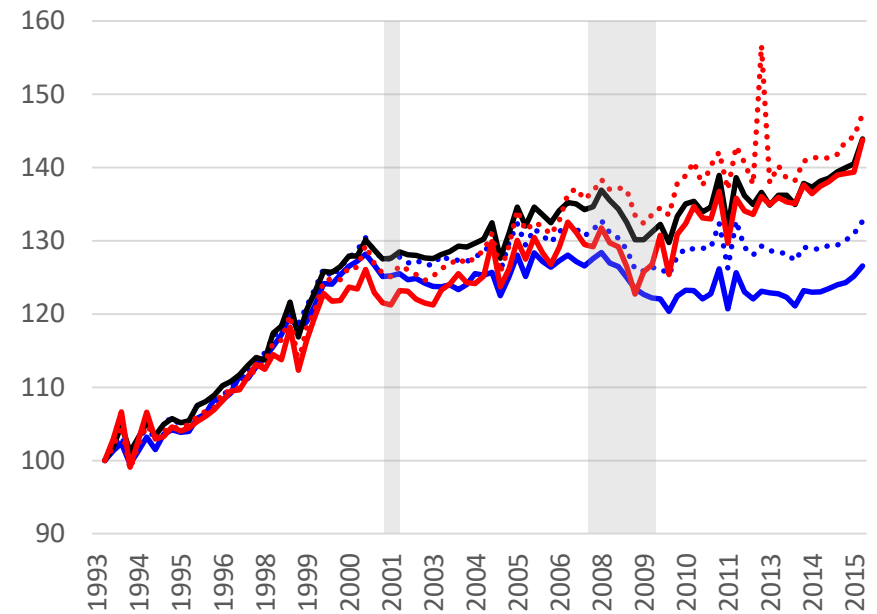
Earnings by Firm Characteristics

SA Real FQ Earnings



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

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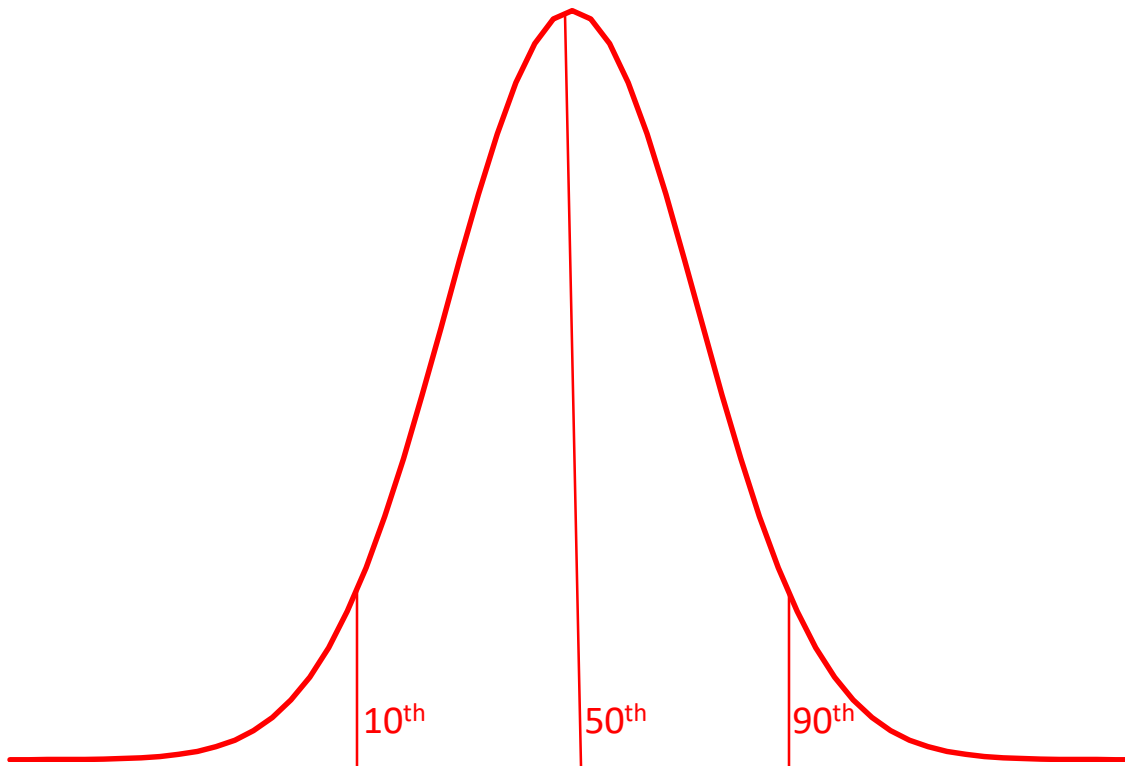
Earnings Data

The tradeoff between timeliness versus detail in publicly available earnings statistics:

- Use CES data for timely statistics
- Use QWI data for detailed statistics by demographics (age, gender, education, ...) and by firm age and firm size

The LEHD program is always looking to make the published QWI data more relevant and easier to use – any suggestions would be appreciated

Earnings Distribution

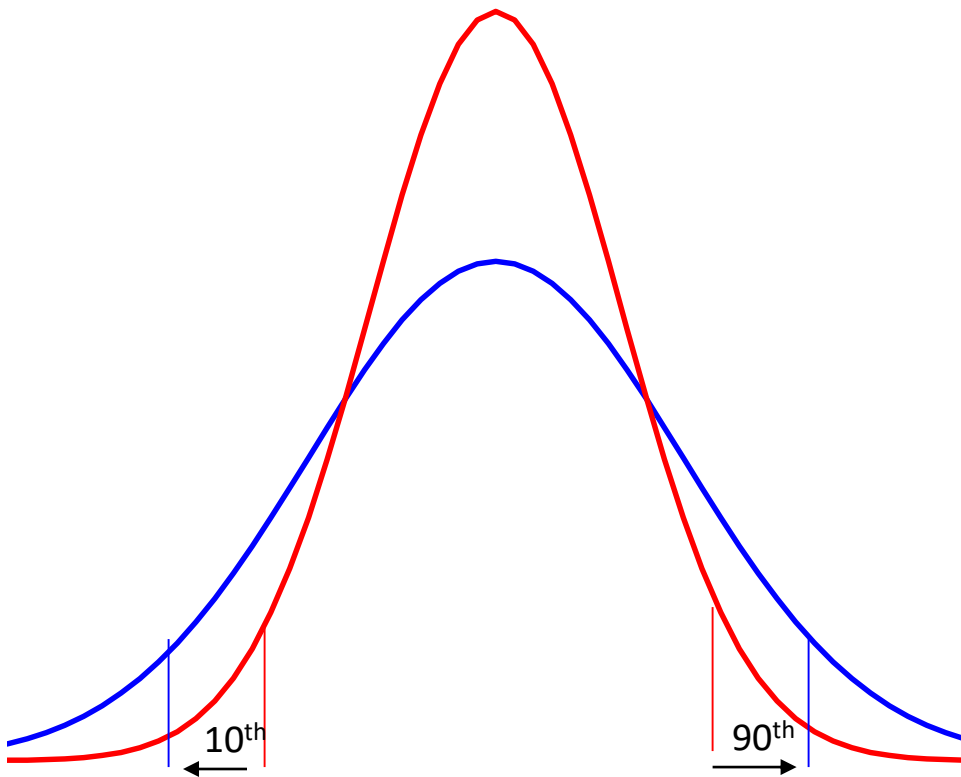


The natural log of earnings is almost always distributed as a normal distribution.

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

Other summary statistics are the median (the 50th percentile), or the 10th and 90th percentiles.

Changes in the Earnings Distribution



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

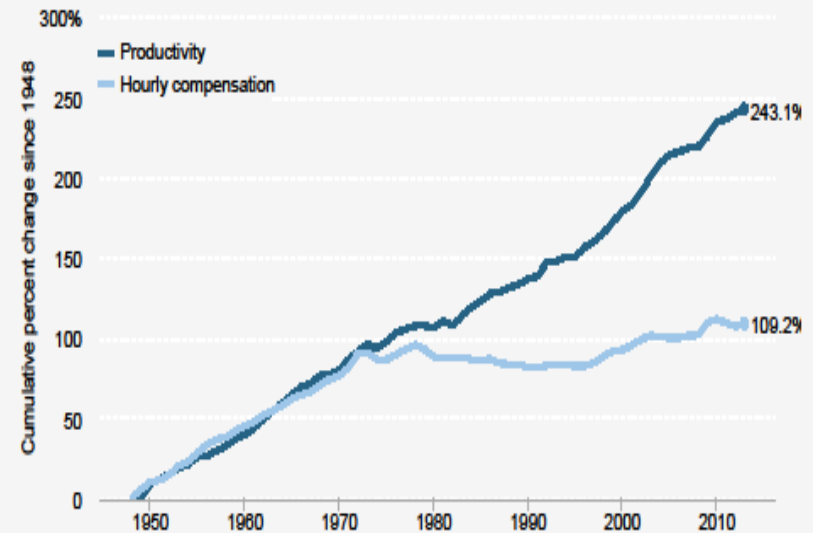
Increasing inequality is often measured using:

- the 10th and 90th percentiles
- the amount of mass in the tails

Why do we care about increasing inequality?

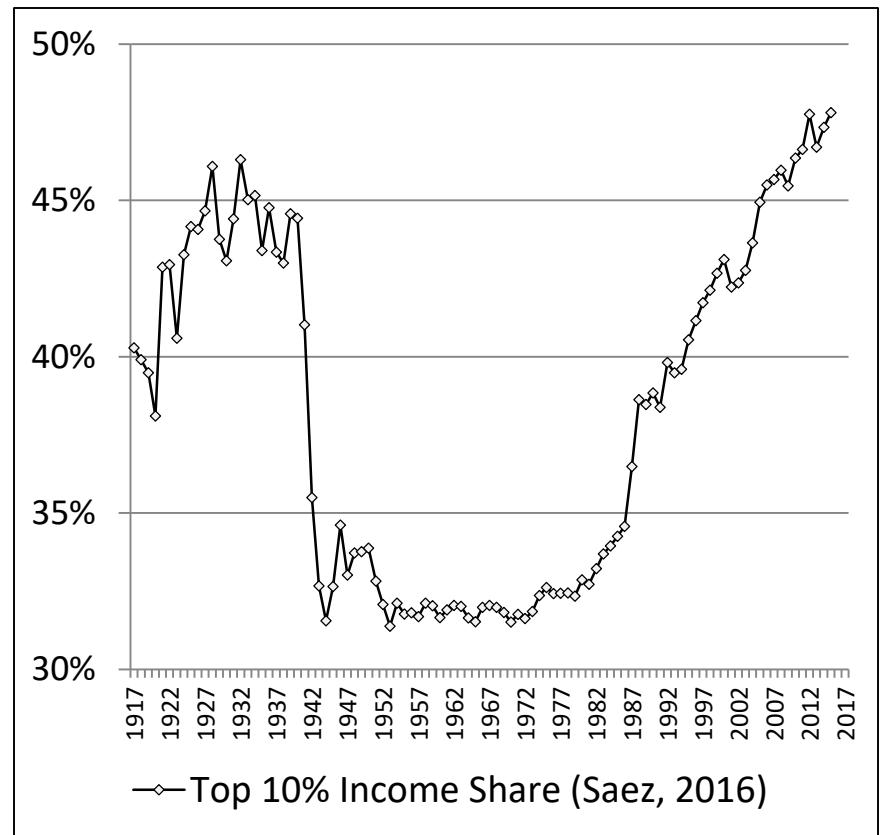
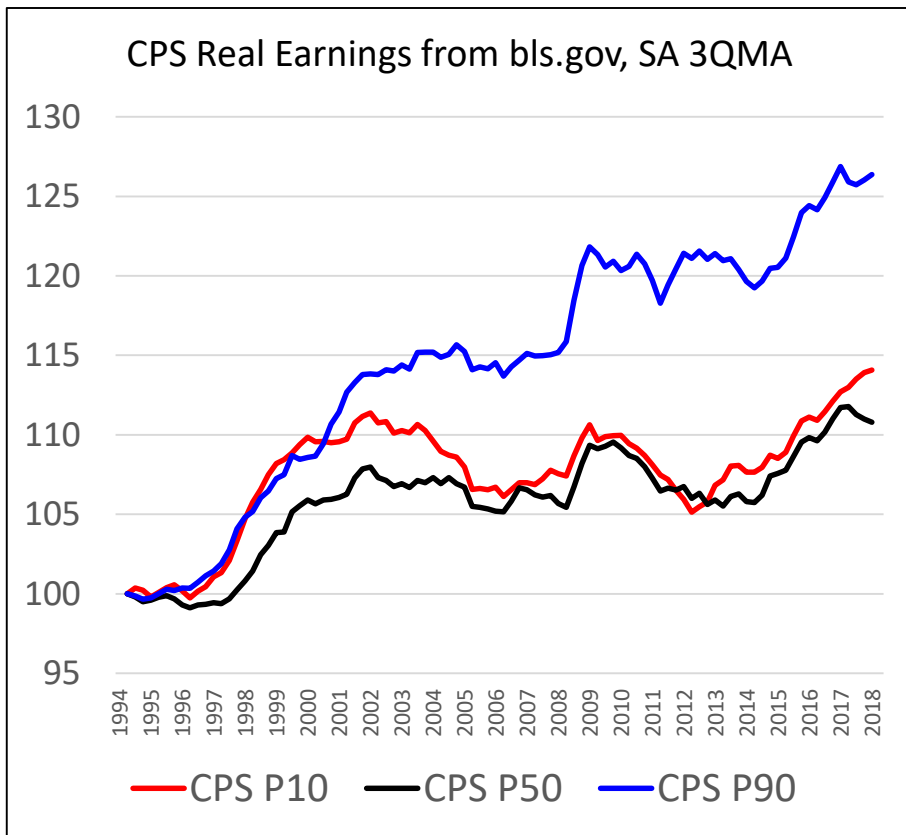
- 1) “The rich getting richer, the poor getting poorer”
- 2) Economic growth is not being shared across the earnings distribution

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



Source: EPI

What do we know about increasing inequality?



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 10th, 25th, 50th, 75th, and 90th percentiles from CPS
 - Earnings shares of top 10%, top 5%, and top 1% from IRS

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 - **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) 1st, 5th, 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

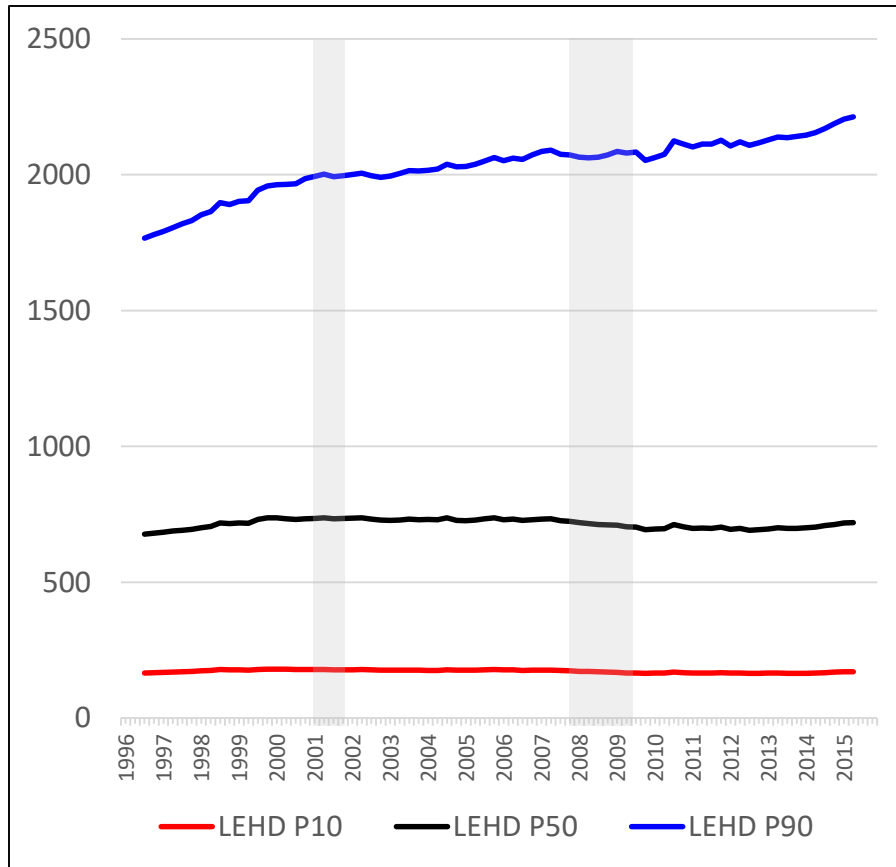
Quick technical point

- ❖ 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.

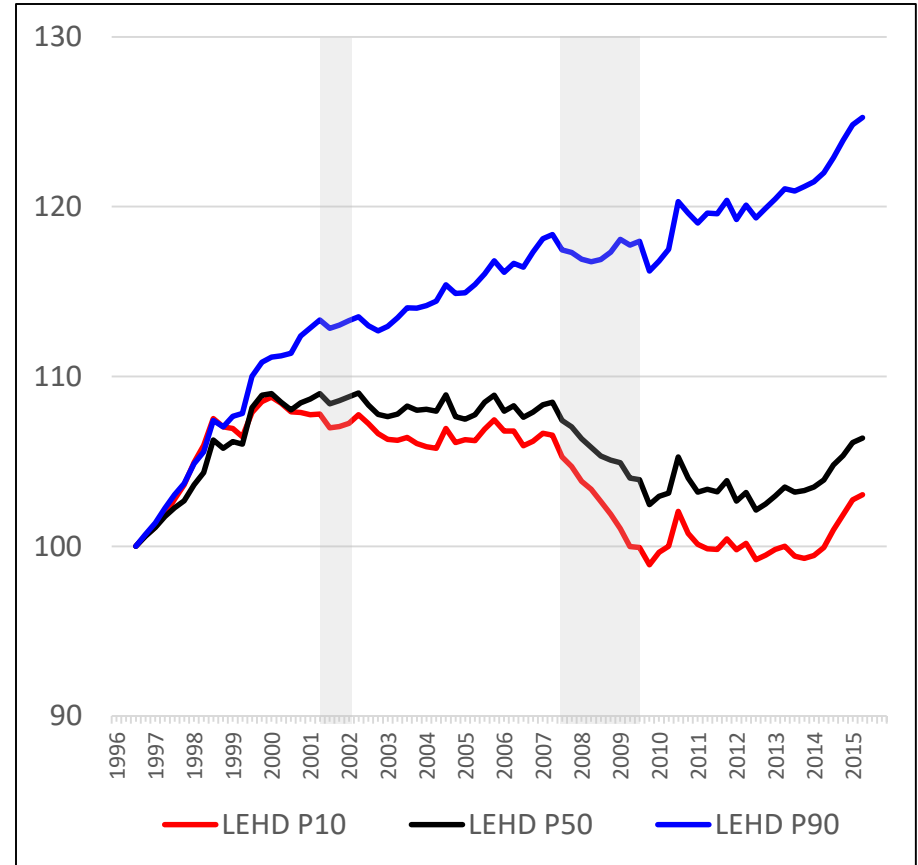
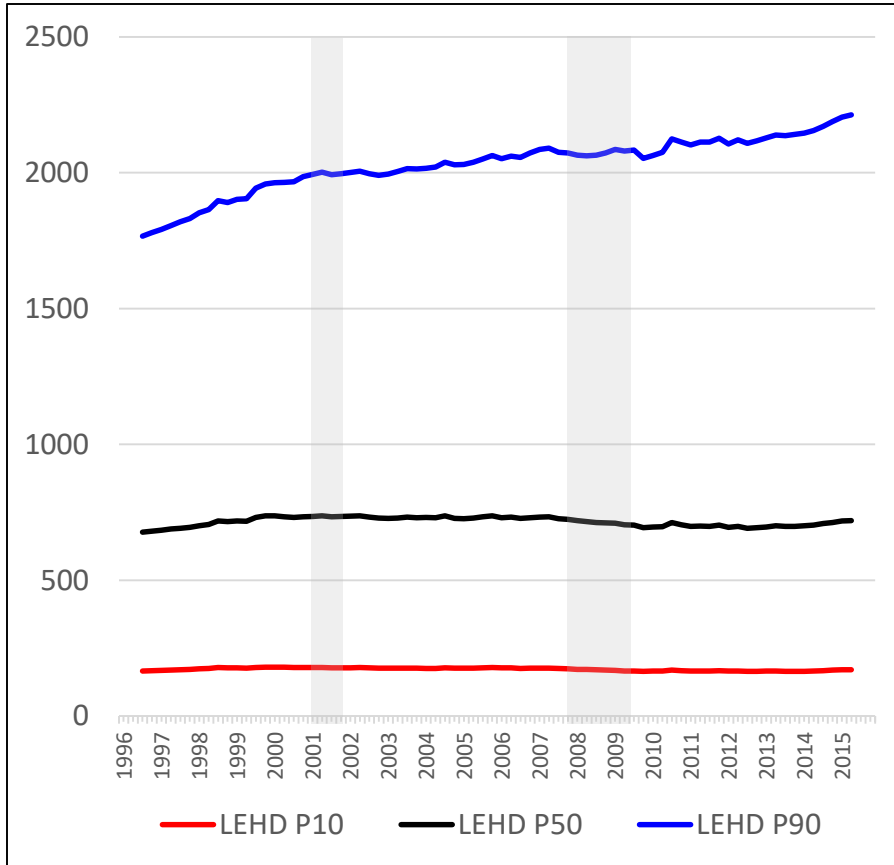
A First Look at LEHD Earnings Distribution Statistics

- ❖ 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, seasonally adjusted, and converted to weekly ($\div 13$)

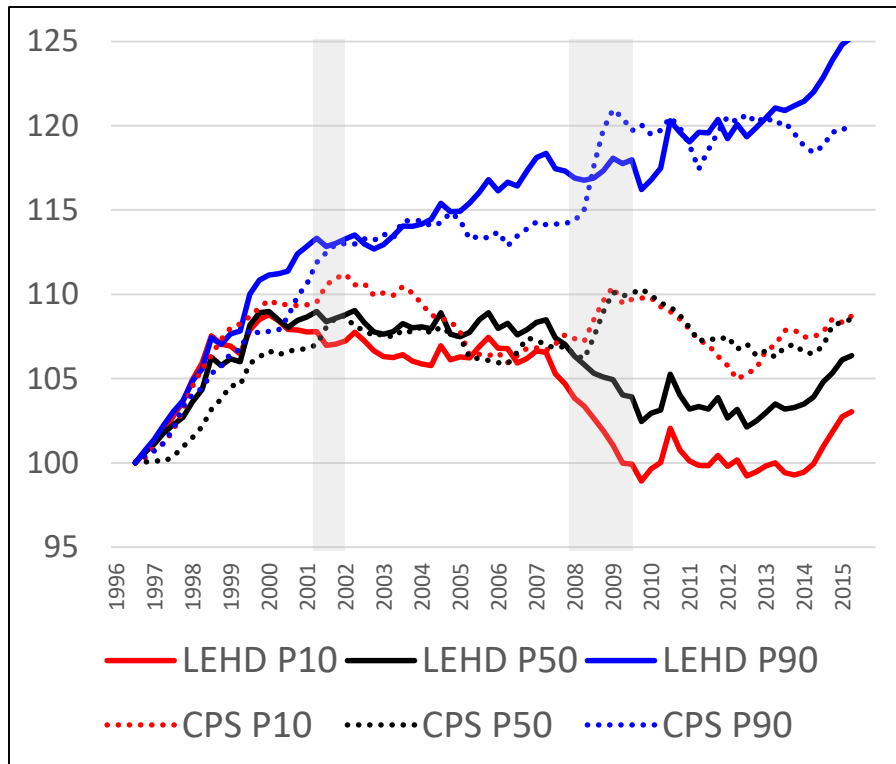
LEHD Earnings Distribution Statistics



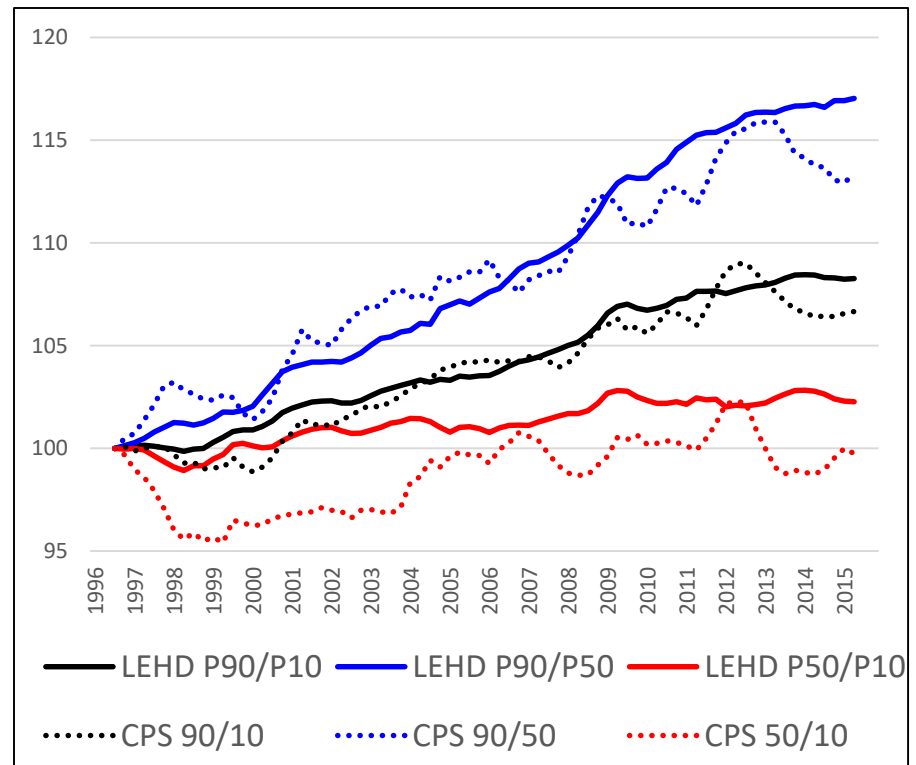
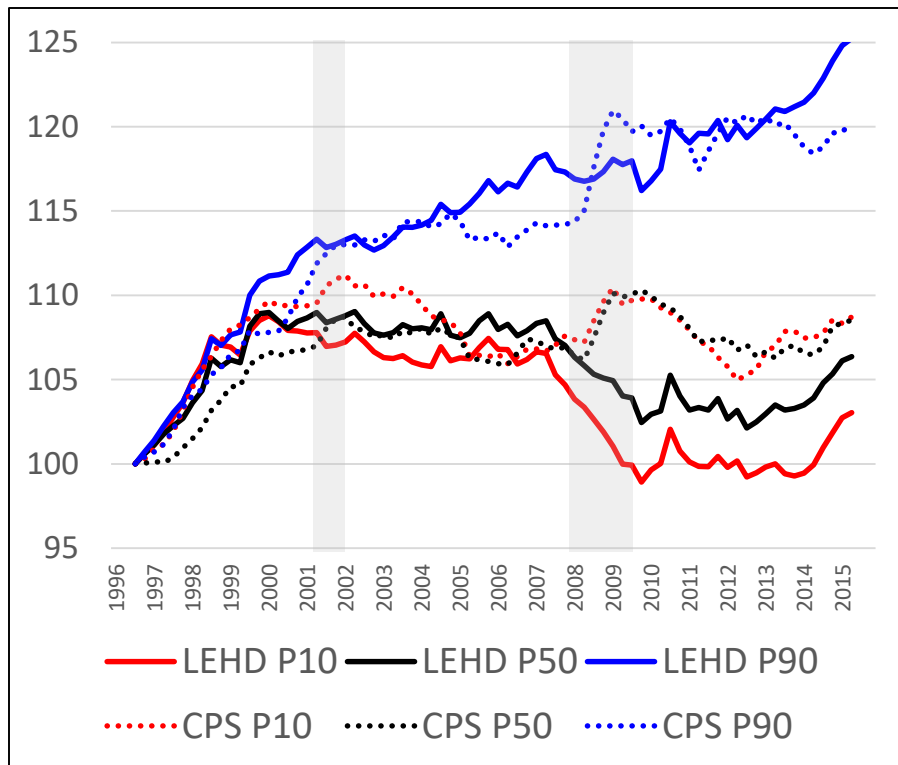
LEHD Earnings Distribution Statistics



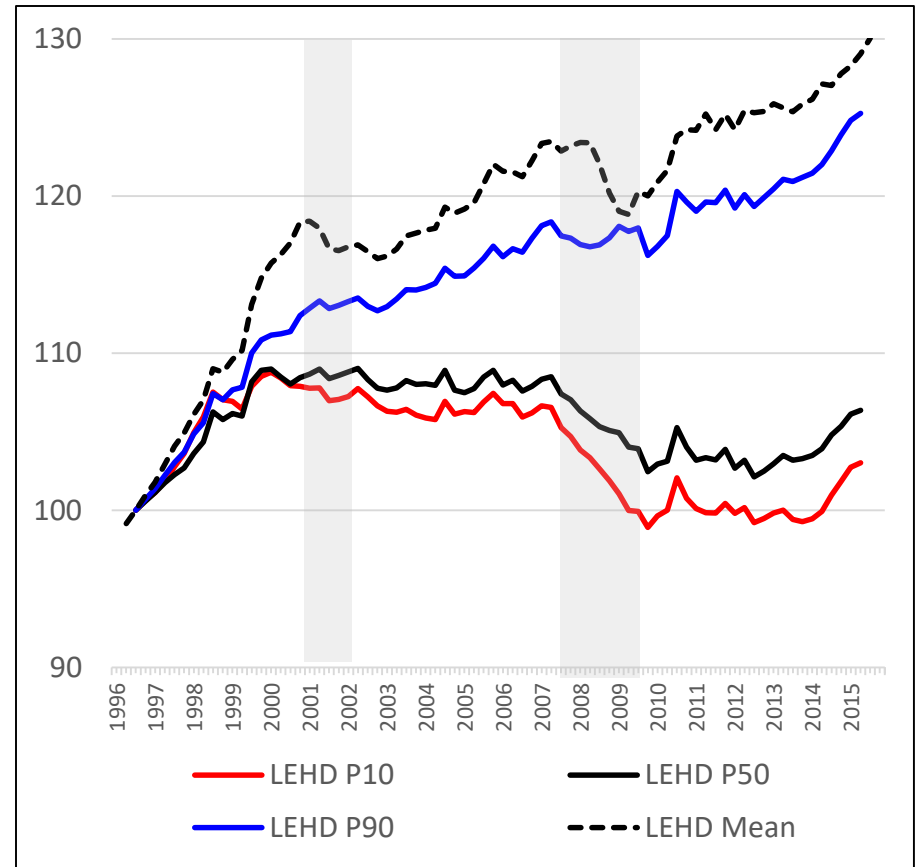
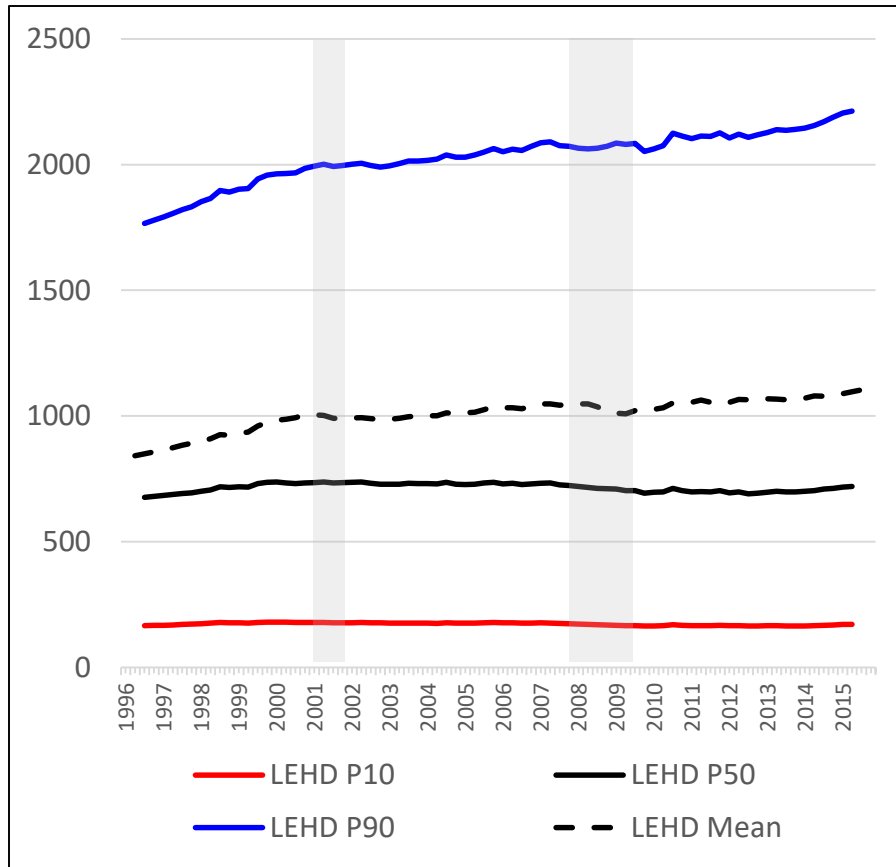
LEHD and CPS are similar but not identical



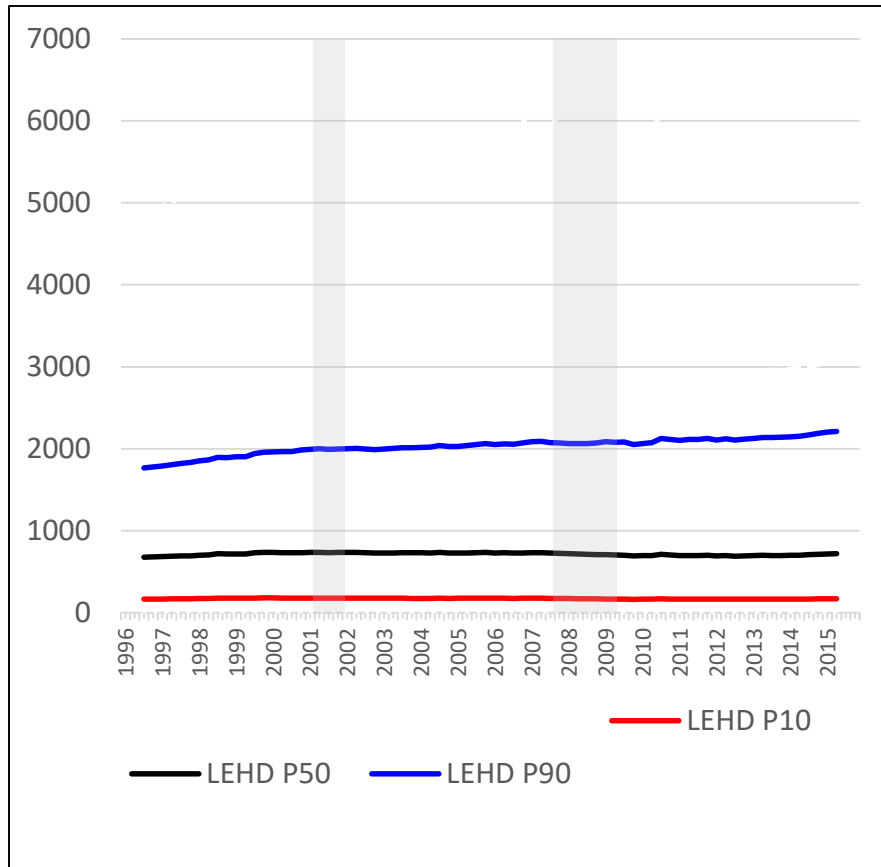
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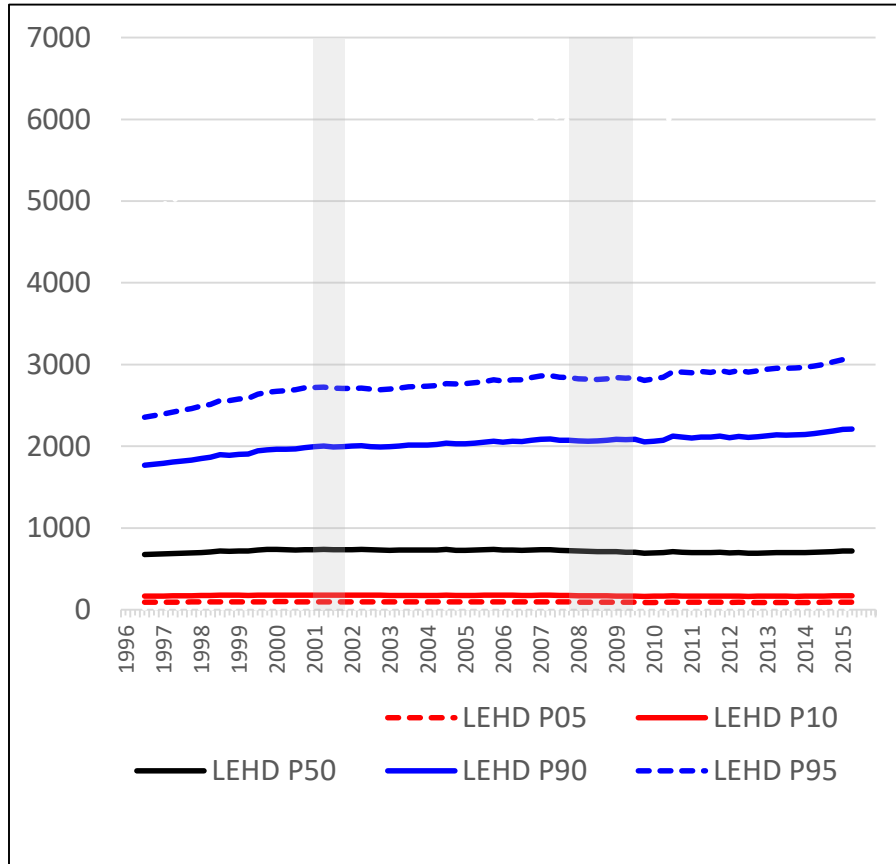
LEHD Earnings Distribution Statistics



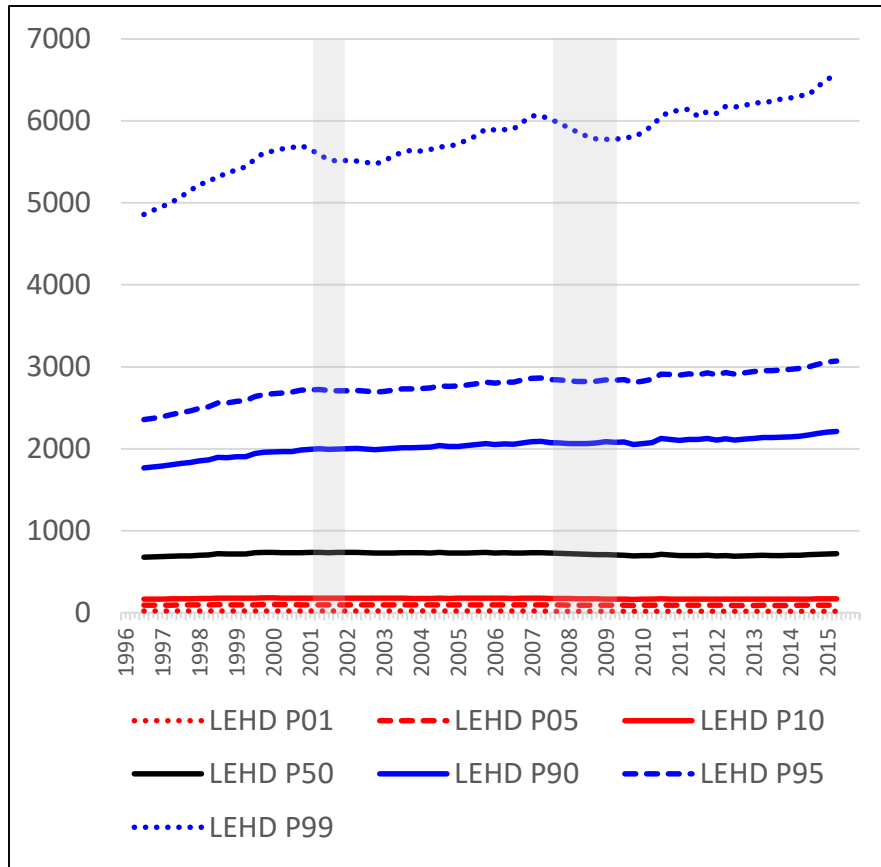
LEHD Earnings Distribution Statistics



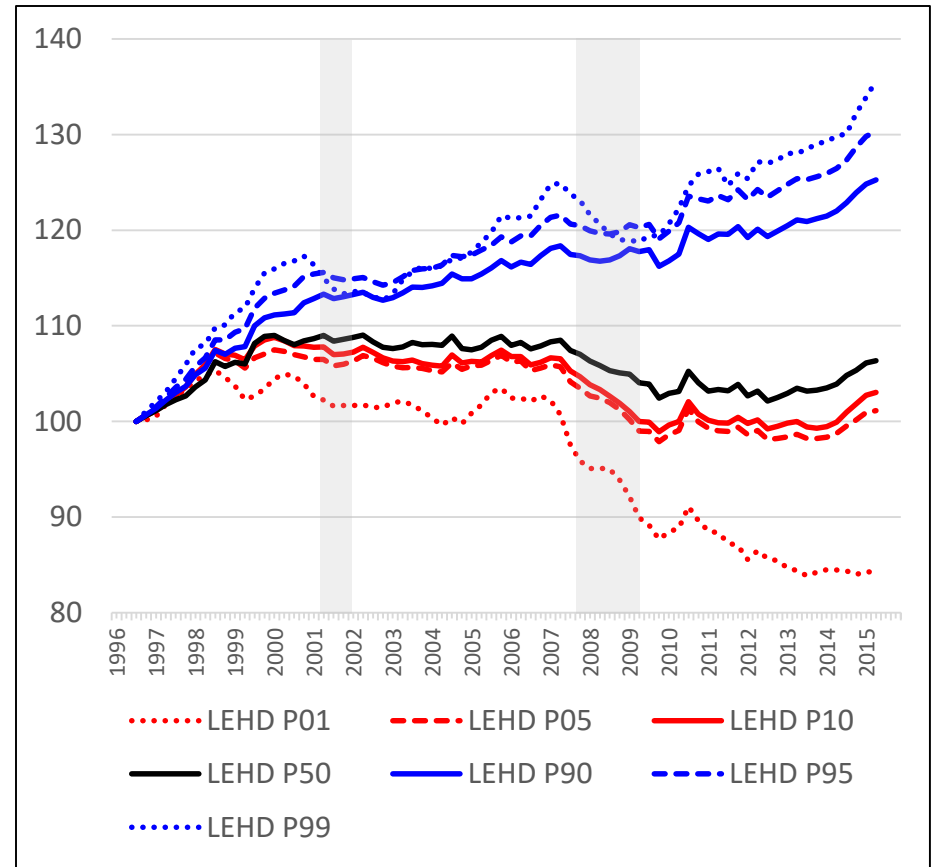
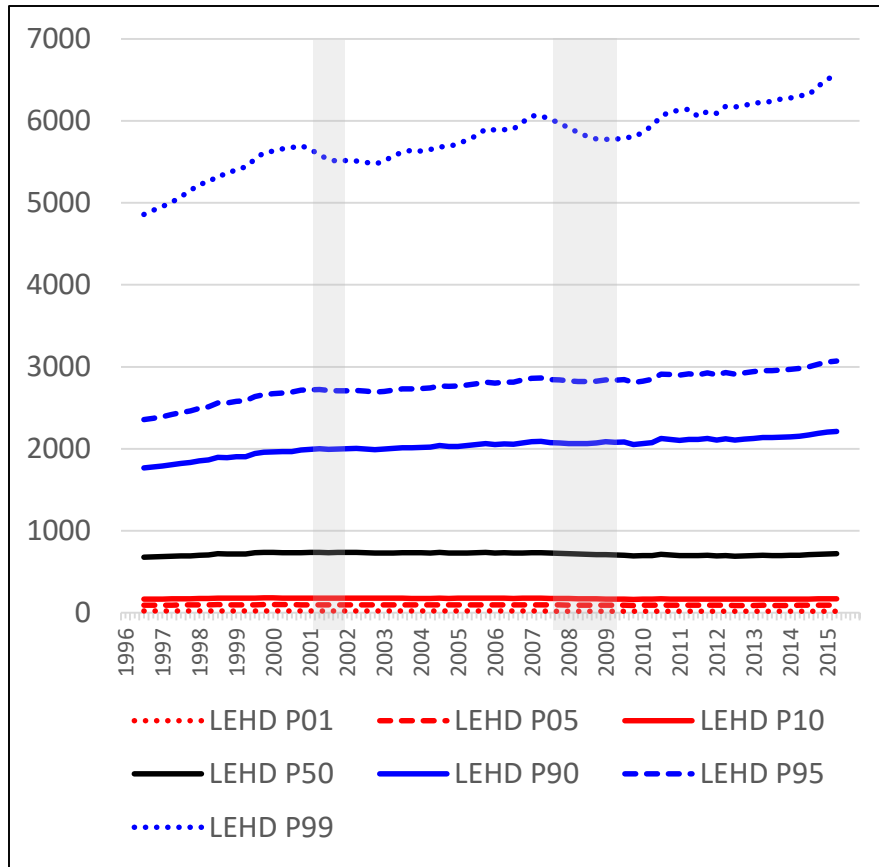
LEHD Earnings Distribution Statistics



LEHD Earnings Distribution Statistics

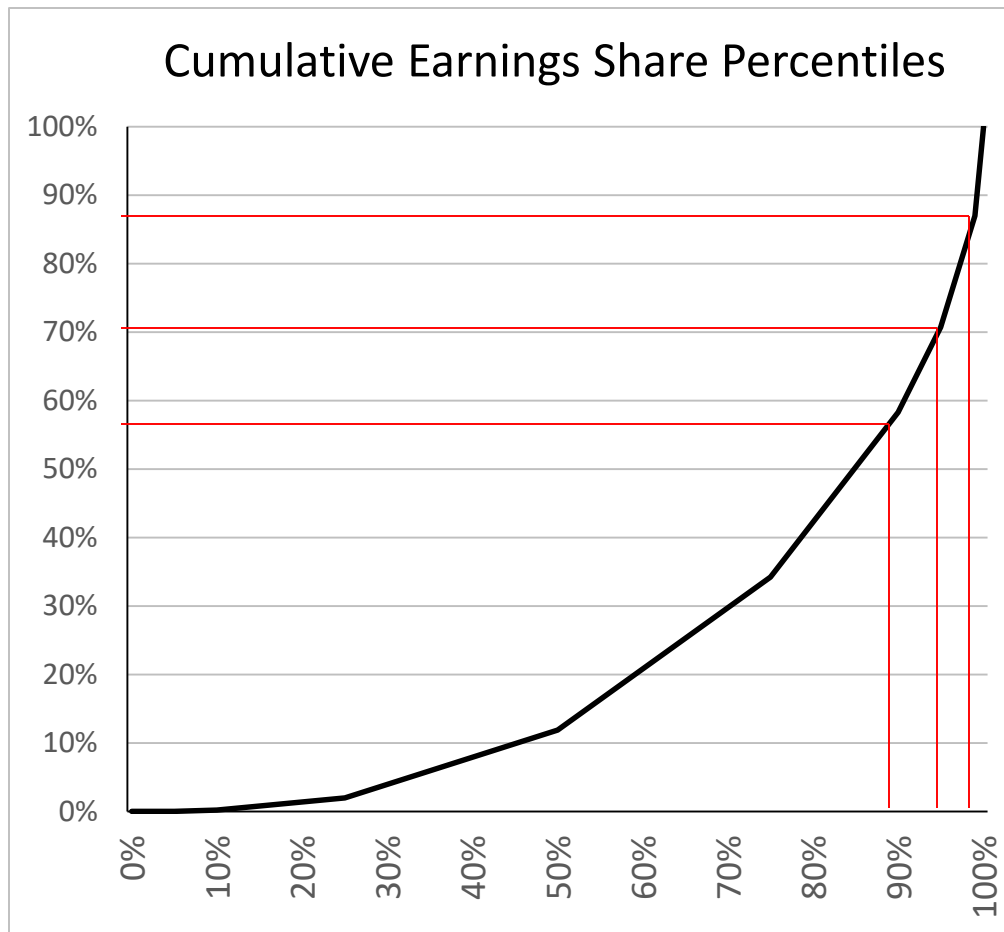


LEHD Earnings Distribution Statistics



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
- CES excellent for timeliness, QWI excellent for detail

2) Earnings Distribution Statistics

- LEHD research statistics show the widening earnings distribution
- Much more to do here (demographic, firm, geographic detail)

3) Earnings Trends in the U.S. Economy

- Median earnings stagnant from around 2000, with some evidence of growth in recent years
- Consistent widening of the earnings distribution during the past several decades, particularly at the top of the distribution

Comments appreciated

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