CE income tax estimates

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CE Microdata User's Workshop
July 13-15, 2016

Overview

▶ Introduce CE income taxes

▶ Compare income tax estimates

▶ How do you get started?

▶ Possible applications of the data

BLS

What changed?

▶ In 2013, CE introduced estimates for federal and state income tax liabilities.

▶ Until the 2014 PUMD, the datasets include the reported income taxes.

Reliability issues

Respondents provided unreliable tax data because of 3 reasons:

- ▶ Unwilling to provide because of privacy concerns
- ▶ Unable to remember taxes
- ▶ Unable to calculate the taxes

Are the estimates better than the reported data?

Yes

▶ TAXSIM uses reliably accurate available data

▶ Model has been tested since the 70s

TAXSIM

▶ Micro-simulation program

▶ Calculates taxes by "tax unit"

▶ Tax units: Group or individual who files their *own* tax return.

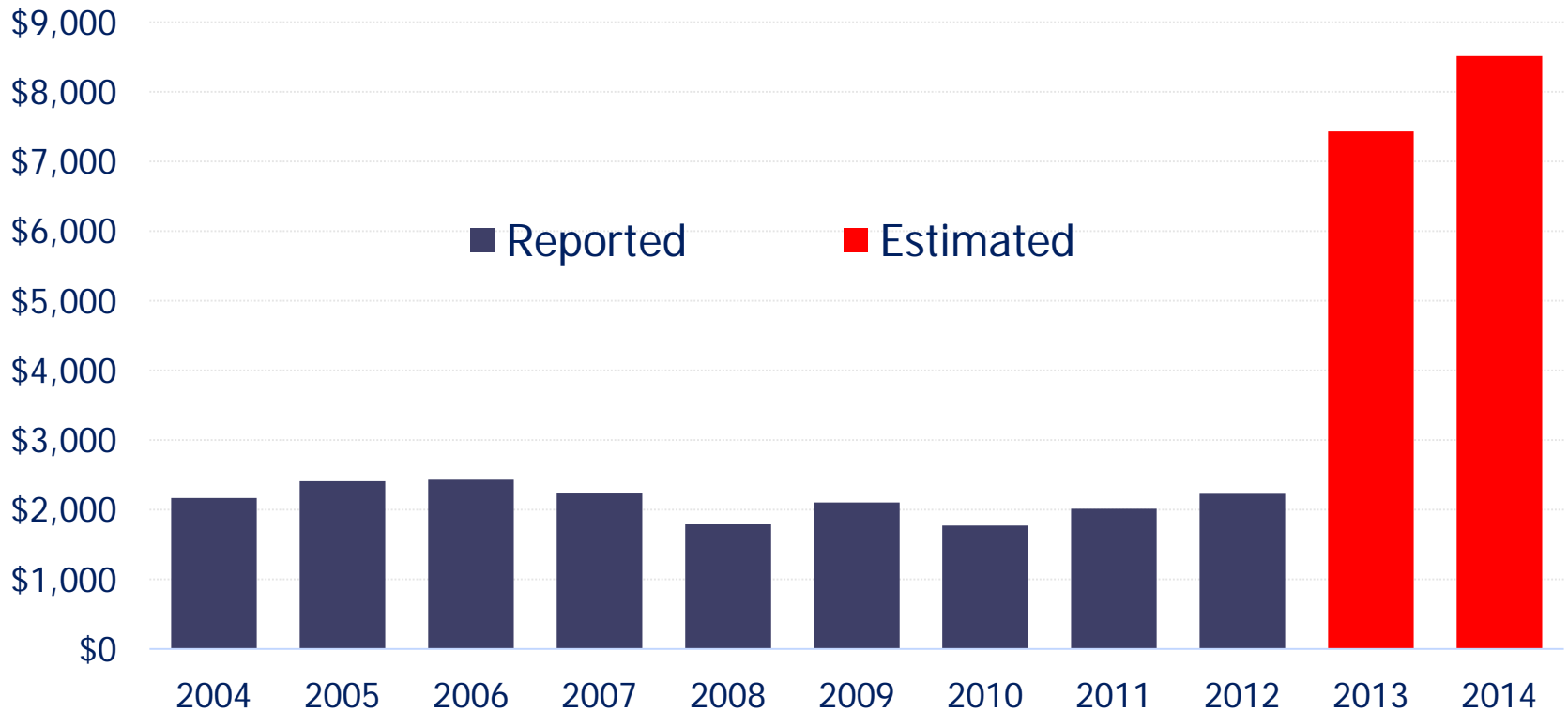# TAXSIM

CE uses TAXSIM in four steps:

1. Create tax units
2. Convert inputs organized by consumer unit to inputs organized by tax unit
3. Run TAXSIM to estimate taxes by tax unit
4. Convert outputs organized by tax unit to be organized by consumer unit

Do estimated data differ from

reported data?

Annual personal taxes per household, U.S. dollars, 2004-2014

Source: U.S. Bureau of Labor Statistics.

Comparison of tax estimates

- **4 agencies:**
  - Bureau of Labor Statistics (BLS CE)
  - U.S. Census Bureau (Census)
  - Internal Revenue Service (IRS)
  - Congressional Budget Office (CBO)

- **2 aspects:**
  - Concepts
  - Formats

Concepts Comparison

Concept	CE (BLS)	IRS	CPS (Census)	CBO
Name of series	Average consumer unit income tax	Average income tax return	Household income tax	Average personal tax
Concepts included	Individual income taxes minus tax credits	Individual income revenue minus tax credits plus trust accumulation distribution	Individual income taxes minus tax credits	Individual income taxes plus payroll taxes, corporate income taxes, and excise taxes
Basic unit	Consumer unit (Tax unit)	Tax return	Household	Household
Federal	Federal	Federal	Federal	Federal
Method	Model	Sample of actual tax returns	Model	Model

Source: U.S. Bureau of Labor Statistics.

BLS

Formats comparison

Format	CE (BLS)	IRS	CPS (Census)	CBO
People counted	People living financially independent	People filing one tax return	People living in one housing unit	People living in one housing unit
Rank by	Population weighted income	Adjusted gross income	No ranking	Size-adjusted income
Present-ation	Tabulated by income quintile	Tabulated by Income segment	Mircodata	Tabulated by income quintile
Currency	U.S. dollars	U.S. dollars	U.S. dollars	U.S. dollars
Year	2013	2013	2013	2013

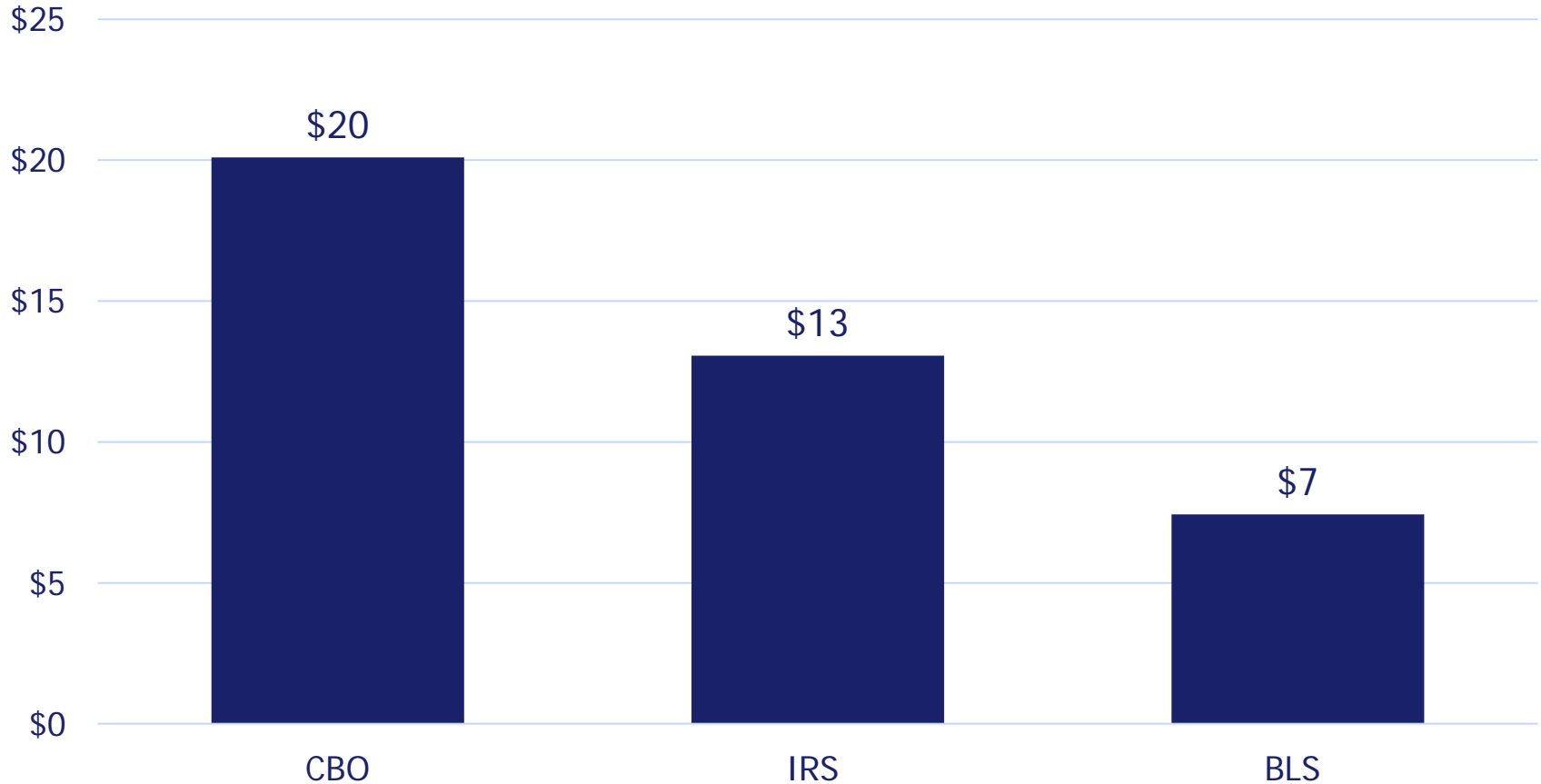Source: U.S. Bureau of Labor Statistics.

Do conceptual differences make numerical differences?
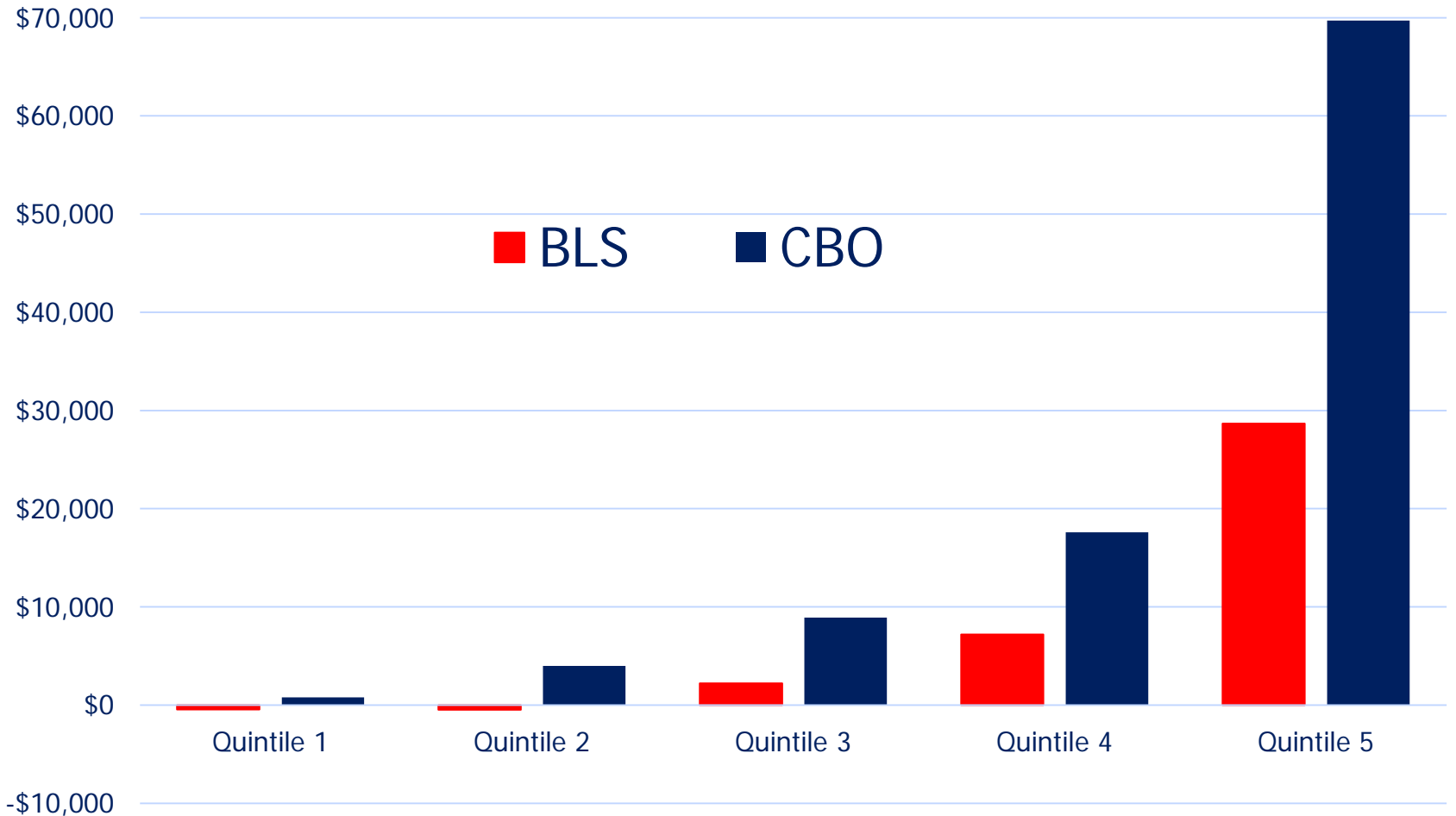
BLS

Average federal income taxes, 2013

Thousands of dollars

Source: U.S. Bureau of Labor Statistics.

Federal taxes by income quintile, 2013

Source: U.S. Bureau of Labor Statistics.

How do you get started?

Getting started!

Where are the tax estimation data?

▶ NTAXI file

▶ In Interview survey files

Getting started!

▶ What is a TAX_UNIT?

– Group or individual who files their *own* tax return.

– Connects all tax returns to CUs.

– Each tax unit has one row

Getting started!

- Administrative variables

  - ▶ **TAX_UNIT** connects to NEWID

  - ▶ **NEWID** connects tax units to other files.

  - ▶ **SOI_ST** identifies state for tax units.

  - ▶ **TAXYR_CY/PY** identifies the year for which taxes were calculated.

  - ▶ **FTAXOWE** and **STAXOWE** point in time estimate of annual Federal and State tax liabilities for Tax Units

FTAXOWE and STAXOWE

Concept

- **Weighted estimate for tax liabilities for each Tax Unit**

  - ▶ $FTAXOWE_n = CYWT * FTAXO\_CY_n + PYWT * FTAXO\_PY_n$,
  - ▶ $STAXOWE_n = CYWT * STAXO\_CY_n + PYWT * STAXO\_Py_n$

  - CYWT: Months in the *current* year
  - PYWT: Months in the *previous* year
  - FTAXO_CY/PY: Federal income tax liabilities after all credits in the current/previous year
  - STAXO_CY/PY: State income tax liabilities after all credits in the current/previous year
  - $n = n^{th}$: Tax unit in CU

FTAXOWE and STAXOWE

Example: How to find Federal taxes owed for tax unit?

- **CU interviewed in May 2011**
  - ▶ 4 months of 2011: Jan11 – April11
  - ▶ 8 months of 2010: May10 – Dec10

- **Calculate annual estimated tax liability**
  - ▶ 2010: FTAXOWE_PY = $3000
  - ▶ 2011: FTAXOWE_CY = $3400

- **Calculate weighted tax amount to be used in tables and on the Microdata:**
  - ▶ (4/12) * $3,000 + (8/12) * $3,400 = $3,134

Getting started!

■ Input variables

- ▶ **Income, deductions, and tax credits**

- ▶ **FRATE_CY/PY:** Federal marginal rate
- ▶ **SRATE_CY/PY:** State marginal rate
- ▶ **FILESTAT:** Filing status

FILESTAT

- Refers to "Marital Status"
- Determined for the tax unit by the members in the tax unit.
- NTAXI contains three codes:

  1: Single: Tax units with one member

  2: Married filing jointly: Tax units with a married couple and maybe dependents

  3: Head of household: Tax units with a head and dependents, but no spouse
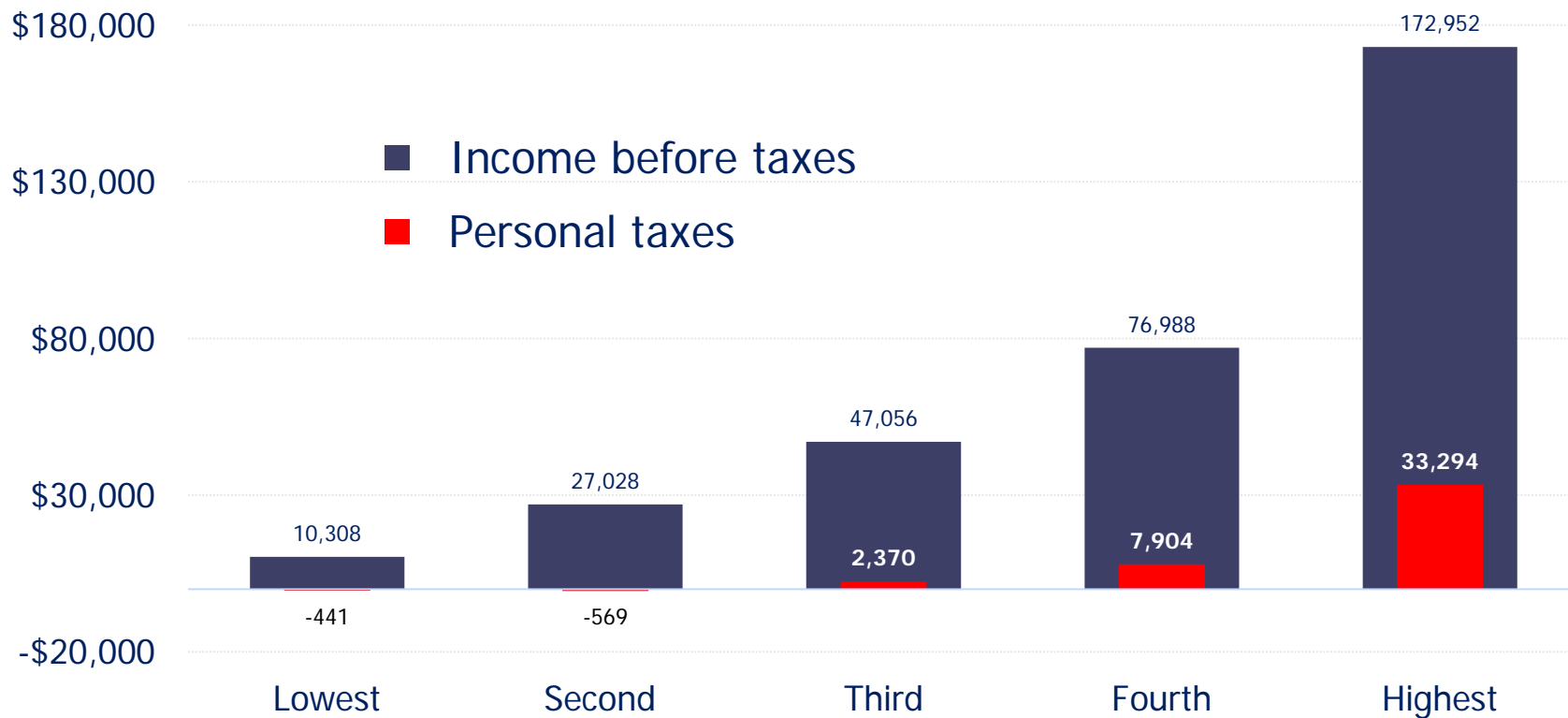
Getting started!

- Output variables

  ▶ **FICA_PY** Federal Insurance Contributions Act (FICA) - US payroll tax, previous year

  ▶ **FTAXO_PY/CY:** Federal taxes after credits

  ▶ **STAXO_PY/CY:** State taxes after credits

  ▶ **AMTOW_CY/PY:** Alternative minimum tax (AMT)

Possible applications of the income taxes

Annual income and personal taxes per household by income quintile, U.S. dollars, 2014
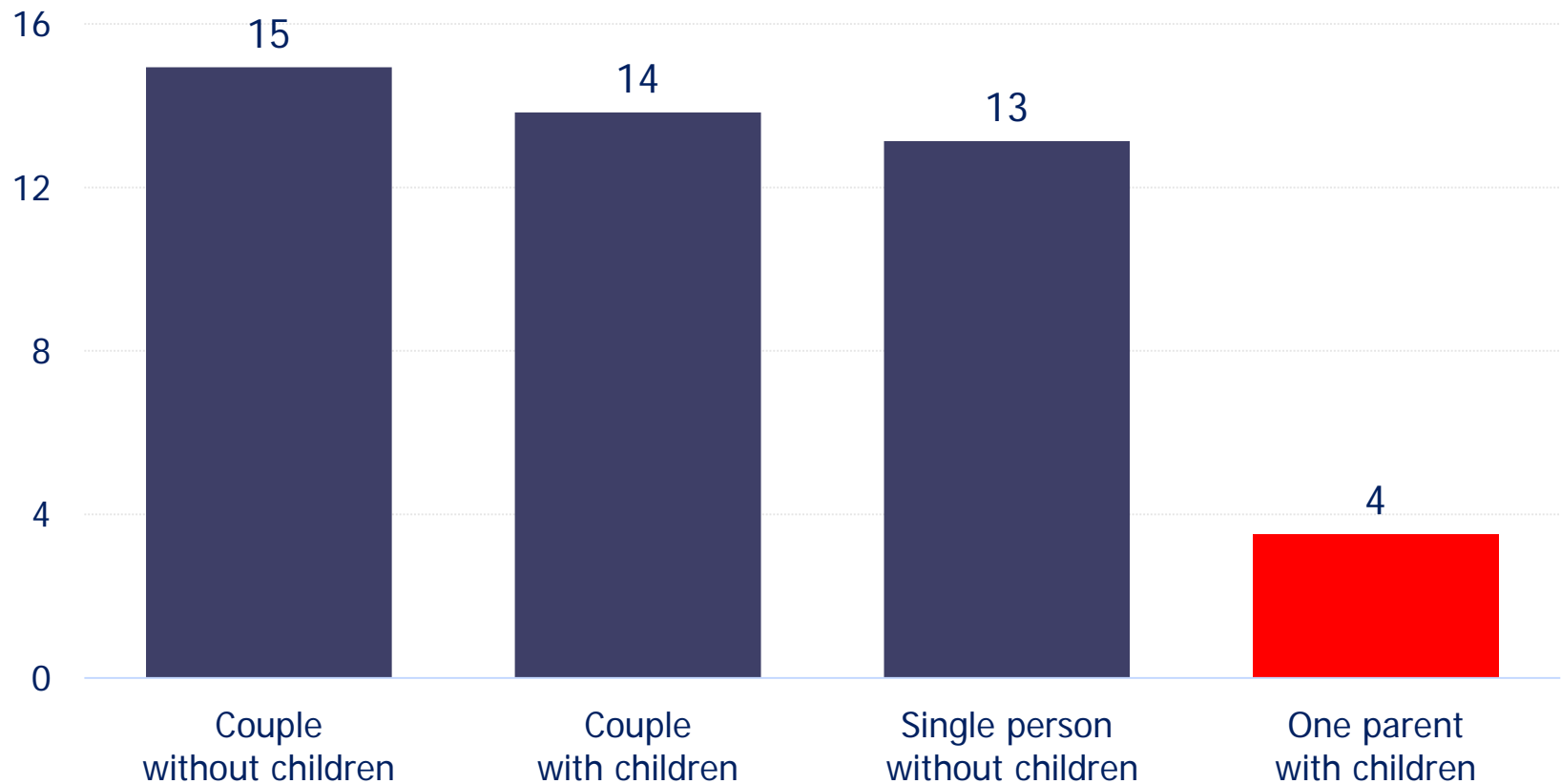

Legend:
- ■ Income before taxes
- ■ Personal taxes

Quintile	Income before taxes	Personal taxes
Lowest	10,308	-441
Second	27,028	-569
Third	47,056	2,370
Fourth	76,988	7,904
Highest	172,952	33,294

Source: U.S. Bureau of Labor Statistics.

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Average shares of personal taxes by households by tax, 2014

21.5

78.5

■ Federal income taxes

■ State and local income taxes and other taxes
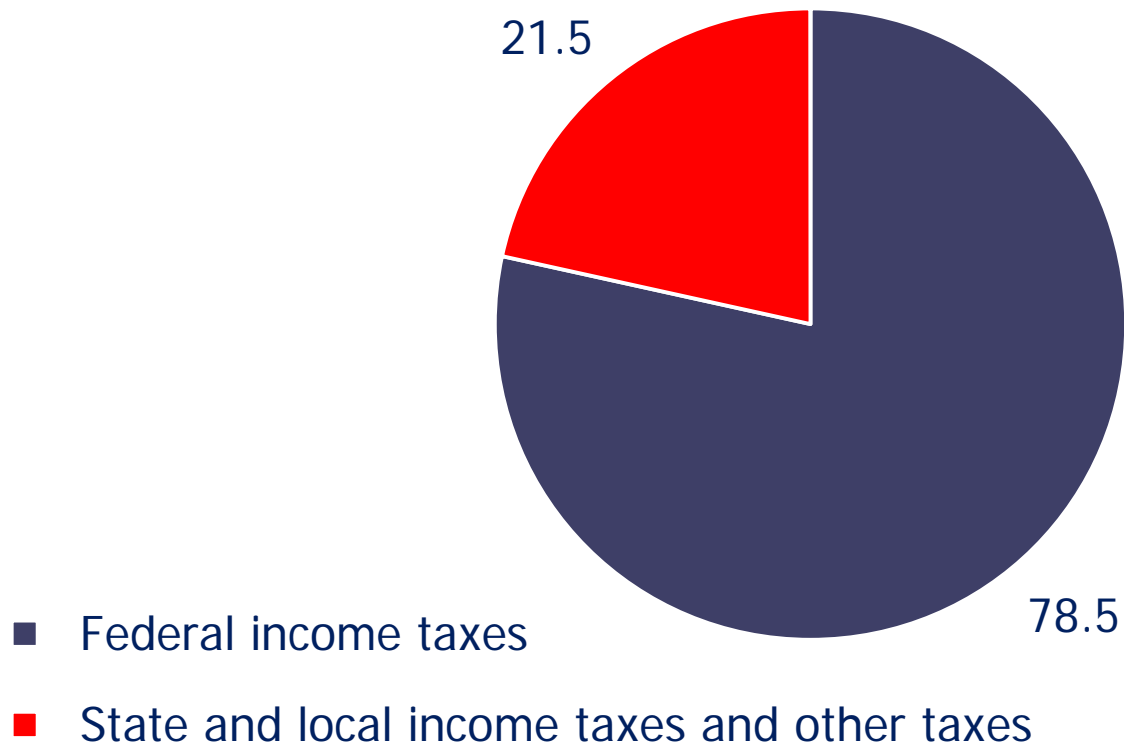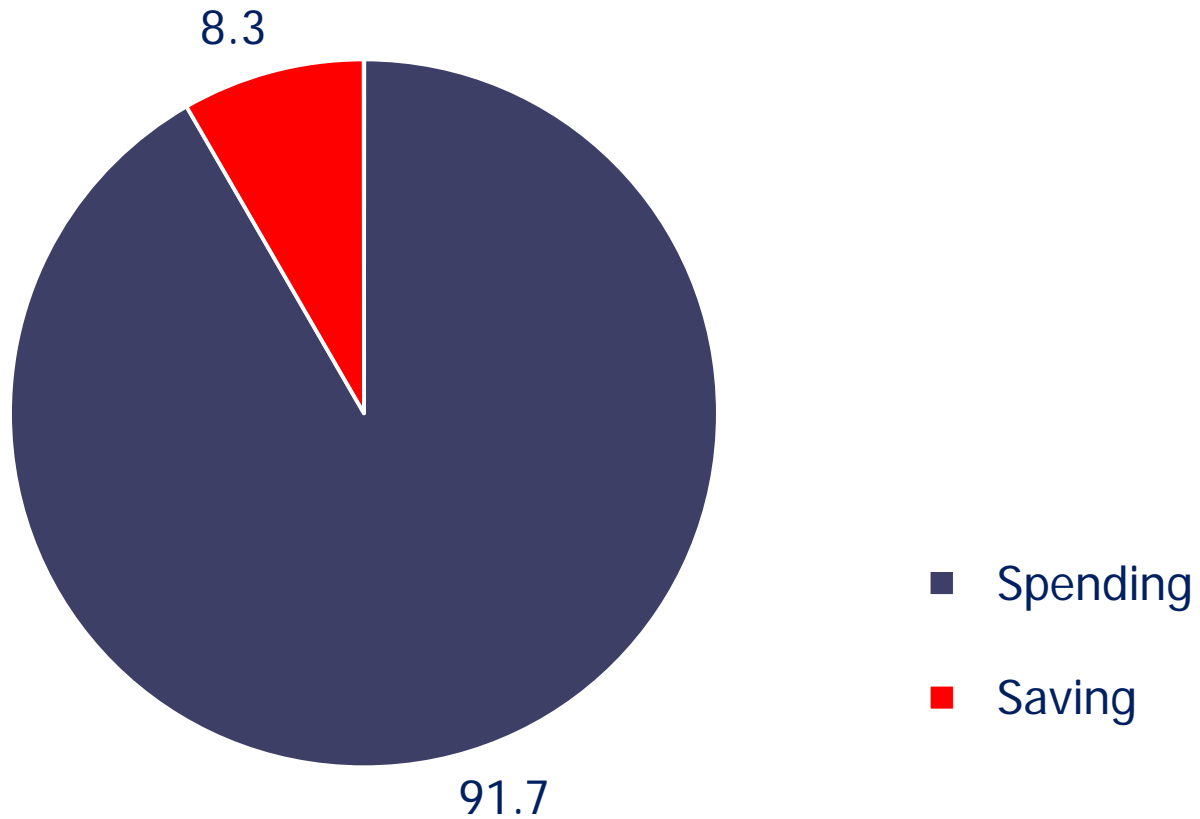
Source: U.S. Bureau of Labor Statistics.

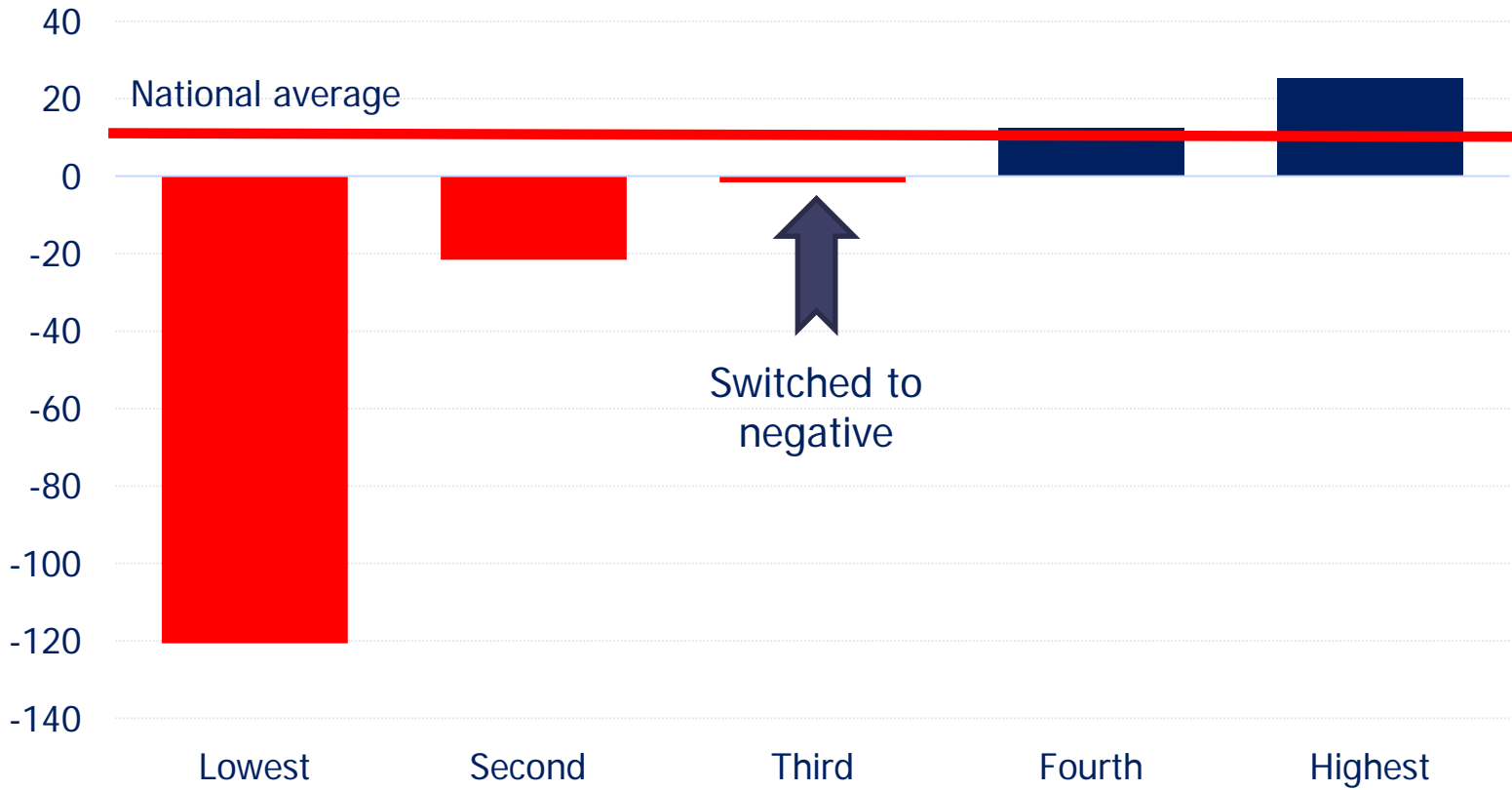# Personal taxes as percent of pre-tax income for selected family types, 2014

16	
	15
	14
12	13
8	
4	4
0	

Couple without children   Couple with children   Single person without children   One parent with children

Average spending and saving per household, percent, 2014

8.3

91.7

■ Spending

■ Saving

Savings as percentage of after-tax income by income quintile, 2014

National average

Switched to negative

40
20
0
-20
-40
-60
-80
-100
-120
-140

Lowest   Second   Third   Fourth   Highest

Source: U.S. Bureau of Labor Statistics.

Can you create TAXSIM data for previous years?

Historical data

Yes

▶ NBER provides the Stata program

▶ http://users.nber.org/~taxsim/to-taxsim/

▶ An introduction to the TAXSIM model by Daniel Feenberg and Elisabeth Coutts

Questions?

Ideas!

Documentation

- P:\Teams\DCES_Publications_Review_Team\Drafts\2015\Cobet_Taxes\CE 2015 Tax comparison 02 Material .docx

- P:\Phase 4 Production (BIA)\Microdata\2013 Processing\Requirements\Requirements 2013 Tax_Estimation.docx

- \\filer1\DCES\DCES-Phase3\Interview_Edit_Specs\I_Tax_Estimation_2013_01.docx