

Are Bracket Responses Accurate?

Using IRS W-2 Records to Assess Earnings Edits for the
Redesigned CPS ASEC

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Wage and Salary Earnings Amount

Q48aa

How much did (name/you) earn from this employer before taxes and other deductions during 2014?

- ✦ Enter dollar amount
- ✦ Enter 0 for none

Wage and Salary Earnings Amount Range Follow-Up

Q48aarn1 Ask only if the respondent “Doesn’t know” or ‘Refused” Q48aa

Could you tell me if (name/you) earned

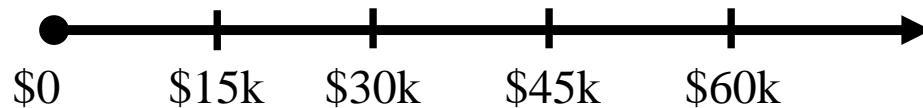
less than \$45,000

between \$45,000 and \$60,000

or over \$60,000

for the TOTAL yearly amount from this employer before taxes and other deductions during 2014?

- 1 Less than \$45,000
- 2 Between \$45,000 and \$60,000
- 3 Over \$60,000



Q48aarn2

Did (name/you) earn

less than \$15,000

between \$15,000 and \$30,000

or over \$30,000

from this employer during 2014?

Brackets

- Other household surveys are increasingly using brackets to address rising income non-response.
 - US: SIPP, PSID
 - Internationally: e.g. Statistics South Africa's Labor Force Survey
- Brackets create options for data users.
 - E.g., Chicoine (2012) develops MLE strategy to use both exact-amount and bracket responses in regression estimation.
 - Census Bureau has recently incorporated bracket responses into production imputation processes.

This Project

- Links 2014-2017 CPS ASEC to IRS W-2 records for tax years 2013-2016.
- Extension of report by John Czajka and Randy Rosso in 2015 on 2014 split-sample test.
- First projects to evaluate the accuracy of bracket responses against individually linked external data sources.
- Today: Preliminary results from this project; more to come.

IRS W-2 Records for Tax Years 2013-2016

- Includes universe of wage and salary W-2 jobs.
 - Filing threshold is \$600.
 - Does not include independent contractors.
- Sum of
 - Box 1 total taxable wages, salaries, bonuses, tips
 - Before taxes,
 - Before taxable payroll deductions,
 - After pretax deductions, e.g. health insurance premiums, FSAs, dependent care, parking
 - Also includes some rare fringe benefits
 - Box 12 elective deferred compensation
 - E.g., employee contributions to 401(k), 403(b), etc.
- De-duplicated to address amended returns and erroneous multiple filings for the same job.

22222		Void <input type="checkbox"/>	a Employee's social security number		For Official Use Only ▶ OMB No. 1545-0008		
b Employer identification number (EIN)			1 Wages, tips, other compensation		2 Federal income tax withheld		
c Employer's name, address, and ZIP code			3 Social security wages		4 Social security tax withheld		
			5 Medicare wages and tips		6 Medicare tax withheld		
			7 Social security tips		8 Allocated tips		
d Control number			9		10 Dependent care benefits		
e Employee's first name and initial		Last name	Suff.	11 Nonqualified plans		12a See instructions for box 12	
f Employee's address and ZIP code			13 Statutory employee <input type="checkbox"/>	Retirement plan <input type="checkbox"/>	Third-party sick pay <input type="checkbox"/>	12b	
			14 Other			12c	
						12d	
15 State	Employer's state ID number		16 State wages, tips, etc.	17 State income tax	18 Local wages, tips, etc.	19 Local income tax	
						20 Locality name	



Form W-2 Wage and Tax Statement

2014

Department of the Treasury—Internal Revenue Service
For Privacy Act and Paperwork Reduction Act Notice, see the separate instructions.

Copy A For Social Security Administration — Send this entire page with Form W-3 to the Social Security Administration; photocopies are not acceptable.

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Table 1: Tax-Reported Earnings Interval by Intervals of Exact-Amount-Reported Earnings, Unweighted 2017 CPS ASEC

Cell

Proportions

CPS ASEC Exact-Amount-Reported Earnings

W-2 Amount

<\$15k

\$15k-\$30k

\$30k-\$45k

\$45k-\$60k

>\$60k

<\$15k

0.16

0.03

<.01

<.01

<.01

\$15k-\$30k

0.03

0.14

0.02

0.01

<.01

\$30k-\$45k

0.01

0.04

0.10

0.03

0.01

\$45k-\$60k

<.01

0.01

0.02

0.09

0.02

>\$60k

<.01

<.01

0.01

0.03

0.23

Unweighted count, rounded:

46,000

Agreement rate

0.72

Table 2: Tax-Reported Earnings Interval by Intervals of Imputed Earnings, among Bracket Reporters, Unweighted 2017 CPS ASEC

Cell

Proportions

CPS ASEC-Imputed Interval, Among Bracket Reporters

<i>W-2 Amount</i>	<\$15k	\$15k-\$30k	\$30k-\$45k	\$45k-\$60k	>\$60k
<\$15k	0.15	0.07	0.02	0.01	0.01
\$15k-\$30k	0.05	0.09	0.04	0.03	0.02
\$30k-\$45k	0.01	0.05	0.04	0.03	0.03
\$45k-\$60k	0.01	0.02	0.02	0.03	0.03
>\$60k	<.01	0.02	0.03	0.05	0.13
Unweighted count, rounded:					11,000
Agreement rate					0.44

Table 3: Tax-Reported Earnings Interval by Survey-Reported Bracket, Unweighted 2017 CPS ASEC

Cell

Proportions

CPS ASEC-Reported Bracket

<i>W-2 Amount</i>	<\$15k	\$15k-\$30k	\$30k-\$45k	\$45k-\$60k	>\$60k
<\$15k	0.17	0.06	0.03	0.01	0.01
\$15k-\$30k	0.04	0.12	0.05	0.02	0.01
\$30k-\$45k	0.01	0.04	0.06	0.04	0.01
\$45k-\$60k	<.01	0.01	0.02	0.05	0.02
>\$60k	<.01	0.01	0.01	0.05	0.17

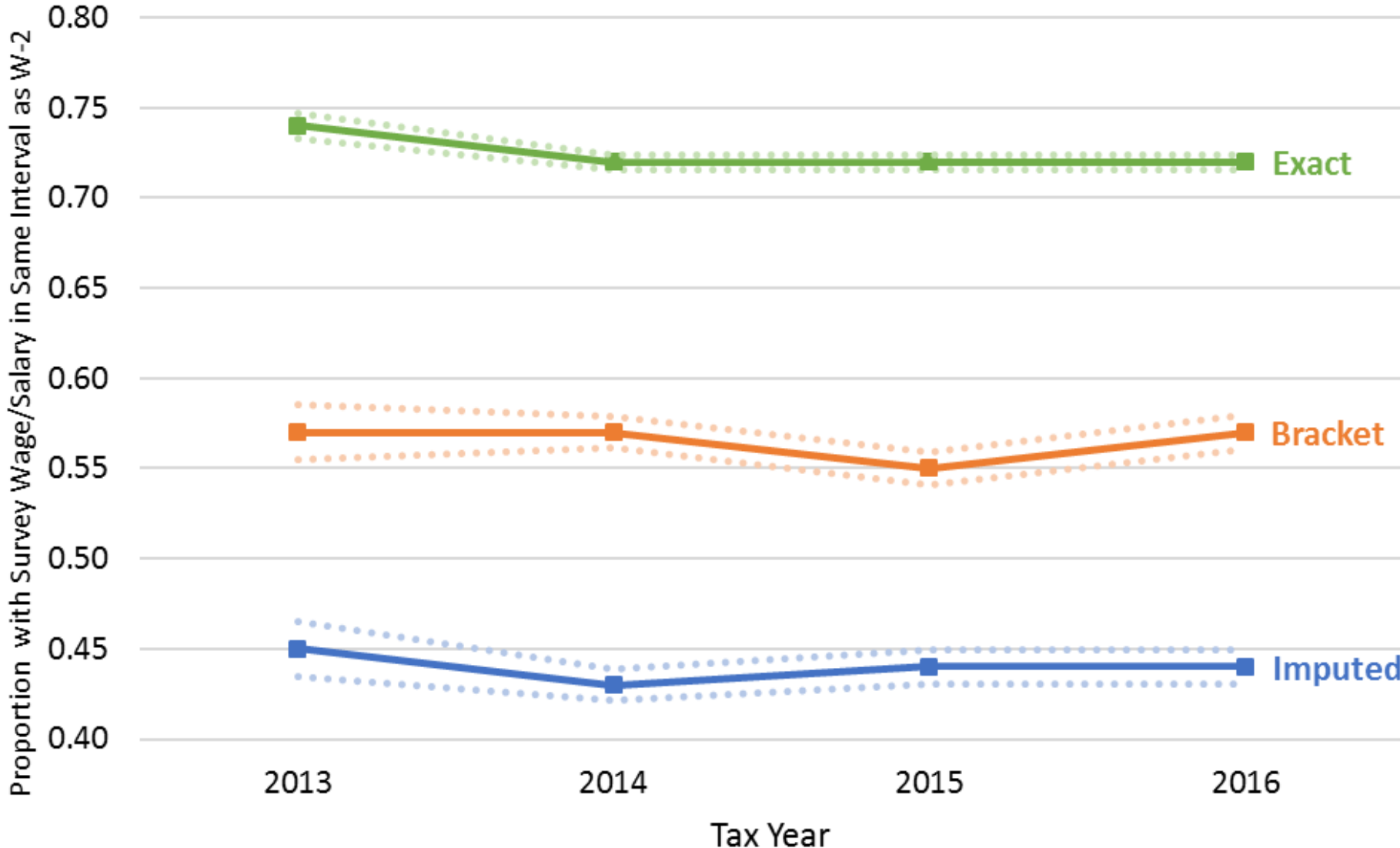
Unweighted count, rounded:

11,000

Agreement rate

0.57

W-2/ASEC Agreement Rates



Conclusions

- Brackets are informative.
 - Incorporating brackets into imputation processes reduces burden on end users.
 - Brackets may represent a promising means of capturing information
 - Beyond what's already available from other covariates,
 - During a period of increasing survey non-response, and
 - When external (e.g., administrative) measures may have error.
- Planned:
 - Summer 2019: Working paper with detailed results.
 - Fall 2019: Public-use microdata file that will use brackets for all income types, as well as other improvements.

Thank You!

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