

Measuring and Monitoring Non-Employee Work

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Grateful to my collaborators...

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What is non-employee work?

- Non-employee workers include independent contractors, independent consultants, freelancers, “gig” workers and day laborers
 - People working on their own account
 - Paid for services provided to households, businesses or other organization
 - Not employees and do not receive a wage or salary
- Non-employee work may be either a main job or a secondary activity

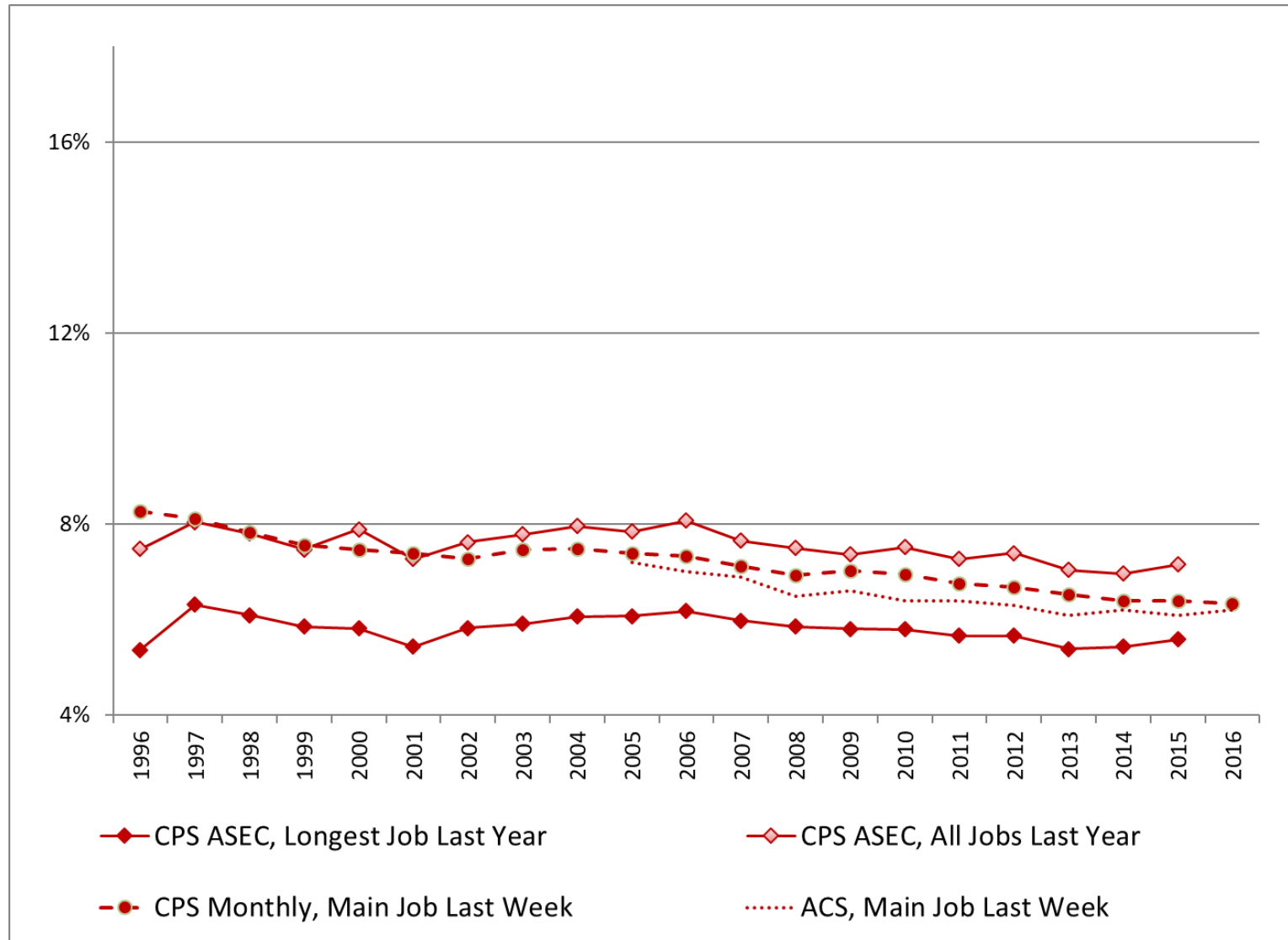
Why should we care about non-employee work?

- Non-employee work has always existed, but prevalence may be growing
 - Anecdotal evidence of greater use of contract workers related to “fissuring” in the workplace (Weil 2014)
 - Some employees of contract firms, but others independent workers
 - New online platforms lower barriers for workers to connect directly with customers
 - Scale of platform work currently modest but growth has been rapid
 - Platform workers often combine wage and salary employment with non-employee work (see, e.g., Farrell and Greig 2016, Koustas 2018)
- Accurate assessment of prevalence and role of non-employee work important for policy
 - Relevant to judging aggregate labor market conditions
 - Relevant to setting labor market policy
 - Non-employee work may offer valued flexibility, but does not offer traditional employee benefits and or coverage under government social insurance programs
 - Growth in non-employee work may force rethinking of existing labor market institutions
 - Relevant to understanding how families make ends meet

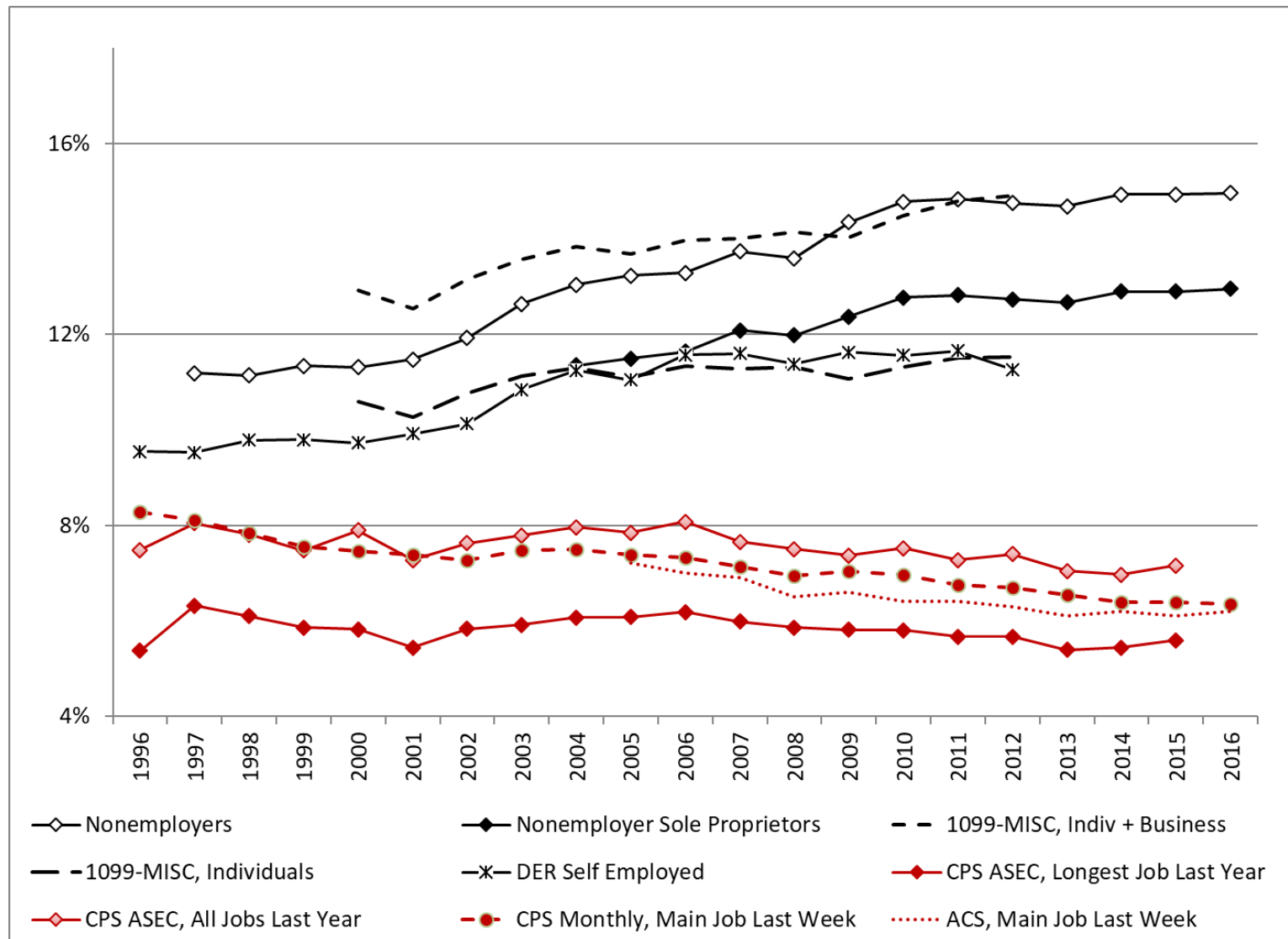
Are available data adequate for assessing prevalence and trends in non-employee work?

- Policymakers and others rely on Current Population Survey, other federal household surveys to understand what is happening in the labor market
 - Even as new sources of information have become available, these surveys continue to be central to informing our understanding of the state of the labor market
- Concern about how well surveys are capturing non-employee work
 - Should be recorded as unincorporated self-employment
 - Evidence that non-employee work may be missed or mischaracterized
 - Reflection of how difficult it can be to capture complex arrangements by asking a small number of questions on a household survey (Bureau of Labor Statistics 2018a)
 - To extent there are issues, important to think about how data can be improved or augmented

Self-employment levels and trends



Self-employment levels and trends



Plan for talk

- Examine tax data vs. household survey reports of self-employment income
 - Tax data show growing share of population with self-employment income
 - Current Population Survey Annual Social and Economic Supplement (CPS-ASEC) data have not captured this growth
 - Analysis of CPS-ASEC records linked to tax records helps to understand causes
- Report results from survey experiments to assess standard household survey employment questions
 - New evidence that standard questions miss some nonemployee work
 - New evidence that standard questions lead some nonemployee work to be mischaracterized
- Consider how measurement of work activity can be improved

Relevant recent research

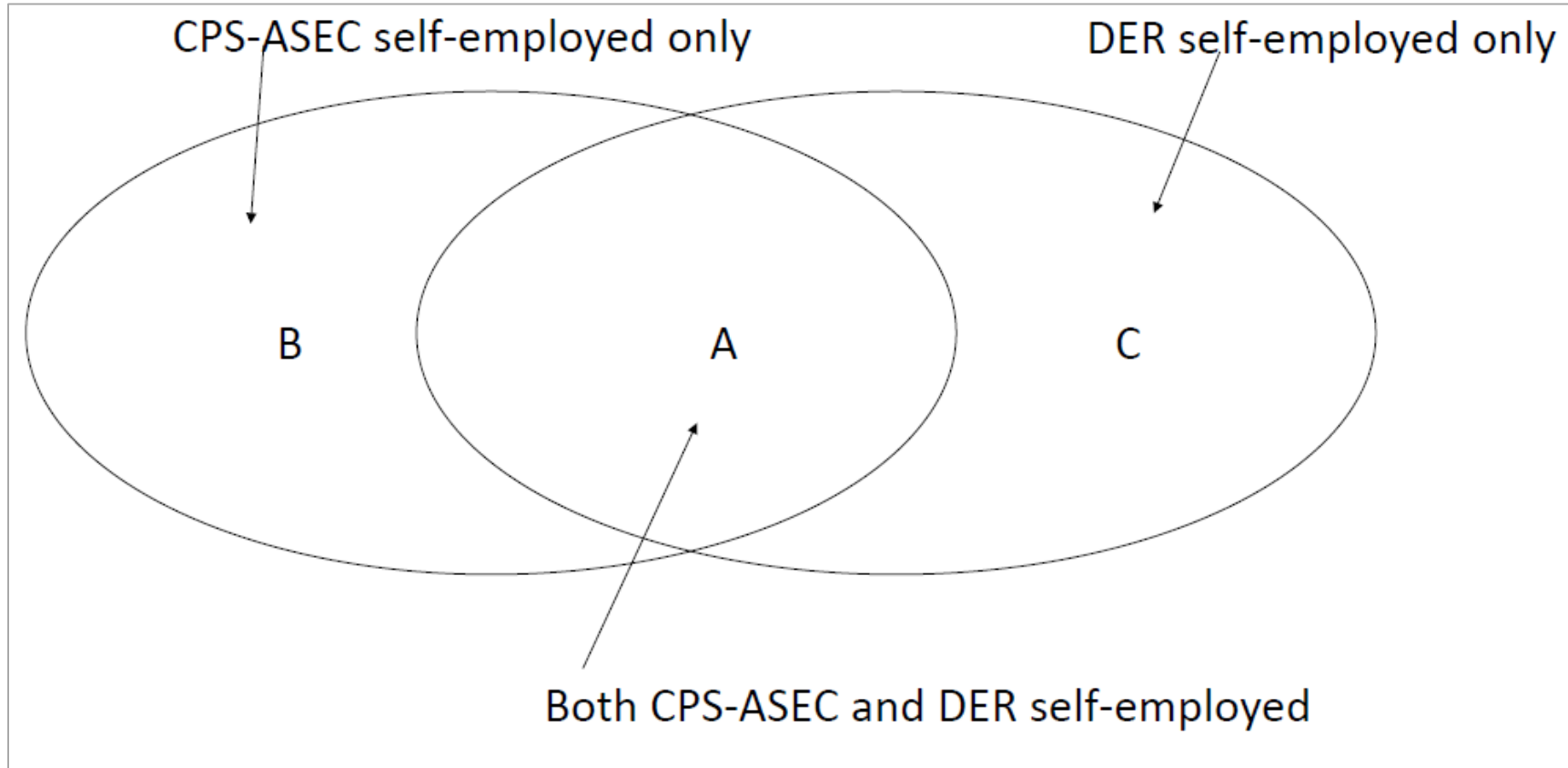
- Studies using tax data to study growth in self employment
 - Jackson, Looney and Ramnath 2017, Collins, Garin, Jackson, Koustas and Payne 2019
 - Studies do not compare household survey responses to tax records
- Analyses of surveys focused on informal work activity
 - Robles and McGee 2016, Abraham and Houseman 2018, Bracha and Burke 2019 on prevalence of informal work
 - Bracha and Burke 2019, Katz and Krueger 2019 on work not captured by standard Current Population Survey questions
 - None of studies explores different question wordings, role of proxy reporting
- Limited evidence on how employment status reported in response to standard household survey questions
 - Related literature on employee misclassification (see e.g. Carre 2015)
 - Dey, Houseman and Polivka 2010, Bureau of Labor Statistics 2018b
 - More to be learned about potential miscategorization of non-employee work in household survey data

I. Trends in receipt of self-employment income in household survey vs tax data

How do survey reports of self-employment earnings compare to reports to IRS?

- Abraham, Haltiwanger, Hou, Sandusky and Spletzer (in progress) link survey data and tax records for CPS-ASEC respondents
 - CPS information from annual Social and Economic Supplement (CPS-ASEC)
 - Count those with any net self-employment income as self-employed
 - Tax information from Detailed Earnings Record (DER) provided by the Social Security Administration to the U.S. Census Bureau
 - DER includes information from all W-2s and Schedule SE's
 - Schedule SE should be filed if person has \$433 or more in gross self-employment earnings
 - No Schedule SE required if self-employment earnings below filing threshold, but self-employment income otherwise conceptually comparable
 - Have standard CPS demographics for everyone on linked file
- Linked data cover 20-year period from 1996 through 2015
 - Will not talk about details of linking procedure, but happy to discuss if there are questions

Self-employment in CPS-ASEC and DER



CPS-ASEC versus DER self-employment status crosswalk (1996-2015)

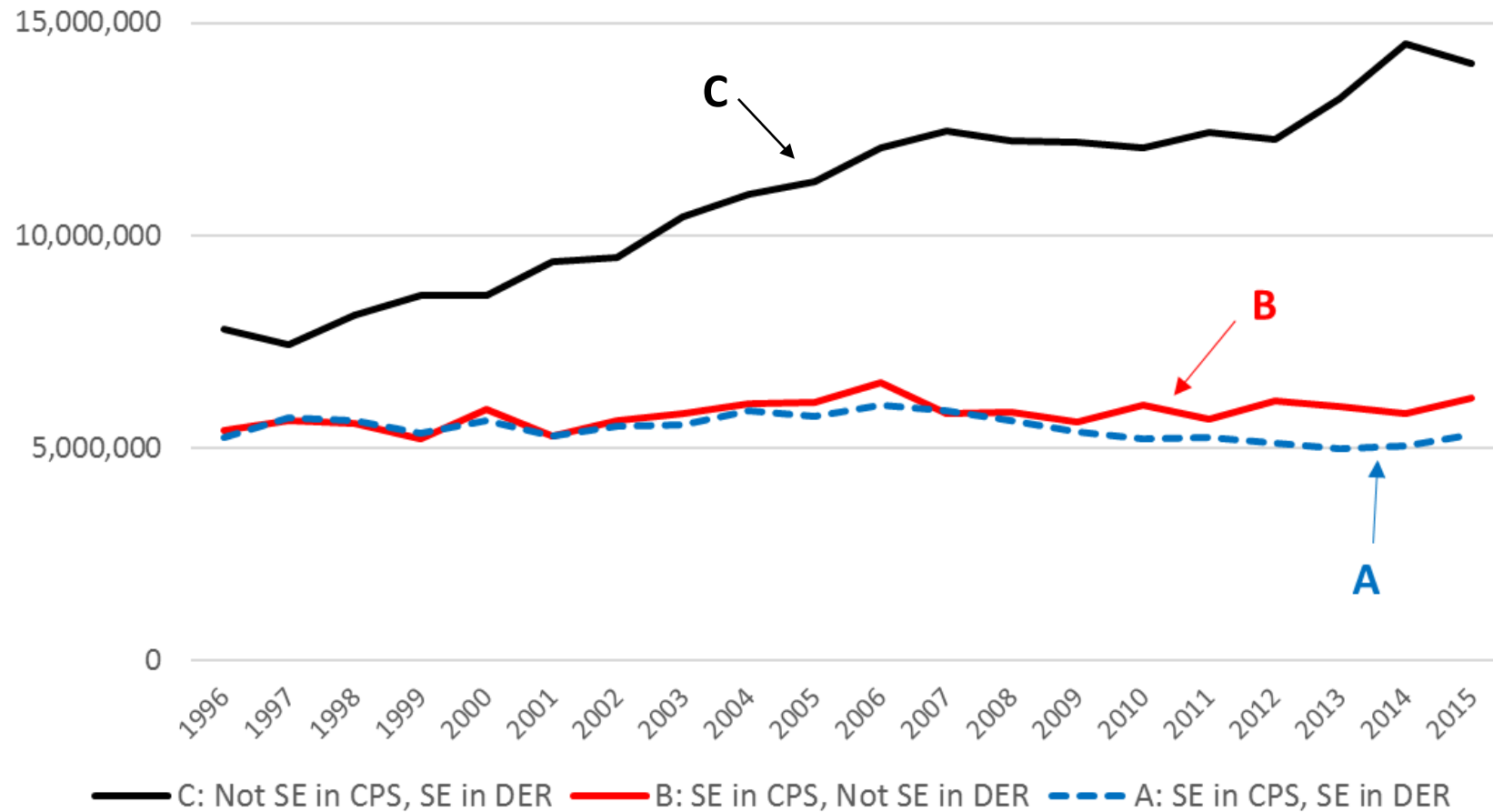
	Not self-employed in DER	Self-employed in DER	Total
<u>Not self-employed in CPS</u>			
Number	205,849,371	10,978,424	216,827,794
Row share	94.9%	5.1%	100.0%
Column share	97.3%	66.7%	95.1%
<u>Self-employed in CPS</u>			
Number	5,808,202	5,471,298	11,279,501
Row share	51.5%	48.5%	100.0%
Column share	2.7%	33.3%	4.9%
<u>Total</u>			
Number	211,657,573	16,449,722	228,107,295
Row share	92.8%	7.2%	100.0%
Column share	100.0%	100.0%	100.0%

C

B

A

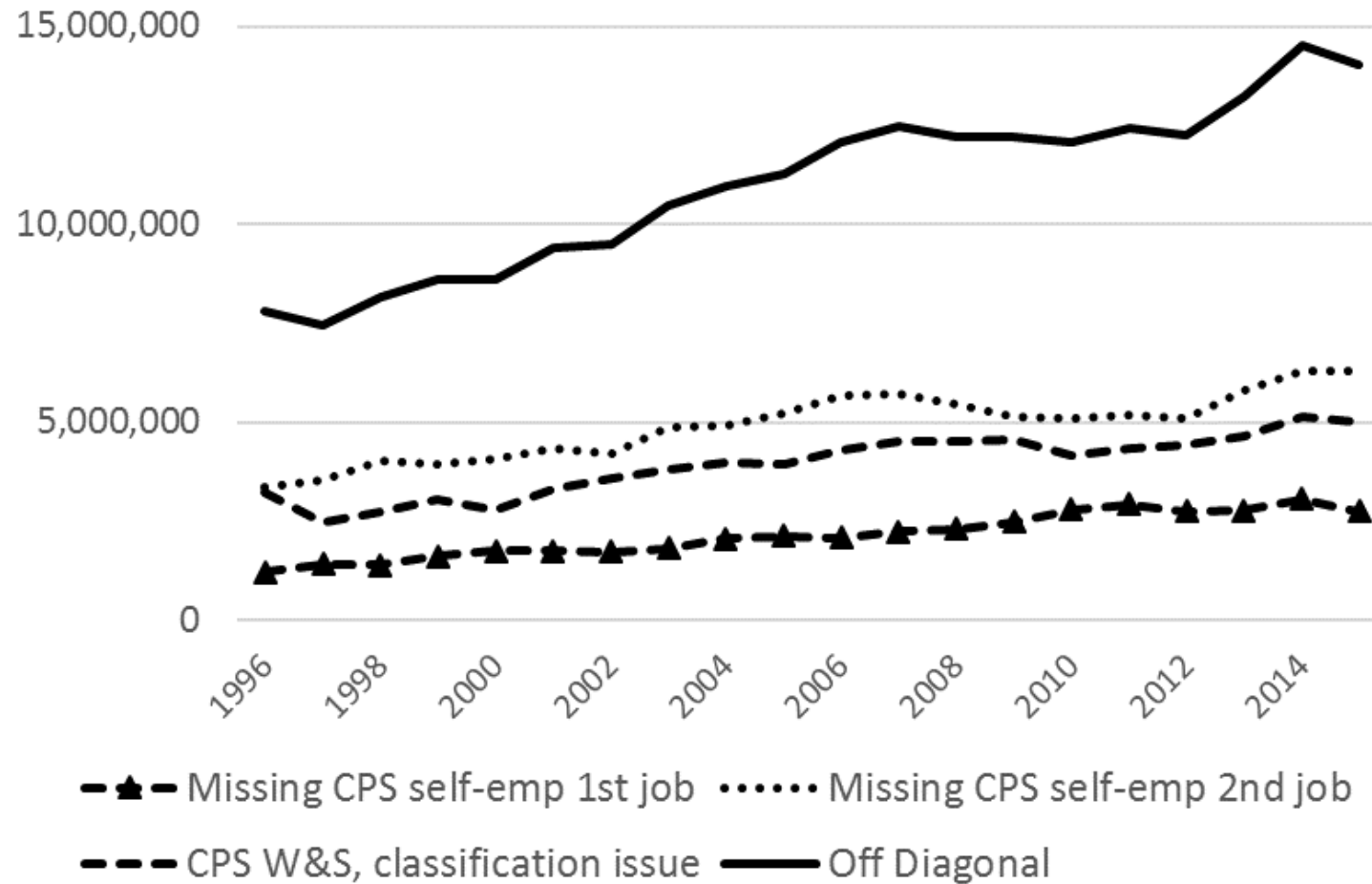
Self-employment in CPS-ASEC and DER, 1996-2015



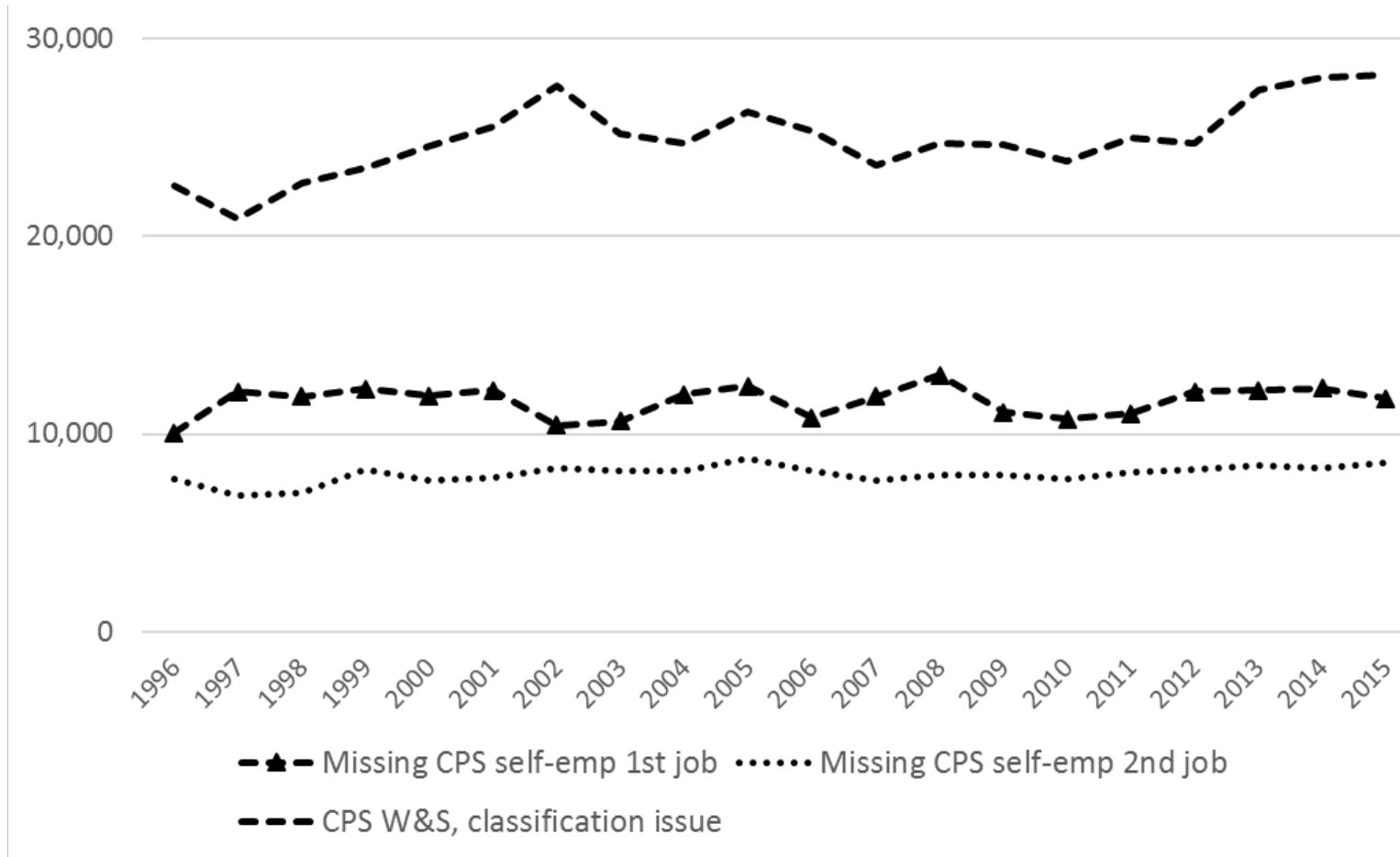
Disaggregation of growing DER self-employed, CPS-ASEC not self-employed off-diagonal

- Three distinct groups of interest
 - Missing CPS self-employment 1st job: Self-employment income in DER (either alone or together with W&S income), no employment income in CPS-ASEC
 - Missing CPS self-employment 2nd job: Both W&S income and self-employment income in DER, only W&S income in CPS-ASEC
 - CPS W&S, classification issue: Only self-employment income in DER, only W&S income in CPS-ASEC
- Size of all three groups has grown
 - Fastest growth: Missing CPS self-employment 1st job
 - Largest contribution to growth: Missing CPS self-employment 2nd job

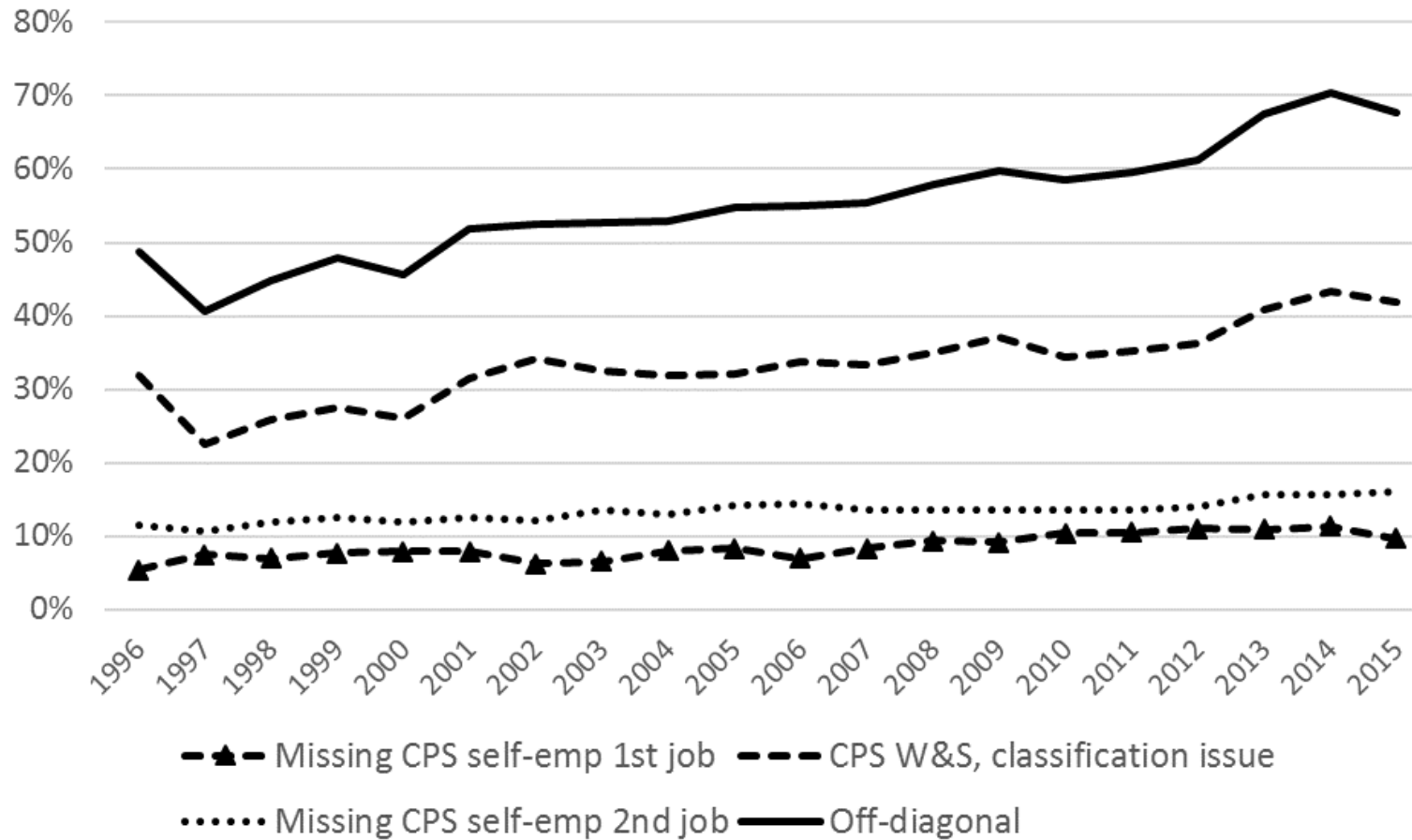
Self-employed in DER, not in CPS-ASEC, 1996-2015



Average DER self-employment earnings, people not self-employed in CPS-ASEC, 1996-2015 (\$2016)



Percent of all DER self-employment earnings from people not self-employed in CPS-ASEC, 1996-2015



Who is not reporting self-employment income in the CPS-ASEC?: Descriptive regressions

- Sample: Members of linked CPS-ASEC-DER sample with positive self-employment earnings in the DER, 1996-2015
- Dependent variables: =1 if in specified category, =0 else
 - 1) Any missing CPS self-employment
 - 2) Missing CPS self-employment 1st job
 - 3) Missing CPS self-employment 2nd job
 - 4) CPS W&S, classification issue
- Independent variables: Age, education, race, ethnicity, foreign born, sex, marital status, DER self-employment earnings quartile, year dummies

Who is not reporting self-employment income in the CPS-ASEC?: Age

	Off-diagonal	Missing CPS self-emp 1 st job	Missing CPS self-emp 2 nd job	CPS W&S, classification issue
Age 15-24	0.167*	0.072*	0.088*	0.007
Age 25-34	0.056*	0.009*	0.049*	-0.002
Age 45-54	-0.037*	0.001*	-0.038*	0.001
Age 55-64	-0.047*	0.050*	-0.103*	0.007*
Age 65+	0.033*	0.274*	-0.259*	0.018*

Who is not reporting self-employment income in the CPS-ASEC?: Other demographics

	Off-diagonal	Missing CPS self-emp 1 st job	Missing CPS self-emp 2 nd job	CPS W&S, classification issue
Black	0.123*	0.079*	0.057*	-0.013*
Other	0.016*	0.023*	-0.017*	0.010*
Foreign Born	0.080*	-0.005*	-0.029*	0.114*
Male	0.006*	-0.049*	0.042*	0.012*
Married	-0.014*	0.006	-0.019*	-0.001

Who is not reporting self-employment income in the CPS-ASEC?: Differences by earnings

	Off-diagonal	Missing CPS self-emp 1 st job	Missing CPS self-emp 2 nd job	CPS W&S, classification issue
DER SE \$ Q2	-0.105*	-0.020*	-0.144*	0.059*
DER SE \$ Q3	-0.189*	-0.017*	-0.316*	0.143*
DER SE \$ Q4	-0.265*	-0.056*	-0.418*	0.209*

Summary: Abraham, Haltiwanger, Hou, Sandusky and Spletzer (in progress) linked data findings

- On average over 1996-2015, two-thirds of those with self-employment income in DER do not have self-employment income in CPS-ASEC
- Significant growth from 1996-97 to 2014-2015 in number of people with self-employment earnings in DER, not in CPS-ASEC
 - Have seen growth among those 1) missing a CPS-ASEC self-employment 1st job, 2) missing a CPS-ASEC 2nd job or 3) only self-employment in DER, only W&S in CPS-ASEC
- Those in first two groups: Characteristics consistent with something other than self-employment viewed as primary activity
 - Missing CPS self-employment 1st job: Under age 25 (students?); 65 and older (retirees?); tend to have low self-employment earnings
 - Missing CPS self-employment 2nd job: Those in this group have a wage and salary job; tend to have low self-employment earnings
- Those in third group: May view activity as working for an employer
 - DER self-employment only, CPS W&S only: Tend to have high self-employment earnings, suggesting a more regular arrangement

II. Survey experiments: Probing to learn about non-employee work

Experiments explore two concerns about household survey data on self-employment

- Self-employment activity missing from household survey data
 - People who think of their primary activity as something other than self-employment may not report accurately
 - May be especially true of informal or irregular self-employment activity
- Self-employment activity mis-categorized in household survey data
 - People who work as independent contractors, especially those who provide services to a single company or organization, may not report accurately

II. A. Probing for missing informal work

Why might household surveys fail to capture nonemployee work?

- Consider question sequence on Current Population Survey
 - Respondents first asked “Last week, did [you/NAME] do any work for [either] pay [or profit]?”
 - Subsequent questions in sequence refer to “job” or “business”
- Potential issue #1: Respondents may not think of money they earn from informal work as “pay” or consider informal activity “work” or a “job”
- Potential issue #2: Especially for proxy reports (about half of CPS responses), stronger cues may be needed to jog the respondent’s memory about work done by other household members, especially those to whom they may be less close
- Suggests that added probes, especially if they provide a rich set of cues, may produce more complete reports of informal work activity

Abraham and Amaya (2018) sought to learn more about work the CPS does and does not capture

- Task visible only to U.S. residents posted to Amazon Mechanical Turk
 - Individuals asked to complete the Current Employment Survey
 - Respondents paid \$2.50 and spent an average of 13.55 minutes on survey
 - 4,991 responses received on August 16 and 17, 2016
 - 52 cases excluded due to item non-response, leaving 4,939 usable cases
- Survey had three sections
 - Standard CPS demographic questions, plus test questions on gender and sexual orientation, asked for all household members
 - Standard CPS employment questions asked for all household members
 - For one randomly selected person per household, additional questions asked about informal work activity

Abraham and Amaya (2018) sought to learn more about work the CPS does and does not capture (contd)

- Two versions of basic question about informal work activity
 - Global question: “Sometimes people who don’t have a job do other things to earn money. Did [you/NAME] do other things to earn money. Did [you/NAME] do other things to earn money last week?” OR “Sometimes, in addition to working at a job [or business] where there is a definite arrangement for regular work on a continuing basis, people do other things to earn money. Outside of a job [or business], did [you/NAME] do other things to earn money last week?”
 - Detailed question: Essentially the same lead in, but potential informal work activity decomposed into seven different categories
- If informal work reported, respondent asked how many hours spent on activity and whether it had been included in answering the CPS employment questions

Selected sample demographics

	Respondent	Other Household Members	ACS (2016) ^{***}
Age			
18-24/16-24*	11.7	18.7	12.8
25-34	45.8	31.7	17.7
35-44	23.9	17.5	16.6
45-54	11.1	14.1	17.7
55-64	5.7	11.4	16.4
65 and over	1.7	6.6	18.9
Education			
Less than high school	0.3	6.7	12.6
High school	8.7	21.3	27.7
Some college or Associates	36.2	33.6	31.0
Bachelors degree or higher	54.7	38.3	28.7
Sample size	2,704	2,235	--

Probing raises employment rate; detailed probe has larger effect for proxy reports

	Employment Rates				
	Sample Size	CPS Questions	Augmented by Probing	Difference	(<i>p</i> -value)
Self Reports					
Global prompt	1,364	94.7	96.9	2.3	(<0.001)
Detailed prompt	1,340	94.7	98.1	3.4	(<0.001)
Detailed minus global	--	0.1	1.2	1.2	--
(<i>p</i> -value)	--	(0.951)	(0.042)	(0.070)	--
Proxy Reports					
Global prompt	1,128	69.8	73.5	3.7	(<0.001)
Detailed prompt	1,107	69.7	76.4	6.7	(<0.001)
Detailed minus global	--	0.0	2.9	3.0	--
(<i>p</i> -value)	--	(0.987)	(0.110)	(0.002)	--

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Global prompt	1,291	32.0	55.9	23.9	(<0.001)
Detailed prompt	1,269	31.8	56.5	24.7	(<0.001)
Detailed minus global	--	-0.2	0.6	0.7	--
(<i>p</i> -value)	--	(0.933)	(0.769)	(0.667)	--
Proxy Reports					
Global prompt	787	10.6	13.5	2.9	(<0.001)
Detailed prompt	772	10.0	21.2	11.3	(<0.001)
Detailed minus global	--	-0.6	7.8	8.4	--
(<i>p</i> -value)	--	(0.710)	(<0.001)	(<0.001)	--

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Summary: Abraham and Amaya (2018) findings on probing for added employment

- Probing after asking standard CPS questions produced a significant number of reports of added work activity, especially work activity in addition to a primary job
- Form of prompt made a difference in some cases to answers received
 - Global prompt had about same effect as more detailed prompt when respondent reporting about themselves
 - Detailed prompt elicited more reports of added activity when respondent reporting about others in household

II. B. Probing for mis-categorization of non-employee work

Why might household surveys produce responses that mischaracterize self-employment?

- Common-sense interpretation of working for an employer may not conform to legal arrangements under which work occurs
 - Independent contractors who receive a 1099-MISC formally are self-employed, but may not think of themselves as such

Abraham, Hershbein and Houseman (2019) examine potential miscategorization

- Module on contract employment added to Gallup Education Consumer Pulse Survey
 - Large nationally representative telephone survey of adults age 18 to 80
 - Fielded in four monthly waves beginning in May 2018, August 2018, November 2018 and February 2019, yielding 60,962 completed interviews
 - Response rate approximately 8 to 10 percent across four waves
 - Data reweighted based on national distributions for age, gender, census region, education, ethnicity and race
- Baseline survey includes questions about working for an employer and self-employment
- Module contained questions to probe for misreporting of employment status, contract work, informal work and work secured through online platforms; also several questions about contract work for older adults
 - Tested alternative wording for several questions

Abraham, Hershbein and Houseman (2019) examine potential miscategorization (cont'd)

- Basic Gallup question to identify employees:
“Thinking about your WORK SITUATION over the past 7 days, have you been employed by an employer - even minimally like for an hour or more - from whom you receive money or goods? (This could be for one or more employers.)”
 - Individual working on a contract basis for company might reasonably (and accurately) respond “yes” to this question.
- Follow-up module question probes whether worker is an employee or nonemployee:
 - Version 1: ***“Were you an employee on this job or were you an independent contractor, independent consultant or freelance worker?”***
 - Version 2: ***“Did this employer take any taxes out of your pay?”***Similar versions asked for those with 2 or more employers

High rates of miscategorization in Gallup data

- Among those who indicate that they are “employed by an employer”
 - 10.8% state that they are an “independent contractor, independent consultant, freelancer” and not an “employee”
 - 8.9% state that their employer does not take out taxes from their pay
 - Difference between 2 versions significant, but two estimates similar in magnitude
- Miscategorization strongly associated with:
 - Number of employers
 - Low work hours
 - Older workers
 - Gender (male)

Summary: Abraham, Hershbein and Houseman (2019) findings on miscategorization

- Responses to basic Gallup employment question lead some workers to report that they are employees who, when probed, say otherwise
- CPS questions are different, but may suffer from a similar problem
 - Basic work question in CPS:
“Last week, did you do ANY work for either pay or profit?”
 - To distinguish employees from self-employed, respondents asked:
“Were you employed by government, by a private company, a nonprofit organization, or were you self-employed or [if applicable] working in the family business?”
 - Person working on contract basis may not think of themselves as self-employed, instead report being employed by organization

How can we do a better job of
measuring non-employee work?

Augment survey data with information from tax records and other sources

- Comparisons of responses to CPS-ASEC and tax record information suggest both miss significant components of non-employee work
 - Amount of non-employee work captured in tax data but not CPS-ASEC both sizable and growing
 - Little change in amount of non-employee work captured in CPS-ASEC but not tax data, but sizeable in magnitude
- Best measures of non-employee work would incorporate both survey and administrative records information
 - Similar to message from research by Bruce Meyer, Jim Sullivan and others on receipt of transfer payment income
- Closing gaps in requirements for filing tax information returns would be helpful both for tax administration and for measurement
- Incorporating data from firms that mediate or use non-employee labor services into the measurement infrastructure a long term goal

Field periodic household surveys to probe for changes in work arrangements

- On several occasions since 1995, Bureau of Labor Statistics has fielded the Contingent Worker Supplement (CWS) to the CPS
 - Questions asked only of those identified as employed in the basic monthly CPS
 - Reflecting concerns at time it was developed, focus on individual's main job
- Evidence basic monthly CPS may be missing and mischaracterizing some non-employee work suggests rethinking CWS and fielding it more regularly
 - Not feasible to add large numbers of questions to basic monthly CPS
 - Could redesign CWS to 1) probe for missing work activity, 2) ask about secondary employment as well as main job and 3) ask more questions about contract work
 - Bureau of Labor Statistics has commissioned National Academies panel to make recommendations for redesigning the CWS

Thank you!