Session 2. New Insights on Taxpayer Behavior

Moderator:	***Brett Collins*** *IRS: RAAS*
Size, Characteristics and Distributional Effects of Income Tax Evasion in Italy	***Paolo Di Caro*** *Italian Dept. of Finance*
The Effects of an Employment Tax Enforcement Regime on US Small Business and Proprietor Payment Compliance	***Rafael Dacal*** *IRS: SB/SE*
Discussant:	***Jamie McGuire*** *Joint Committee on Taxation*

Size, characteristics, and distributional effects of income tax evasion in Italy

MEF Dipartimento delle Finanze

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10th Annual IRS/TPC Joint Research Conference on Tax Administration

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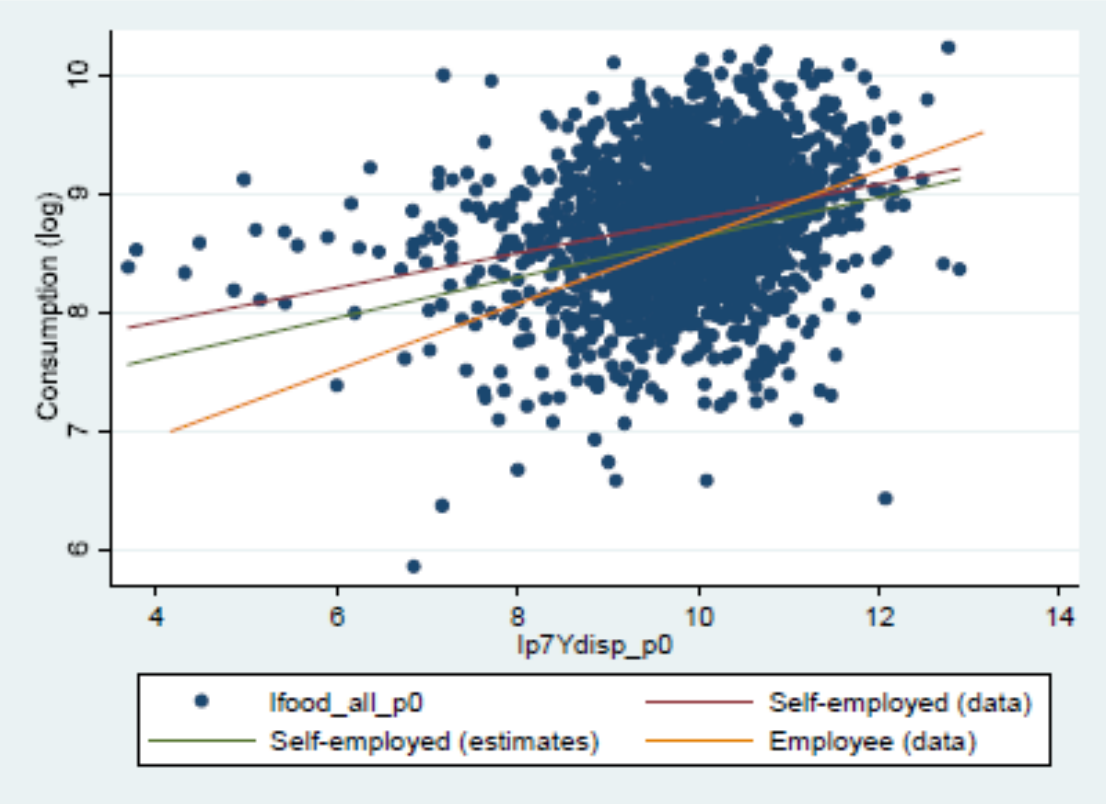
Outline

- Motivation
- Main contributions
- Data and methodology
- The empirics: results and checks
- Discussion and next steps

Motivation

- There are two main approaches for estimating Personal Income Tax gap (a proxy for PIT evasion): top-down (using National Accounts data), and bottom-up (using microdata from tax audits, surveys, and tax returns);
- **Top-down approach.** It does not allow for the estimation of heterogeneous evasion rates depending on taxpayers' characteristics; analysing the distributive effects of tax evasion is not a direct objective.
- **Bottom-up approach.** When random audits (e.g. US, Denmark) are not available like in Italy, different data and methods are needed (e.g., survey data, tax returns). The main limit is the production of time series.

Main idea (from PW, 1989 for the UK)



- Survey data matched with tax returns show differences between the income-consumption relation for categories of taxpayers (e.g. self-employed vs employees);
- Can this difference be related to different tax evasion profiles?

Main contributions

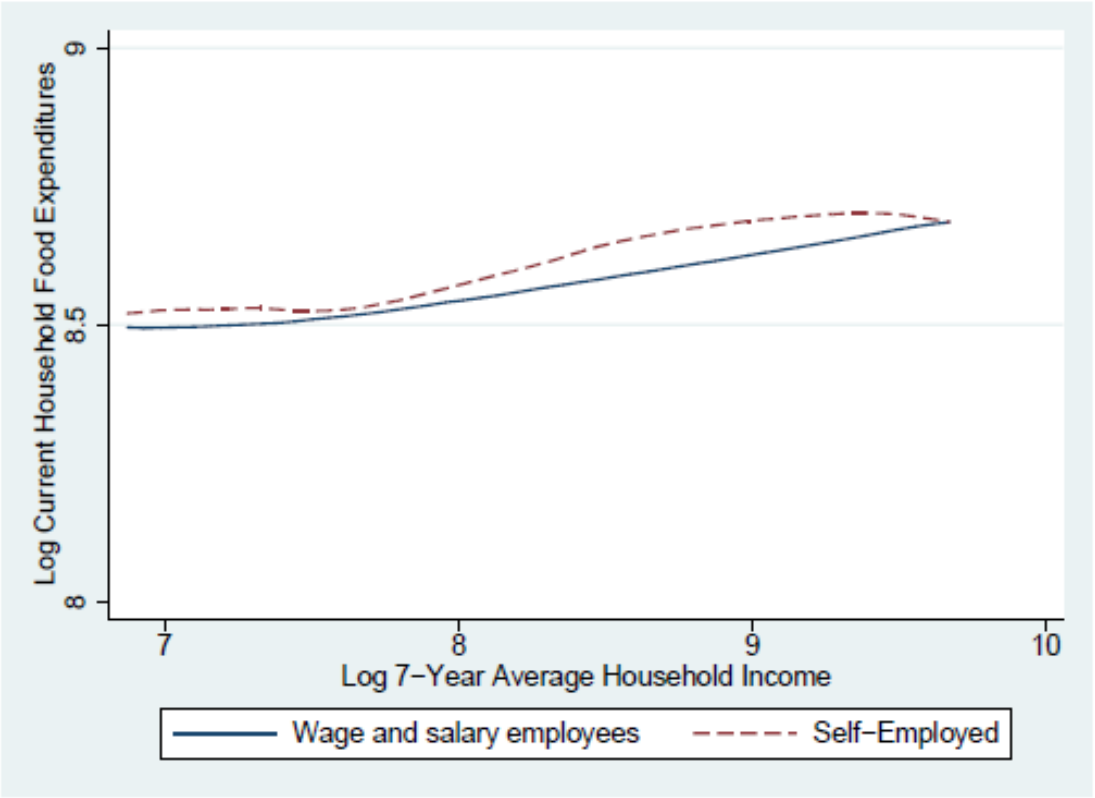
1. We apply, for the first time in Italy, the Pissarides and Weber (1989) income-consumption method to estimate self-employment income tax evasion, by using a rich administrative dataset (tax returns, financial and property wealth data);
2. We calculate different self-employment income tax evasion rates depending on household and individual characteristics (e.g., age, gender, single vs in-couples, etc.);
3. We estimate the effects of self-employment income tax evasion on tax revenues and income distribution, by using the tax-benefit microsimulation model EUROMOD.

On the methodological side, we extend the PW formula to account for heterogeneous evasion rates.

Data

- We built a novel consumption-income dataset for a representative sample of Italian households - 44,284 individuals living in 18,198 households - by exactly matching individual and household information;
- Consumption data: from Household Budget Survey (HBS), year 2013;
- Income data: from tax returns, years 2009-2016;
- Property wealth data: from tax returns, years 2009-2016;
- Financial wealth data (new): from administrative data on individual financial accounts (bank deposits, portfolios, etc.) transmitted by banks and intermediaries to the tax authority, years 2014-2017.

Preliminary evidence



We plot the estimated nonlinear Engel curve for wage salaries and self-employed derived by using a nonparametric local-mean smoothing procedure.

The methodology I

- The reporting of expenditure on some items (food) by all groups in the population is accurate and independent on population groups identifier
- The reporting of income by some groups in the population (wage and salary workers) is accurate (third-party reported)
- The permanent income is well measured in the data (we use average of yearly income over a 7-year period)
- True (permanent) income ($y_i^{P,T}$) is larger than the reported one ($y_i^{P,R}$), where $k_{i,j}$ is larger than one if household i is self-employed ($j = S$) and is equal to one otherwise ($j = E$):

$$y_i^{P,T} = k_{i,j} \cdot y_i^{P,R} \tag{1}$$

The log of $k_{i,j}$ might depend on a set of observable characteristics, $Z = z_1, z_2, ..., z_L$, which includes the constant and where v_i is a zero-mean random term:

$$ln\, k_{i,j} = \sum_{l=1}^{L} \mu_l z_l + v_i. \tag{2}$$

The methodology II

Using an indicator S_i that takes values equal one if the household i is self-employed, and zero otherwise, we can write Engel curve as:

$$ln\, c_i = \beta \cdot ln\, y_i^{P,R} + \sum_{l=1}^{L} \underbrace{S_i \cdot \beta \cdot \mu_l}_{\gamma_l} \cdot z_l + X_i' \alpha + \epsilon_i + S_i \cdot \beta \cdot v_i \qquad (3)$$

The proportion of true income that is reported by self-employed households is:

$$\widehat{\kappa}_{iS} = exp\left[- \frac{\sum_{l=0}^{L} \widehat{\gamma}_l \cdot E\left(z_l\right)}{\widehat{\beta}} \right] \qquad (4)$$

and $(1 - \widehat{\kappa}_{iS})$ is the proportion of unreported income.

The empirics: main results (1)

	(A) OLS	(B) OLS	(C) OLS	(D) OLS	(E) IV	(F) IV
Income = Pre-tax Total Family Income						
Self-employed	0.187***	0.177***	0.053***	0.055***	0.077***	0.071***
	(0.017)	(0.017)	(0.016)	(0.017)	(0.024)	(0.022)
Current inc.	0.197***		0.076***		0.157***	
	(0.009)		(0.008)		(0.051)	
Aver. inc. (7-year)		0.233***		0.094***		0.154***
		(0.009)		(0.009)		(0.048)
$(1 - \kappa)$	0.612***	0.534***	0.501***	0.441***	0.389***	0.369***
	(0.038)	(0.037)	(0.107)	(0.098)	(0.070)	(0.075)
Controls	No	No	Yes	Yes	Yes	Yes
R-squared	0.097	0.115	0.261	0.263	0.251	0.259
N. obs	18198	18198	18198	18198	18198	18198
N. obs Self-Employed	1767	1767	1767	1767	1767	1767
Share Self-Employed	0.866	0.866	0.866	0.866	0.866	0.866
F-stat					176.629	207.798
Income = Post-tax Total Family Income						
Self-employed	0.189***	0.183***	0.052***	0.056***	0.080***	0.074***
	(0.017)	(0.017)	(0.016)	(0.017)	(0.025)	(0.023)
Current inc.	0.216***		0.077***		0.173***	
	(0.011)		(0.009)		(0.056)	
Aver. inc. (7-year)		0.259***		0.099***		0.168***
		(0.010)		(0.011)		(0.053)
$(1 - \kappa)$	0.584***	0.506***	0.492***	0.432***	0.372***	0.357***
	(0.038)	(0.035)	(0.107)	(0.096)	(0.066)	(0.070)
Controls	No	No	Yes	Yes	Yes	Yes
R-squared	0.098	0.119	0.26	0.262	0.249	0.257
N. obs	18198	18198	18198	18198	18198	18198
N. obs Self-Employed	1767	1767	1767	1767	1767	1767
Share Self-Employed	0.866	0.866	0.866	0.866	0.866	0.866
F-stat					169.646	205.36

Notes: A self-employed household has at least 50% of its income from self-employment. Controls include household head age and gender, in-couple dummy interacted with education (primary, secondary or tertiary) of the spouse, household size, a dummy for presence of kids, family consumption of sin goods, a full set of macro area of residence dummies, household head education and building property wealth (cadastral values).
Standard errors are adjusted for 109 clusters at the province of family residence.

The empirics: main results (2)

Table. Heterogeneous evasion rates

	(A)	(B)
	Income = Pre-tax Total Family Income	
	OLS	IV
Single and Low educated	0.831***	0.679***
	(0.079)	(0.124)
Single and Mid-educated	0.555**	0.494***
	(0.225)	(0.155)
Single and High-educated	0.822***	0.674***
	(0.092)	(0.138)
Couple and Low educated	0.382**	0.312***
	(0.177)	(0.120)
Couple and Mid-educated	-0.405	-0.105
	(0.440)	(0.251)
Couple and High-educated	0.562***	0.434**
	(0.212)	(0.183)

Notes:

- This table displays the evasion rates for different characteristics of households.
- A self-employed household has at least 50% of its income from self-employment.

The empirics: checks

- We use both pre- and post-tax income data;
- Different definitions of self-employed households: alternative shares of self-employment income (25-50-75%), self-declaration in the HBS survey;
- Different dependent consumption variables from food expenditures: home utilities expenditures, health expenditures, etc.;
- IV estimation strategy (the workhorse of previous works) for current income: testing for exclusion restrictions with new instruments (financial and property wealth data);
- Additional checks: clustering, different control variables (e.g. sin goods), etc.

The empirics: microsimulation

- We use EUROMOD, the tax-benefit microsimulation model of the EU Commission, to calculate the effects of tax evasion on SSC, taxes and benefits
- Baseline: no full tax compliance
- Scenario: full tax compliance
- Input data: HBS 3013, Income variables updated to 2018
- Policy system: 2018
- Self-employment income derived from he estimated shares of unreported income
- We calculate the budgetary and distributional consequences of tax evasion

The empirics: main results (3)

Budgetary effects, 2018

	Reported	True	Evasion-adjusted
		Euro million, annual	
Taxable income	829,281	829,281	906,670
	(8,150)	(8,150)	(10,724)
Reported Self-employment income	105,313	105,313	182,702
	(4,008)	(4,008)	(8,064)
IRPEF	165,823	165,823	193,791
	(2,772)	(2,772)	(3,927)
Self employed SSCs	22,477	22,477	31,758
	(629)	(629)	(881)
Pensions and other transfers	281,503	281,503	281,395
	(3,448)	(3,448)	(3,449)
Disposable income	665,927	743,317	705,955
	(5,332)	(8,052)	(8,765)
		Changes in % wrt to Reported	
Taxable income		0.00	9.33
Reported Self-employment income		0.00	73.48
IRPEF		0.00	16.87
Self employed SSCs		0.00	41.29
Pensions and other transfers		0.00	-0.04
Disposable income		11.62	6.01

Notes:

- IRPEF stands for national and regional personal income tax.
- Standard errors in parentheses. Source: authors' elaboration based on EUROMOD (HBS-fiscal data).

The empirics: main results (4)

Average tax rates for income deciles

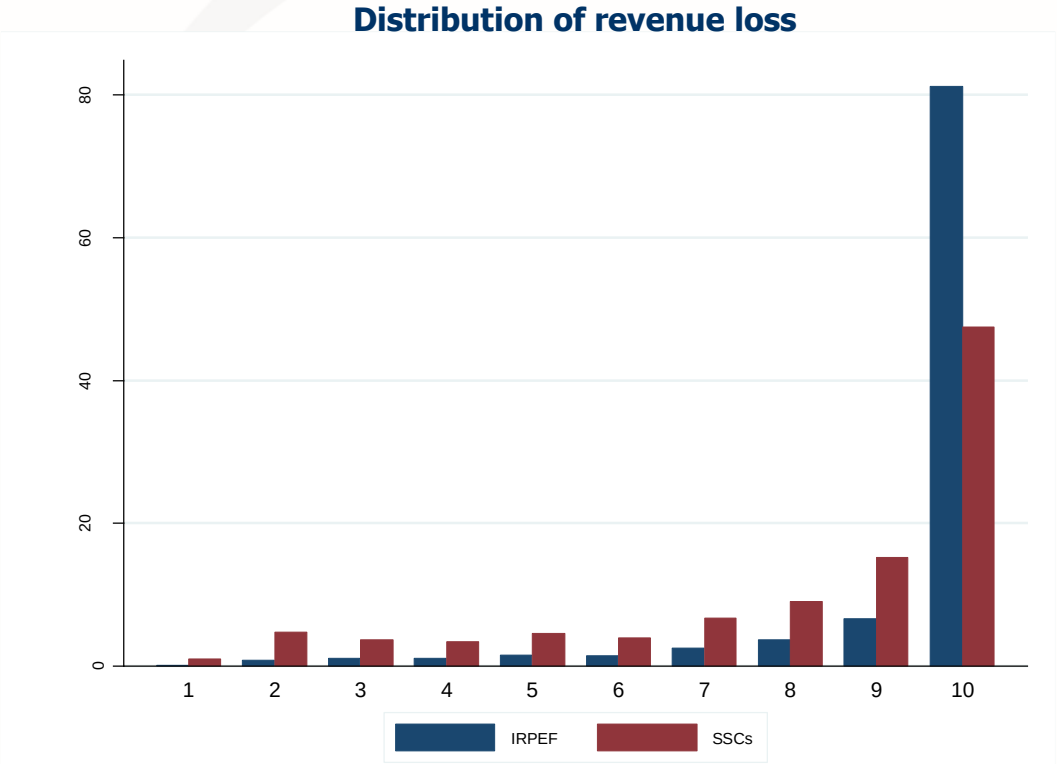
Decile groups	True	Evasion-adjusted
1	0.198 (0.019)	0.274 (0.019)
2	0.164 (0.007)	0.224 (0.004)
3	0.173 (0.006)	0.248 (0.004)
4	0.188 (0.007)	0.274 (0.005)
5	0.203 (0.007)	0.297 (0.005)
6	0.213 (0.009)	0.315 (0.005)
7	0.210 (0.007)	0.338 (0.004)
8	0.221 (0.007)	0.373 (0.003)
9	0.221 (0.006)	0.388 (0.003)
10	0.221 (0.004)	0.455 (0.001)
All	0.209 (0.002)	0.365 (0.002)

Notes:

- Averages of individual tax rates. Decile groups based on taxable income in the evasion adjusted scenario.
- Standard errors shown in parentheses.

Source: authors' elaboration based on EUROMOD (HBS - fiscal data).

The empirics: main results (5)



Discussion and next steps

- In Italy, we find that self-employed workers underreport more than 40% of their income to tax authorities: about twice the size registered in the UK (Cabral et al., 2019) and Sweden (Engström and Hagen, 2017), and in 25% larger than in the US (Hurst et al., 2014);
- Our estimates are in line with top-down results for Italy; we are also able to provide specific evasion rates for taxpayers' categories: self-employed households are different from each other;
- Self-employment income tax evasion produces both revenue losses and more inequality in Italy;
- Future avenues: i) to study the effects on horizontal equity; ii) to combine evasion results with Covid-19 adjusted microsimulation (Figari et al. 2020); iii) to update estimates.

THANK YOU FOR YOUR ATTENTION!

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The Effects of Employment Tax Reporting Regime on US Small Business and Proprietor Payment Compliance

Disclaimer

- This paper and slides are base on my dissertation
- While I work at the Internal revenue Service, this work was completed out of my IRS activities
  - Results were not reviewed
  - Funding nor time was provided for the execution of this study
  - Data comes strictly from public data or experiment data
- Prior IRS work did provide context
- Doctoral committee did include another IRS employee.

Background

- Federal tax Deposits (FTD)
  - FTD is the deposit of federal income tax withheld, and both the employer and employee social security and Medicare taxes.
  - There are two deposit schedules, (monthly and semi-weekly) and this is determined by certain criteria provided in Publication 15.
  - The FTD Alert Program is the only Collection tool available that identifies anomalies in an employer's pattern of payroll tax deposits (IRS.gov IRM 5.7.1.1.1)

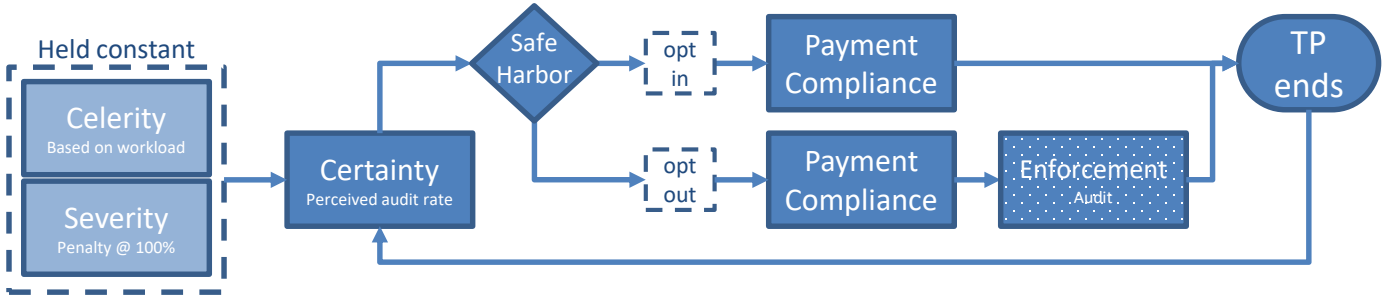
- Safe Harbor
  - Safe harbor refers to a legal provision to reduce or eliminate liability in certain situations as long as certain conditions are met (Investopedia)

- Research Question
  - Does different tax regimes, such as safe harbor, change the behavior of small business or self-employed taxpayers regarding their tax payment

Scope and Importance

- Practical Implications for the IRS
  - Improve voluntary compliance
  - Reduce misreporting and underpayment of tax liability.
  - Reduce Tax Gap
- Taxpayer compliance subcategorized
  - Payment
  - Filling
  - Reporting
- Employment tax
  - Defined by Publication 15
    - Penalty
    - Authorized individual
  - Payroll tax dilemma (Grady, 2013)
- General Deterrence Theory'
  - Framework
  - Celerity
  - Severity
  - Certainty
- Income shock

Research Model



- Model Basis
  - Simple Model of Rational Crime (SMORC) (Becker 1968)
  - Improved SMORC model (Allingham and Sandmo (1972))

$$E(U) = (1-p)U(W-\Theta X) + pU(W-\Theta X-\pi(W-X) \quad (1)$$

  - The multistage model could be restated as:

$$E(U_t) = (1-p)U(Y_t) + pU(Z_t) \quad (2)$$

- Introduction of a safe harbor provision leads to the following model, if and only if they chose the safe harbor

$$E(U) = U(W-\Theta X) \quad (1a)$$

$$E(U_t) = U(Y_t) \quad (2a)$$

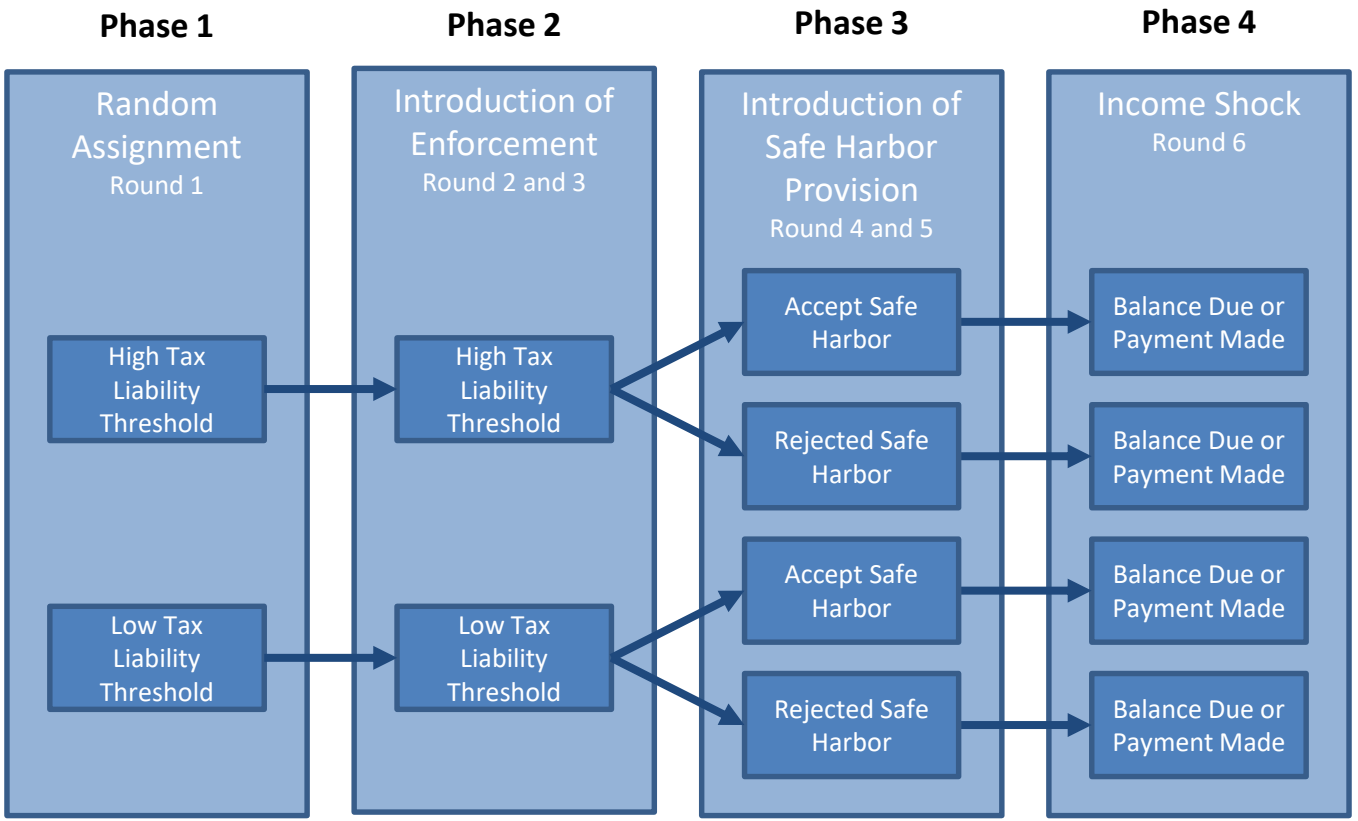
Hypotheses

- **Hypothesis 1:** Individuals within the higher tax liability thresholds will have lower subscription to a safe harbor provision than individuals within the lower tax liability thresholds.
- **Hypothesis 2:** Individuals who experience audits:
  - 2a: Will have higher subscription rate to a safe harbor provision than those who do not experience an audit.
  - 2b**:** Will have higher compliance rate than those who do not experience an audit.
- **Hypothesis 3**: Individual who chose safe harbor will be more compliant, with respect to payment.
- **Hypothesis 4:** Individual who chose safe harbor will remain more compliant after an income shock is experienced. Income shock is defined as a 50 percent drop in firm revenue

Methods: Experimental Design

- General experiment
  - Phases breakdown and purpose
  - Rounds – consist of competing all steps necessary to file, report, and pay employment tax; analogues to filing period
- Online experiment
- Sample size
- Probability of detection or audit
- Population of interest and sampling design
  - Population of interest
  - Purposive sampling

Methods: Experimental Design (Con't)



Methods: Data Analysis

- Assessed risk appetite constructs
  - Risk attitude scale
  - Scale analysis (reliability)
  - Factor analysis (validity)
- Paired T-Tested to identify if there was a change in perception of audit and penalty
- Analysis of variance (ANOVA) was chosen as the data analysis technique
- Nonparametric test
  - Pearson's χ^2 was used for categorical variables
  - Fisher Exact test was used for binary variables
- Logistic regression to model safe-harbor

Findings: Perception and Risk Constructs

Changes in **perception** were **statically significant** based Pair t-test results.

34.9 percent increase.

The average perceived pre-test audit rate was 40.3 percent, and the post-test results showed a 74.9 percent perceived audit rate.

169.1 percent decrease.

The average perceived pre-test penalty rate was 262.0 percent, and the post-test results showed a 92.9 percent perceived penalty t rate.

Risk constructs were reliable and valid

Risk appetite constructs were developed to potentially control for compliance behaviors

- Results yielded acceptable internal consistencies (Chronbach's $\alpha > 0.7$) indicating reliability in the constructs
- Principal component methods and Varimax rotation indicated the risk constructs were also valid
  - Factor score coefficient Variable loading below 0.4 were suppressed
  - Kaiser-Meyer-Olkin (>.7) and Bartlett's test of sphericity statistics (<.05) showing the underling data was useful in assessing validity

Findings: Hypothesis 1

Hypothesis 1: Individuals within the higher tax liability thresholds will have lower subscription to a safe harbor provision than individuals within the lower tax liability thresholds.

81.0% - 96.2%

Subscription rate for the Voluntary safe harbor

- Low tax liability threshold
  - Max 96.2 (4th round)
  - Min 86.7 (6th round)
- High tax liability threshold
  - Max 90.0 (3rd round)
  - Min 81.0 (6th round)
- Subscription dropped on the last round by approximately 10%

- The higher liability threshold did show lower subscription rate, but results were not statistically conclusive in all the rounds.

P-values	ANOVA	Pearson's χ^2	Fisher's Exact
Round 4	0.255	0.253	0.189
Round 5	**0.017**	**0.017**	**0.015**
Round 6	0.272	0.270	0.181

Findings: Hypothesis 2

Hypothesis 2a: Individuals who experience audits will have higher subscription rate to a safe harbor provision than those who do not experience an audit.

- The results confirm a higher number of enforcement treatments may lead to higher subscription to the safe harbor provision
- There was association between enforcement treatments and subscription to the safe harbor provision

P-values	ANOVA	Pearson's χ^2
Round 4	**0.012**	**0.012**
Round 5	**0.000**	**0.000**
Round 6	**0.008**	**0.009**

The Fisher Exact test was not run for this hypothesis because data was not binary.

Hypothesis 2b: Individuals who experience audits will have higher payment compliance rate than those who do not experience an audit.

- Results confirm no dependency between the number of enforcement treatments and employment tax payment compliance.

P-values	ANOVA	Pearson's χ^2
Round 4	0.075	0.075
Round 5	0.442	0.437
Round 6	0.866	0.863

Findings: Hypothesis 3 and 4

Hypothesis 3: Individual who chose safe harbor will be more compliant, with respect to payment.

- Compliance for those in the safe harbor provision was approximately 15% higher in rounds 4 and 5, but they were not statistically significant

P-values	ANOVA	Pearson's χ^2	Fisher's Exact
Round 4	0.155	0.154	0.124
Round 5	0.221	0.154	0.166
Round 6	0.884	0.883	0.516

Hypothesis 4: Individual who chose safe harbor will remain more compliant after an income shock is experienced.

- Compliance for those in the safe harbor provision was 5.8% higher, but it was not statistically significant
- Income shock is define as a 50 percent drop in firm revenue

P-values	ANOVA	Pearson's χ^2	Fisher's Exact
Round 6	0.675	0.716	0.674

Payment compliance

	Compliant	Non-Compliant
Round 1	49.3%	50.7%
Round 2	48.8%	51.2%
Round 3	51.2%	48.8%
Round 4	60.5%	39.5%
Round 5	61.0%	39.0%
Round 6	52.7%	47.3%

- 11.7% increase in payment compliance as enforcement increases
- 8.3% decrease reduction in payment compliance when supply shock took affect

The information for round one through three provides the propensity to underpay. The payment compliance rate for rounds four through six provided a compliance propensity for subjects under the safe harbor provision

- The information for round one through three provides the propensity to underpay.
- The payment compliance rate for rounds four through six provided a compliance propensity for subjects under the safe harbor provision. Compliance appears to increase.
  - Using ANOVA test, we tested to see if the propensity to comply had changed under the safe harbor provision.
  - The results confirms that there was dependency between payment compliance and subscription to the safe harbor provision.

	Sum of Squares	df	Mean Square	F	p-value
Between groups	11.738	3	3.913	38.962	0.000
Within Groups	20.184	201	0.100		
Total	31.922	204			

Findings: Logistic Regression

$$log \frac{P(Subscription\ to\ Safe\ Harbor\ Provision)}{1-P(Subscription\ to\ Safe\ Harbor\ Provision)} =$$

$\alpha + \beta 1$ (Prior round compliance) + $\beta 2$ (prior round enforcement encounter × availability of safe harbor) + $\beta 3$ (Availability to a safe harbor provision × tax liability threshold) + β_4 (prior round compliance × tax liability threshold)

	Payment Compliance		
	B	p-value	Odd Ratio
Prior round compliance	1.970	**0.000**	9.919
Interaction of prior enforcement encounter and availability of a safe harbor	1.748	**0.000**	0.276
Interaction of availability of a safe harbor and tax liability threshold	3.512	**0.009**	1.584
Interaction of prior compliance and tax liability threshold	-2.564	**0.009**	0.547
Constant	-1.695	**0.039**	1.510

- 10 times more likely to subscribe to a safe harbor provision if compliant
- Higher tax liability threshold were 2 times more likely to use the safe harbor
- 77.0% prediction accurate

Conclusion

Null Hypothesis	Supported?
Hypothesis 1: Business owners within the higher tax liability thresholds will have lower subscription to a safe harbor provision than business owners within the lower tax liability thresholds.	Partial Acceptance
Hypothesis 2a: Business owners who experience enforcement will have higher subscription rate to a safe harbor provision than those who do not experience enforcement.	Accepted
Hypothesis 2b: Business owners who experience enforcements will have higher payment compliance rate than those who do not experience enforcement.	Rejected
Hypothesis 3: Business owners who chose the safe harbor provision will be more compliant, with respect to payment.	Partial Acceptance
Hypothesis 4: Business owners who chose the safe harbor provision will remain more compliant after an income shock is experienced.	Partial Acceptance

There were three possible outcomes:

- Accepted indicates that all the results indicate that the hypothesis is supported.
- Rejected indicates that all the results indicate that the hypothesis is not supported.
- Partial acceptance indicates that some of the results do support the hypothesis, but not all them.

Research Limitations and Next Steps

Limitations

- Design Bias
  - Social Desirability bias
  - Survey instruments
- Payment of participants (IRB requirements)
- Sampling method
- Inference to the population

Next Steps

- Further research is necessarily to determine if these type of provisions can improve payment compliance, but we may conduct
  - An IRS pilot with a sample of the population of businesses (or subset)
  - Lab experiment that would allow for more realistic scenario

Questions?

Discussion of Session 2: New Insights on Taxpayer Behavior

IRS/TPC Conference, 6/18/20

Jamie McGuire

Joint Committee on Taxation

This presentation embodies work undertaken for the staff of the Joint Committee on Taxation, but as members of both parties and both houses of Congress comprise the Joint Committee on Taxation, this presentation should not be construed to represent the position of any member of the Committee.

Size, heterogeneity and distributional effects of self-employment tax evasion in Italy

Martina Bazzoli, Paolo Di Caro, Francesco Figari, Carlo V. Fiorio, and Marco Manzo

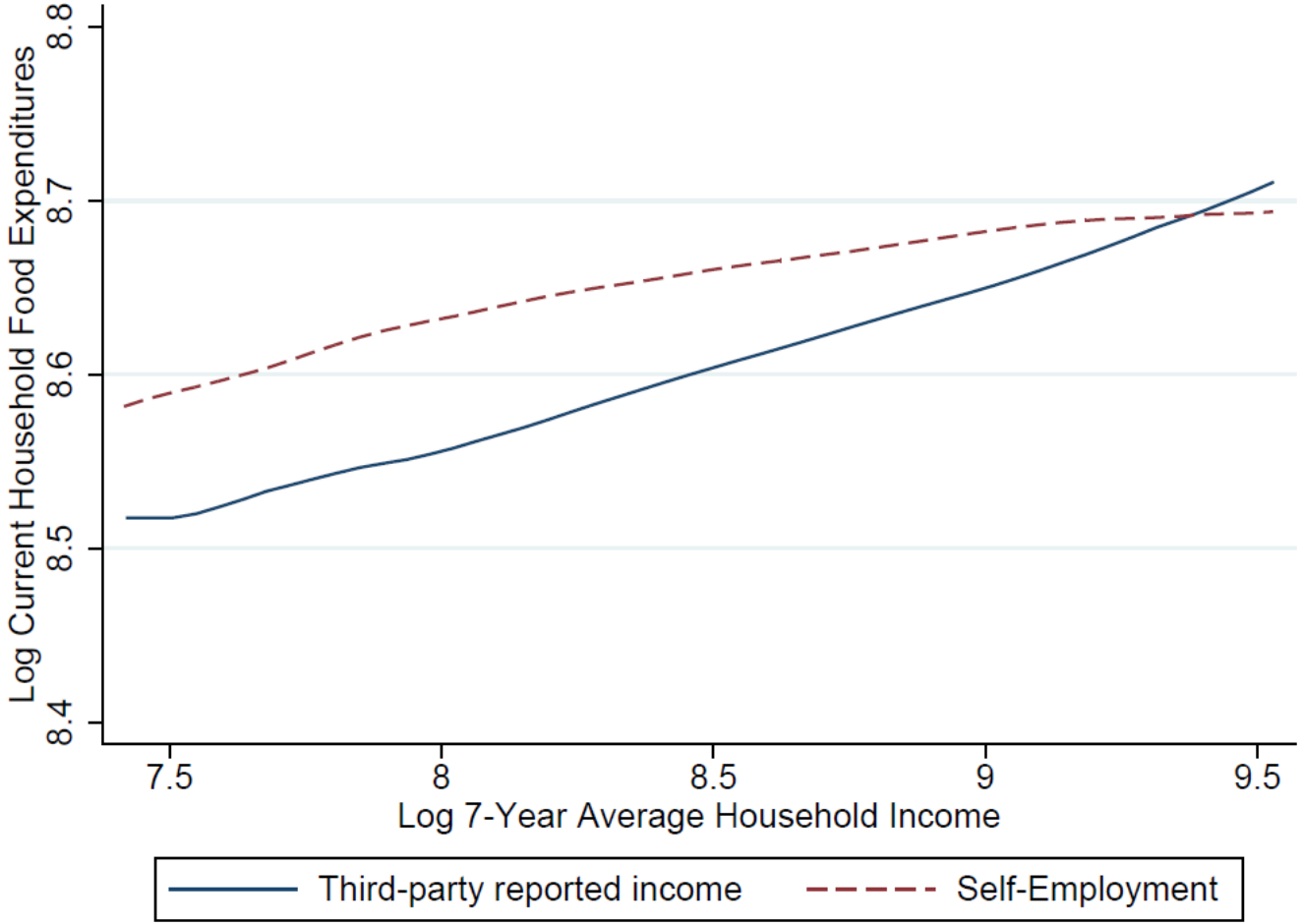
Key assumptions

- Taxpayers earning income reported by third parties have little opportunity to underreport income, whereas self-employed can underreport.

- Both groups report food expenditure correctly.

- Food expenditure does not depend on type of income.

Figure 1: Nonparametric estimates of food-expenditures curves, by household type



Size

- Self-employed households underreport income by ~40% relative to households receiving primarily income reported by third parties.
- This 40% is a weighted average of underreporting of both types of income combined.
  - 93% of self-employed households also earn third-party reported income.
  - Example:
    - Consider a household with total true income = 100, self-employment income = 80.
    - Total reported income = 60.
    - 40% underreporting overall, but 50% underreporting of self-employment income.

Table 5. Individual Income Tax Underreporting Tax Gap by Source: Tax Years 2011–2013[1]

[Money amounts are in billions of dollars]

Tax Return Line Items	Tax			Line Item Amount
	Tax Gap	Share of Gross Tax Gap	Share of Individual Income Tax Underreporting Tax Gap	Net Misreporting Percentage[2]
Gross Tax Gap	$441	100%	n.a.	n.a.
Individual Income Tax Underreporting Tax Gap	$245	56%	100%	18%
Items Subject to Substantial Information Reporting and Withholding	$9	2%	4%	1%
Wages, salaries, tips	$9	2%	4%	1%
Items Subject to Substantial Information Reporting	$12	3%	5%	5%
Interest income	[3]	[3]	[3]	1%
Dividend income	$1	[3]	1%	5%
State income tax refunds	$1	[3]	[3]	12%
Pensions & annuities	$5	1%	2%	3%
Unemployment Compensation	[3]	[3]	[3]	7%
Taxable Social Security benefits	$4	1%	2%	11%
Items Subject to Some Information Reporting	$36	8%	15%	17%
Partnership, S-Corp, Estate & Trust, etc.	$19	4%	8%	11%
Alimony income	[4]	[4]	[4]	[4]
Capital gains[5]	$17	4%	7%	23%
Short-term Capital Gains	*$7*	*2%*	*3%*	*24%*
Long-term Capital Gains	*$10*	*2%*	*4%*	*15%*
Items Subject to Little or No Information Reporting	$109	25%	45%	55%
Form 4797 income	$2	1%	1%	36%
Other income	$16	4%	6%	42%
Nonfarm proprietor income	$68	15%	28%	56%
Farm income	$6	1%	2%	62%
Rents & royalties	$17	4%	7%	51%
Other Taxes	$1	[3]	1%	3%
Unallocated Marginal Effects	$10	2%	4%	n.a.
Income Offsets (Adjustments, Deductions, Exemptions)	$20	4%	8%	5%
Total Credits	$42	10%	17%	38%
Filing Status	$5	1%	2%	n.a.

- Comparison to US NRP:
  - NMP = 55-56%
  - $68 B tax gap for nonfarm proprietor income
  - $109 B tax gap for income with little/no information reporting.
  - $1,398 B true individual income tax liability
  - $1,084 B paid voluntarily and timely.
  - $109/$1,398 = 7.8%
  - $109/$1,084 = 10%
  - Compared to 17% in Italy.
- Hurst et al. (2014) measured US income misreporting in survey data.

Heterogeneity

- Higher underreporting among single self-employed, relative to in-couple self-employed households.
  - If underreporting could be measured by type of income, rather than by household type, we could learn more about what is driving this effect.
    - Couples are more likely to have more third-party reported income.
    - But also possibility risk aversion, coordination, or other reasons.
- And for most and least educated.
  - Why is evasion lowest for self-employed individuals with secondary education?

Distribution

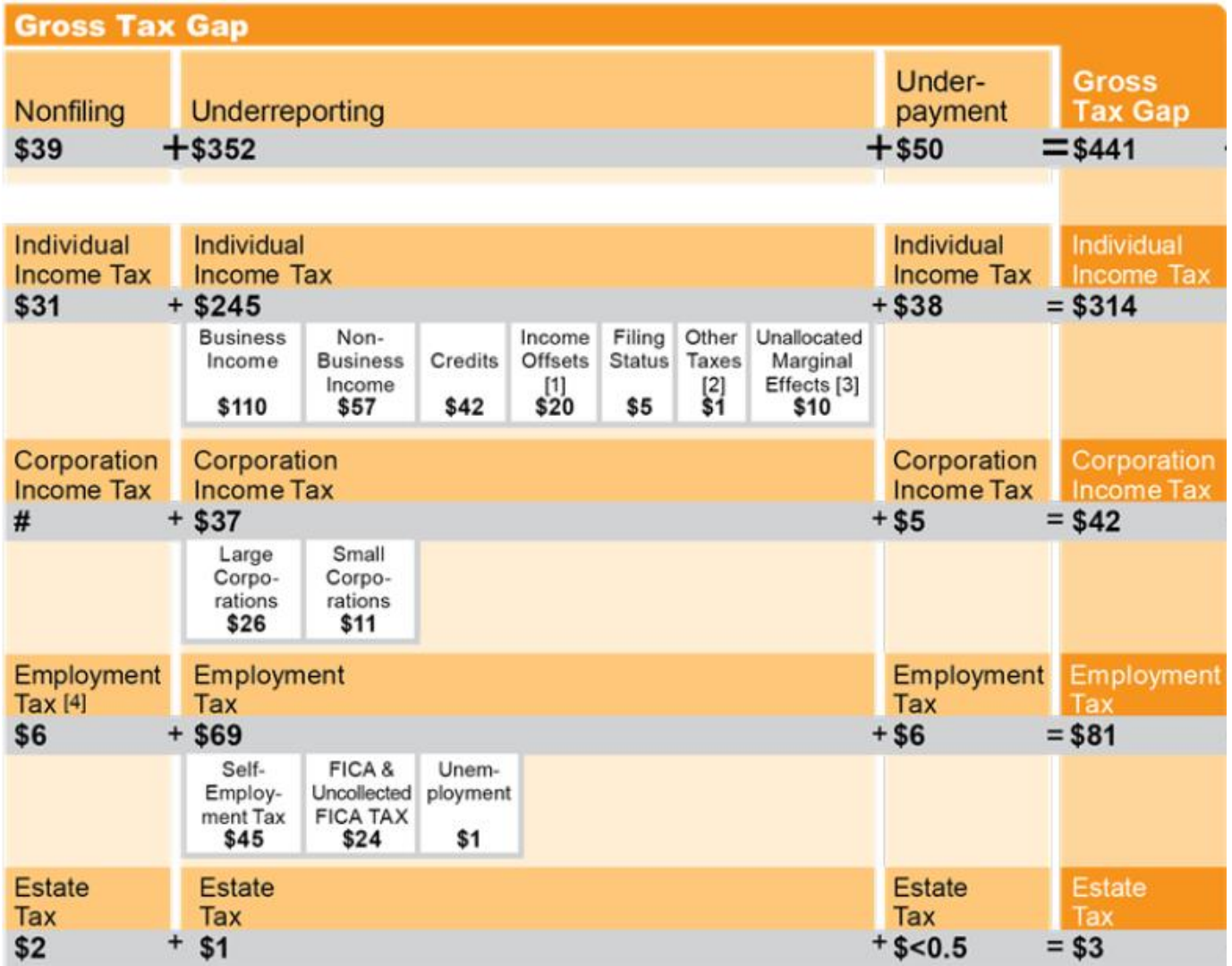
- Self-employed households have lower average reported income, but higher average true income.
- Thus, underreporting skews toward higher-income households.
  - Slightly counterintuitive based on figure shown earlier, which suggested more underreporting for lower reported income.
- Progressive tax system means higher-income households also benefit more relative to amount of unreported income.

Revisiting assumptions

- All groups report food expenditure correctly.
  - Do tax evaders underreport food expenditures to avoid detection?
- Food expenditure does not depend on type of income.
  - Propensity of self-employed to work from home → lower food expenditures?
  - Self-employed might have more confidence in future earnings → higher food expenditures?
    - Especially for single self-employed?
  - Self-employed might have higher food expenditures related to trying to grow business?
    - Taking potential clients or business partners to restaurants.
    - Hosting events to become more visible in community.
    - Not sure if these types of expenditures would show up in the data as food expenditures.

The effects of employment tax enforcement regime on US small business and proprietor payment compliance

Rafael Dacal



Employment tax noncompliance

- Mostly self-employment tax due to underreported sole proprietor income.
- But also FICA, which is underreported by $24 billion and underpaid by $6 billion.
  - This is the focus of the current paper.

Online experiment

- Participants were authorized individuals from small firms.
- Participants were asked to voluntarily report and pay employment taxes under multiple scenarios over six stages:
  - High/low tax liability
  - Safe harbor
  - Income shock
- Penalty for noncompliance if detected.

Hypotheses

- Taxpayers with higher tax rate will be less likely to choose safe harbor.
  - More expensive to choose safe harbor given higher tax rate?
- Taxpayers who have experienced enforcement will have higher (1) likelihood of choosing safe harbor and (2) compliance rates.
  - Enforcement becomes more salient or seems more likely or more expensive than previously expected.
- Taxpayers who choose safe harbor will be more compliant.
  - Choosing safe harbor could be correlated with a desire to comply.
- Taxpayers who choose safe harbor will remain more complaint after income shock.
  - Choosing safe harbor might be a form of pre-commitment to comply.

Safe harbors

- Not much literature on their effects.
  - Could reduce errors or increase compliance by making it easier to comply.
  - But also define a minimum that taxpayers need to do to comply, so could result in less tax paid.
- How was this safe harbor structured?
  - Understanding pros and cons of choosing it would be helpful in understanding participants' choices.
  - Overall, very high safe harbor take-up (81 to 96%) but slightly declining over time.

Incentives?

- However, participants were paid a flat rate, not based on their choices.
  - Economics experiments usually create incentives by paying participants based on their choices.
  - Why did IRB constraints not allow payments to vary by participant?
  - Did participants know they would not be paid based on their choices?
- Participants' real world experience might mitigate the lack of payment incentives to some degree.

Other Questions

- More detail on how the experiment worked would be helpful.
  - What did participants see?
  - What were participants asked to input?
- What makes the experiment specifically about employment tax compliance, rather than tax compliance more generally?
  - The framing helps, but is the experimental structure specific to employment tax?

Session 2. New Insights on Taxpayer Behavior

Moderator:	***Brett Collins*** *IRS: RAAS*
Size, Characteristics and Distributional Effects of Income Tax Evasion in Italy	***Paolo Di Caro*** *Italian Dept. of Finance*
The Effects of an Employment Tax Enforcement Regime on US Small Business and Proprietor Payment Compliance	***Rafael Dacal*** *IRS: SB/SE*
Discussant:	***Jamie McGuire*** *Joint Committee on Taxation*