Who Are Married-Filing-Separately Filers and Why Should We Care?

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Motivation

- Little is known about the married-filing-separately (MFS) status and the taxpayers– when to use it? who uses it, and for how long?

- What is known?

  -- Married individuals can choose between filing jointly (married-filing-jointly or MFJ status) or separately (married-filing-separately or MFS status)

  -- MFS *generally* results in a higher federal income tax liability than MFJ

  - Extent and magnitude?

  -- There is no single formula or condition to apply; Plenty of online articles on how to choose the "better' filing status or when it makes sense to file separately

  -- IRS publications advise taxpayers to calculate tax both ways

  -- Few returns are filed as MFS (2.4% of returns or 3.4% of married filers for TY20)

- Complexity, equity, and compliance issues

Examples of Online Articles

Investopedia
https://www.investopedia.com › ... › Marriage & Union

Happily Married? You May Still Want to File Taxes Separately

This means that filing separately is a good idea from a tax-savings standpoint **only when one spouse's deductions are large enough to make up for the second** ...
Earned Income Tax Credit · Child Tax Credit · The Tax Benefits of Having a...

CNBC
https://www.cnbc.com › 2022/02/24 › heres-when-marri...

Here's when married filing separately makes sense, tax ...

Feb 24, 2022 — Married couples have the choice to file taxes jointly or separately **every season**. While filing together generally pays off, splitting returns ...

H&R Block
https://www.hrblock.com › personal-tax-planning › m...

Filing Taxes Jointly Vs. Separately

Married Filing Separately might benefit you **if you have to use the Alternative Minimum Tax (AMT) on a joint return** (Only true if only one spouse is liable on a ...

NerdWallet
https://www.nerdwallet.com › Taxes

Married Filing Separately: How It Works, When to Do It

Feb 9, 2023 — Under the married filing separately status, **each spouse files their own tax return instead of one return jointly**. Instead of combining income, ...

Intuit
https://turbotax.intuit.com › tax-tips › marriage › whe...

When Married Filing Separately Will Save You Taxes - TurboTax

Mar 30, 2023 — **If one spouse has a large tax bill and the other is due a tax refund, filing separately will protect the refund**. The IRS won't apply it to the ...

https://turbotax.intuit.com › tax-tips › marriage › shou...

Should You and Your Spouse File Taxes Jointly or Separately?

May 25, 2023 — On the other hand, couples who file **separately typically receive fewer tax**

Empower
https://www.empower.com › the-currency › life › whe...

How married filing separately works & when to do it

Married filing separately is one of five different tax-filing statuses that you can choose from. It means that **you and your spouse each report income**, ...

SmartAsset.com
https://smartasset.com › taxes › 3-reasons-married-cou...

3 Reasons Married Couples Should Consider Filing Taxes ...

Apr 26, 2023 — When you file separately, **only your income is taken into account to determine what kind of payments you qualify for**. Again, you're sacrificing ...

U.S. News & World Report
https://money.usnews.com › ... › Taxes

Married Couples: Is It Better to File Taxes Jointly or ...

Most married couples will come out ahead by **filing jointly**, but filing separately may be the better choice for some.

Tax Rules for MFS: Marital Status

- Marital status is determined based on the taxpayer's status on the last day of the tax year.
- Legally separated persons according to the state law, under the decree of divorce or of separate maintenance, are considered as unmarried.
    - Some taxpayers may be in a prolonged separation, but not legally separated, from their spouse.
- Exception: A married person is considered as unmarried if the "abandoned spouse" rules are met.
    - The person furnishes over half of the cost of maintaining the household that constitutes the principal place of abode of the taxpayer and a qualifying child for more than half of the tax year, and the spouse is not a member of the household during the last six months of the tax year.
    - Head-of-household status may be used.

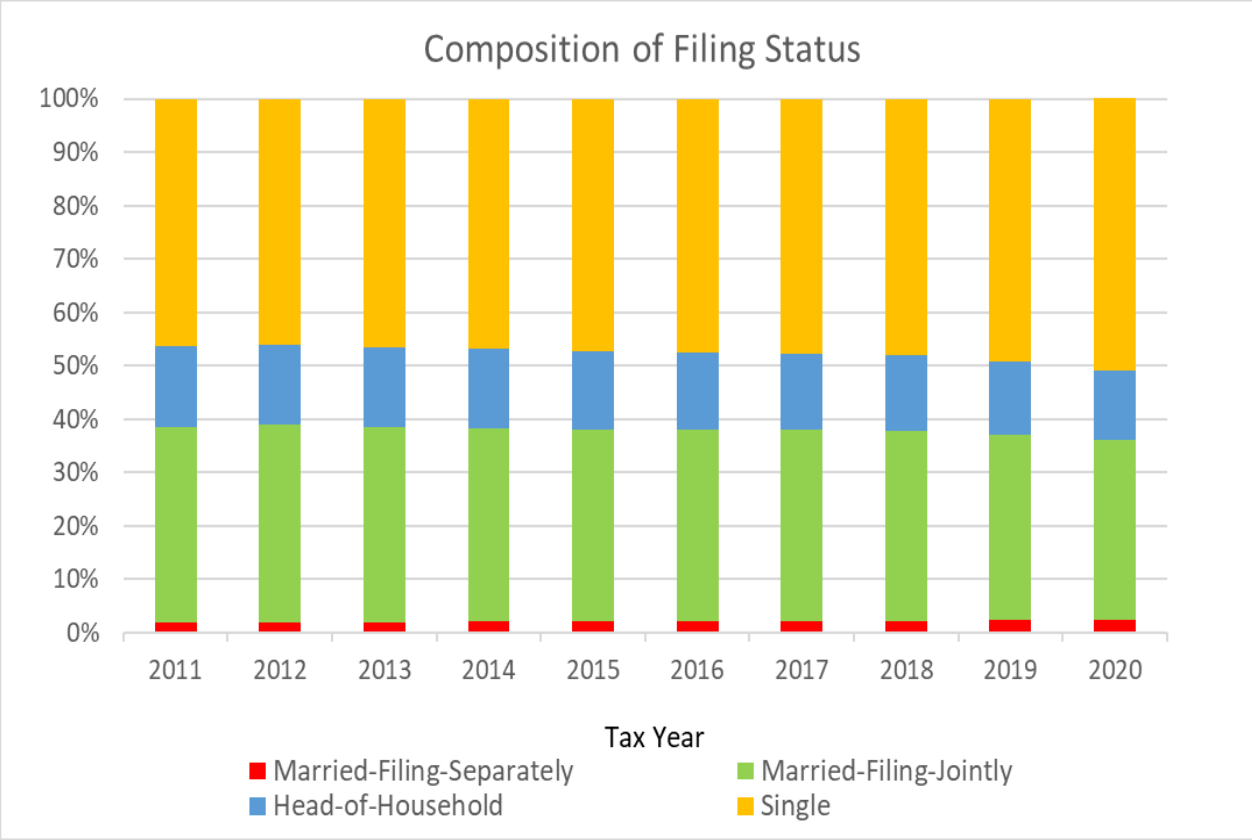
Tax Rules for MFS: Tax Penalty

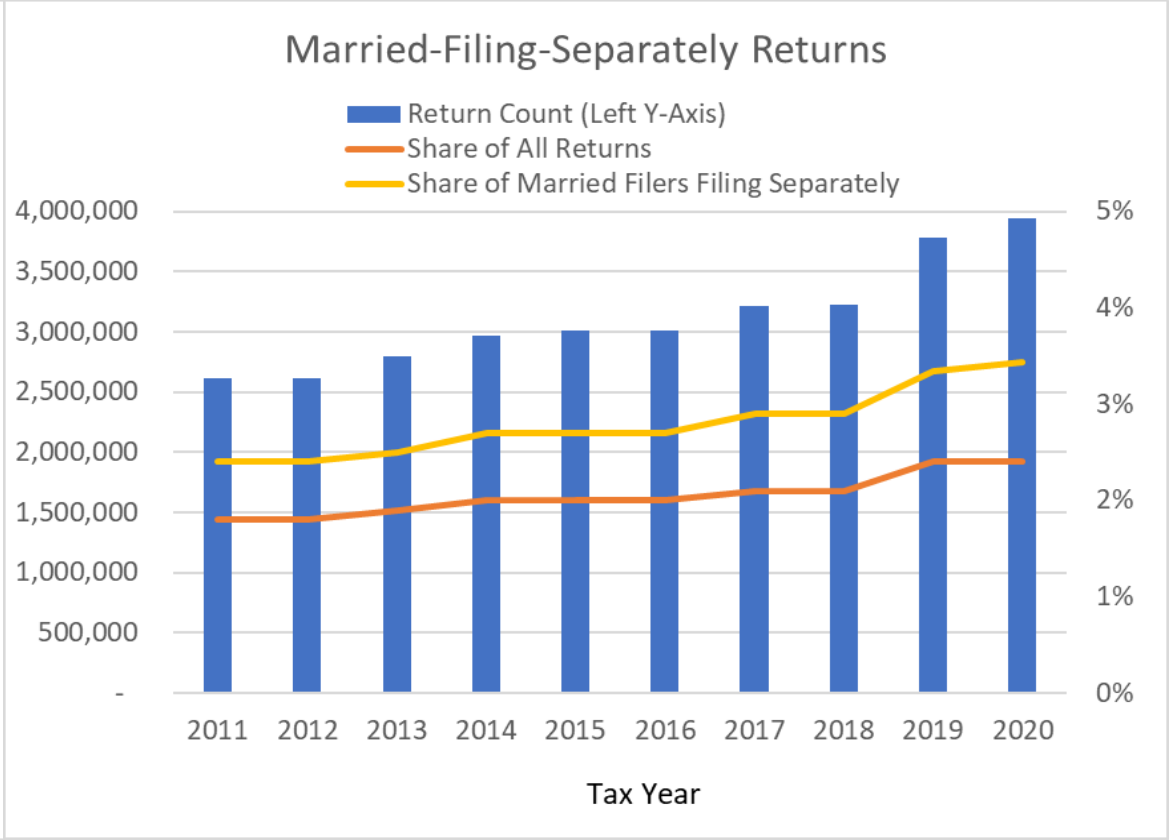
- Lengths of tax brackets for MFS and the amount of standard deduction are ½ of those for MFJ
- Limited eligibility for tax credits
  - -- Not eligible for the EITC until tax year 2021 when limited exceptions were allowed
  - -- Premium Tax Credit (PTC) only if victims of domestic abuse and spousal abandonment
  - -- Very limited eligibility for the Child and Dependent Care Tax Credit
  - -- Cannot take education credits and the adoption tax credit
- Examples of other provisions
  - -- Cannot take the deduction for student loan interest
  - -- A reduced amount of the child and dependent care exclusion
  - -- If one spouse claims itemized deductions, the other cannot take the standard deduction.
- Tax disadvantage relative to single or head-of-household status

Why Using MFS?

- Lower federal tax liability
  - If one spouse has low income and significant deductions subject to an adjusted gross income (AGI) floor, it is possible that filing separately is advantageous. For example, medical expenses are deductible to the extent that expenses exceed 7.5 percent of a taxpayer's AGI.
- U.S. persons married to a nonresident (unless they elect to treat the nonresident alien spouse as a resident alien for federal tax purposes)
- Cases of domestic abuse or spousal abandonment (for those not meeting the "abandoned spouse" rules)
- Protect from audits on the spouse's return and from being liable for the spouse's tax bill or refund offsets
- Estranged spouses who no longer live together or do not have an emotionally co-dependent relationship
- Couples in the process of divorce
- Stay financially independent
- Have large student loan expenses subject to an income-based repayment plan

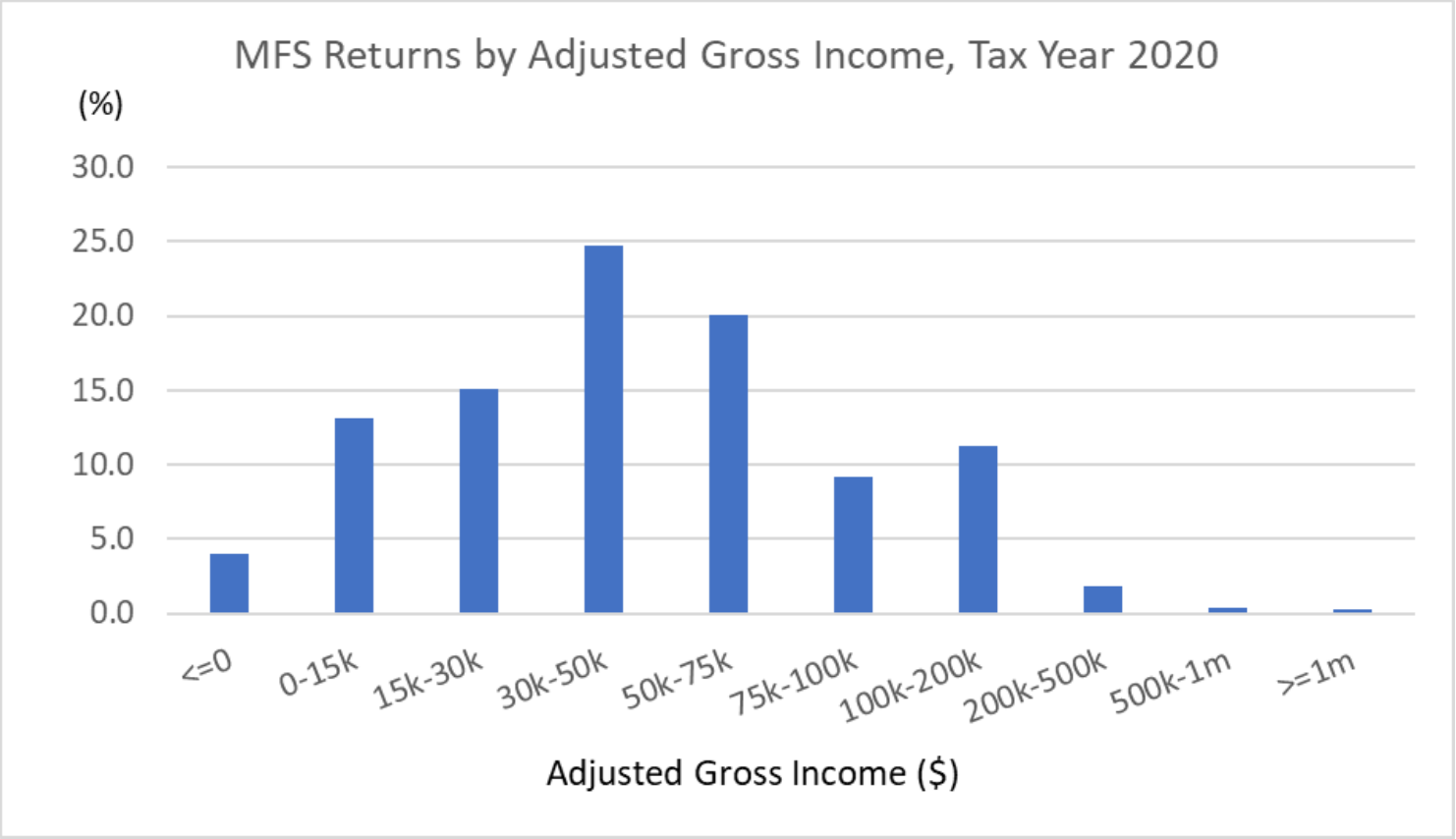
How Many MFS Returns Are Filed Each Year?





Data source: : Author calculation of the IRS Statistics of Income (SOI) publications (IRS, various years).

Income Reported on MFS Returns



Data source: : Author calculation of the IRS Statistics of Income (SOI) publications (IRS, 2020).

Dynamics of MFS Claims

- Data: Population of MFS returns filed for tax years 2013-2021; a total of 31.8 million returns filed by 13.4 million taxpayers

Number of Years with MFS Filing	Percentage (%) of All Filers	Accumulated Percentage (%)	Mean Age in 2021	Mean Adjusted Gross Income (AGI) in 2021$
1	51.69	51.69	45.8	55,290
2	18.29	69.98	47.5	59,228
3	9.78	79.75	49.1	64,292
4	6.05	85.80	50.9	65,794
5	4.13	89.93	52.7	67,757
6	2.92	92.85	53.8	73,397
7	2.26	95.10	55.3	74,360
8	1.93	97.03	57.0	98,647
9	2.97	100.00	60.7	118,026

- Longer claims if accounting for censored data: half of MFS claims end after 1 year, >70 percent end after 3 years, but 12 percent last after 8 years
- Each year, 39% to 42% of MFS filers newly used this filing status, 37% to 42% stopped filing as MFS in the subsequent year, 58% to 63% continued

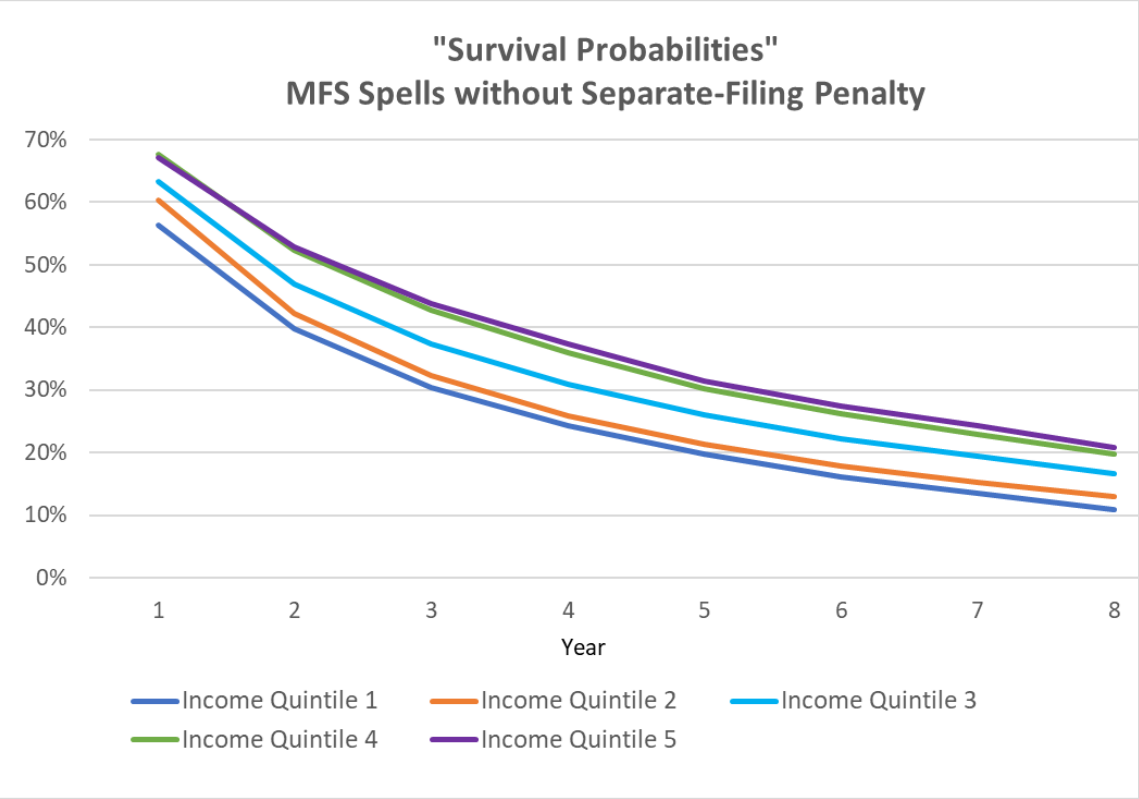
Tax Penalty or Bonus for Filing Separately

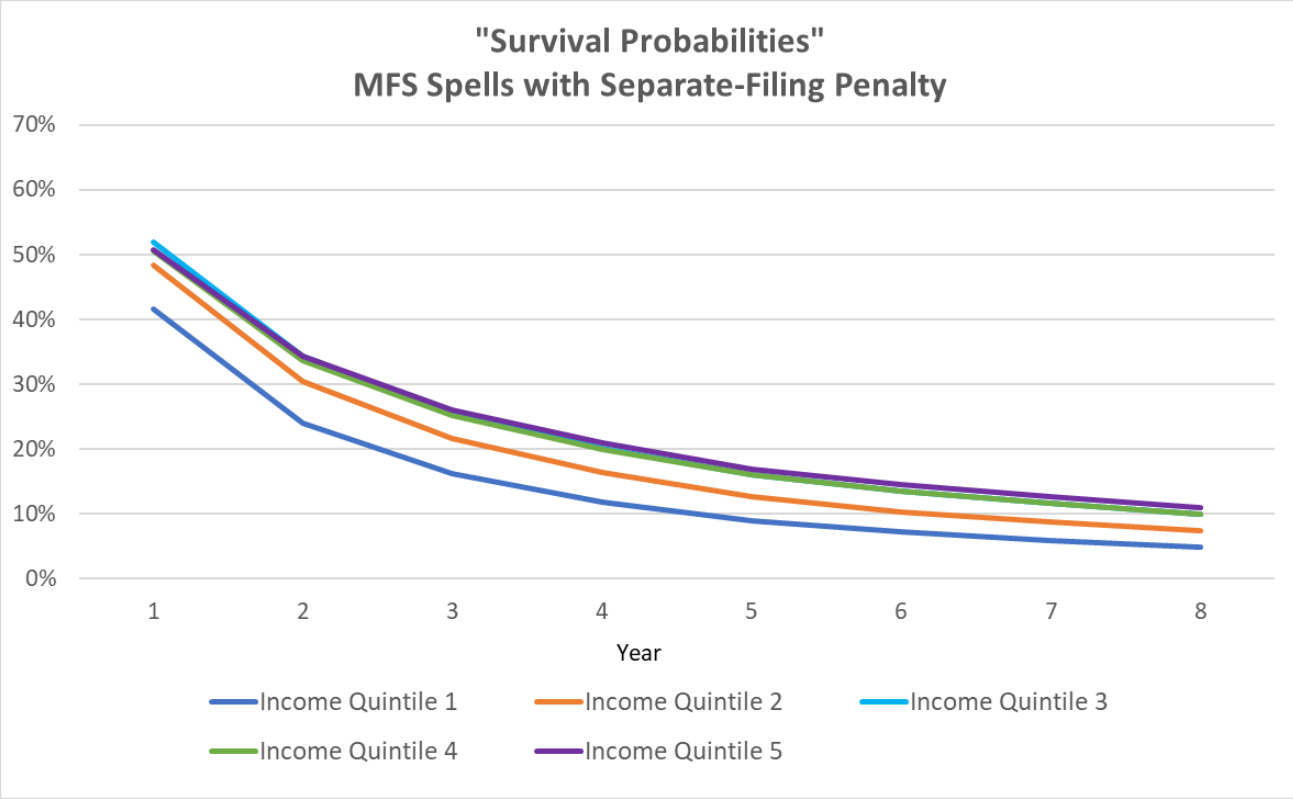
Variable	Mean			
	ALL	Separate Filing Penalty	Separate Filing Neutral	Separate Filing Bonus
Tax penalty ($)	-1,172	-2,260	0	1,130
Fraction of all MFS returns	100.0%	63.0%	23.7%	13.0%
Penalty as % of joint liability	-7.02%	-12.26%	0	4.56%
Adjusted gross income ($)	59,889	59,590	50,774	77,629
Age	47.4	47.8	46.0	48.3
Itemizer (0/1), self or spouse	0.3431	0.2960	0.1712	0.8746
EITC on joint return (0/1)	0.0922	0.1459	0.0007	0.0009
Child tax credit (0/1)	0.1733	0.1787	0.1363	0.2138
Number of dependents	0.3348	0.3520	0.2457	0.4129
Any dependents (0/1)	0.2184	0.2245	0.1734	0.2697
Number of observations	22,730,168	14,324,290	5,393,126	3,012,752

Effects of the Penalty on MFS Claim Dynamics

Survival probability (t) = the probability of continuing filing as MFS after year t

- The higher the income, the higher the survival probability
- The effect of the separate filing penalty is strong
  - -- For the first 3 years of a spell, penalty decreases the survival rate by 12 to 18 ppt each year
  - --The effect is attenuated with spell duration but remains substantial





Complexity and Equity

- Marital status
  -- Taxpayers going through a separation or divorce need to determine if their separation agreement or living situations meet the standard of being considered as unmarried for filing status purposes
- The “abandoned spouse” exception does not apply to separating individuals who
  -- do not have dependent children,
  -- do not live apart from their spouses for a required period, or
  -- do no furnish more than half of the cost of maintaining the household
- Rules may disadvantage low-income taxpayers
  -- Lack tax advice
  -- Lack resources to obtain the required court action for legal separation
  -- Hard to meet the household maintenance test if receiving outside support

CDCTC, PTC and EITC Rules for MFS Filers

- CDCTC (claimed by <1% MFS filers)
  Meet the "abandoned spouse" rules except that the household they maintain is the home they reside in with a qualifying person for the CDCTC purposes (e.g., a disabled sibling) who is not a dependent child.

- PTC (claimed by <2% MFS filers)
  For victims of domestic abuse and spousal abandonment. The taxpayer must live apart from the spouse at the time of filing the tax return. A taxpayer is a victim of spousal abandonment if he or she cannot locate the spouse after a "reasonably diligent" effort is made.

- EITC (claimed by about 2% of MFS filers for TY 2021)
  Live with a qualifying child for more than half of the year and either (1) separated under a legally binding written separation agreement (not necessarily a decree of divorce) and live apart from the spouse at the end of the tax year or (2) the spouse is not a member of the household during the last six months of the year.

Tax Administration Challenges

- EITC, PTC and CDCTC for MFS filers under specified situations
  -- Difficult for taxpayers to be aware of, or to determine, eligibility
  -- Difficult to target outreach efforts by IRS
  -- Compliance challenge

- Filing status
  -- Complex rules, unverifiable standards, coupled with tax incentives to file as unmarried
  -- 2.68% of returns should've claimed the MFS status compared to 1.74% claiming it (NRP, 2006-2014)

Compliance

Variable	Reported Other Status; Corrected to MFS		Reported MFS; Corrected to Other Status	
	Mean	Std. Dev.	Mean	Std. Dev.
Adjustment for tax after credits ($)	4,196	4,791	2,204	8,046
Positive adjustment (0/1)	**0.9619**	0.1915	0.5992	0.4924
Negative adjustment (0/1)	0.0139	0.1171	**0.3372**	0.4750
Adjustment for EITC and additional CTC ($)	-2318	2,497	-106	1,077
Negative adjustment (0/1)	**0.6842**	0.4651	0.0651	0.248
Positive adjustment (0/1)	0.0118	0.1081	0.0463	0.211

Data source: The NRP 1040 Study, 2006-2014.
Note: All dollar amounts are in 2021 level.

Summary

- Despite constituting a small share of tax filers, MFS filers consist of a diverse group of individuals by income and by how long they use this filing status.
- About 13 percent of MFS filers enjoy a tax bonus by filing separately; 63 percent have a penalty.
  - -- Bonus status is positively associated with income, dependents, and the claim of itemized deductions.
  - -- Penalty status is positively associated with EITC receipt when filing jointly.
  - -- The presence of a penalty substantially decreases the likelihood that an individual continues using this filing status.
- Complexity and equity concerns.
- A large percentage of filing status errors are associated with a small group of taxpayers.

Willing but Unable to Pay? The Role of Gender in TaxCompliance

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Motivation

- Women are more likely to comply with taxes.
  - Evidence from field interventions.
    (Wenzel, 2006; Kleven et al., 2011; Alstadsaeter and Jacob, 2013; Cabral, Myles, and Kotsogiannis, 2015; Advani, Elming, and Shaw, 2017)
  - Evidence from laboratory experiments.
    (Fortin, Lacroix, and Villeval, 2007; Bazart and Pickhardt, 2011; Eisenhauer, Geide-Stevenson, and Ferro, 2011; Finocchiaro Castro and Rizzo, 2014; Kogler, Mittone, and Kirchler, 2016)

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- Hypothesis:
  - Risk aversion
    (Hibbert, Lawrence, and Prakash, 2013; Engstrom et al., 2015; Skatun, 2017; Charness et al., 2018)
  - Tax morale
    (Alm and Torgler, 2006; Torgler, 2005; Torgler and Valev, 2010; Shafiq, 2015; Cyan, Koumpias, and Martinez-Vazquez, 2016)

Motivation

- When faced with an intervention, who would react more?

Women

⇓

More sensitive

Men

⇓

Room for improvement

Motivation

- When faced with an intervention, who would react more?

Women	**Men**
⇓	⇓
More sensitive	Room for improvement

- Are there any other considerations?
- Ideal intervention:
  - Treatment for men and women.

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More sensitive	Room for improvement

- Are there any other considerations?
- Ideal intervention:
  - Treatment for men and women.
  - Test for the effect of promoting tax morale and signal deterrence on compliance.
  - Simple tax that has very clear measure of compliance.

Outline

- Intervention: RCT property tax
- Results
- Complementary data
- Our interpretation

Intervention: RCT

Background

Castro and Scartascini (2015): Large field experiment designed to test which factors increase compliance with property tax. A message was included on the property tax bill (23,000 taxpayers)

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Property tax is very simple:

- Tax is billed by the city.
- The tax is computed according to the front side of the property and the services the city provides, such as public lighting, trash collection, and street cleaning.

Compliance is very simple: either to **pay or not**.

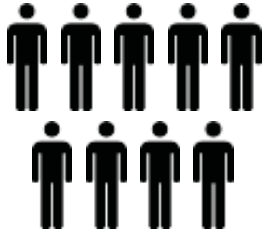
Background / treatments

Compliance messages were designed to trigger one the following:

T1 Deterrence → ***RiskAversion***

T2 Reciprocity → ***TaxMorale***

T3 Peer-effects → ***TaxMorale***



Gender

- The original experiment did not consider gender; recovered for this work
- The message was included in the tax bill.

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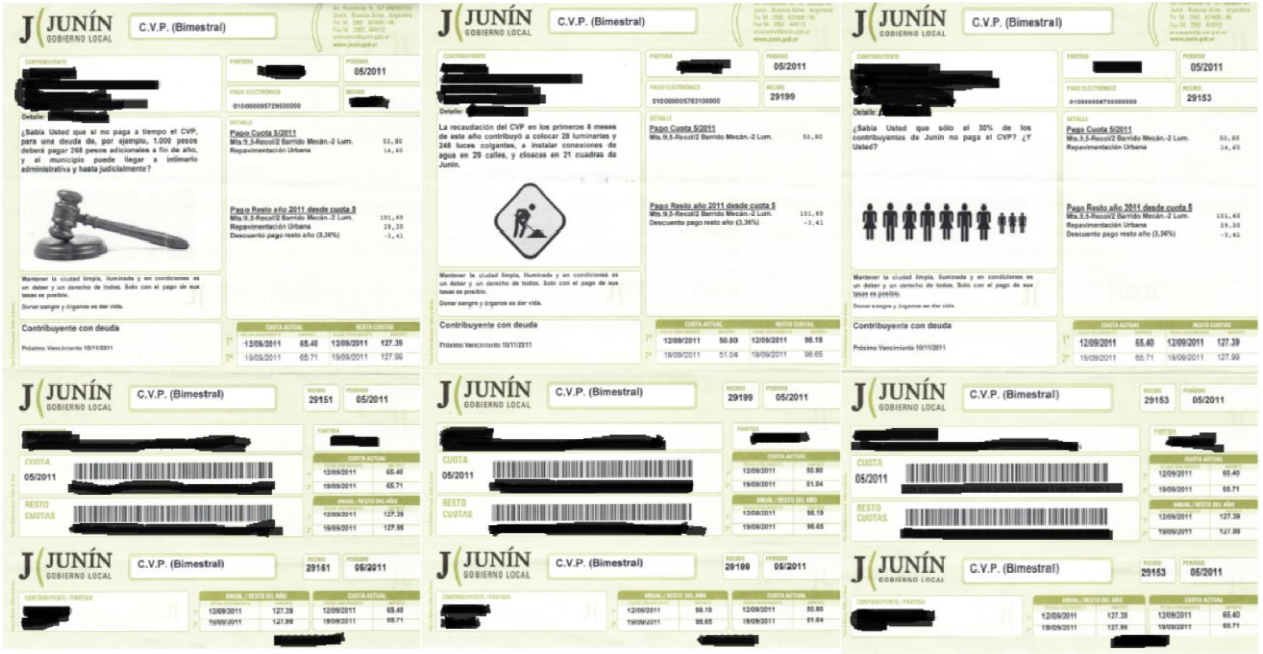
- The message was included in the tax bill.
- Gender of the person who the tax bill is addressed to:
  - Owns the property or,
  - Rents the property and the lease in their name
- List of officially-approved names of Provincia de Buenos Aires ⇒ 92% sample (21,500)

Randomization is still good: the groups were balanced by gender.



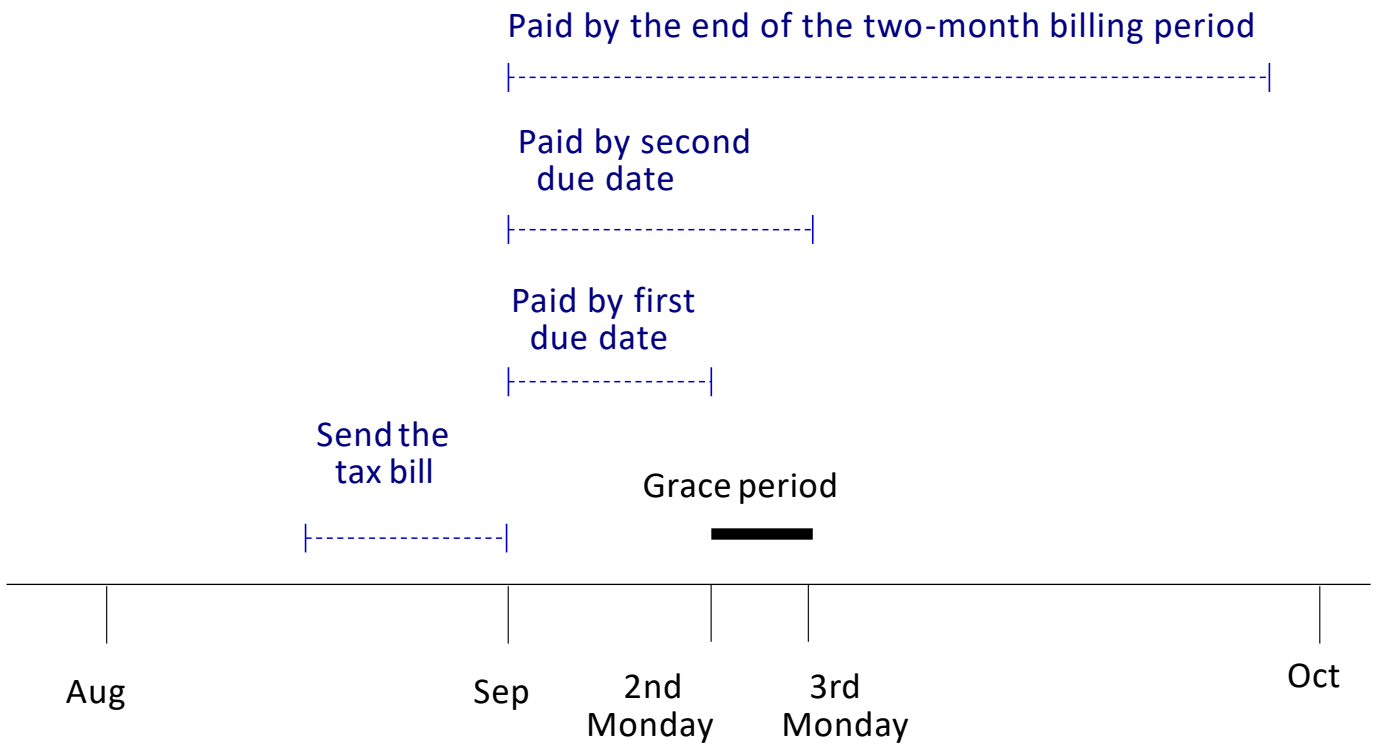
Tax Characteristics and Outcomes

Tax:

- Tax is billed by the city based on the property characteristics Fine: A
- compound monthly interest rate of 2%.

Outcomes:

- Binary outcomes for payment:



Results

Results

T1 Deterrence

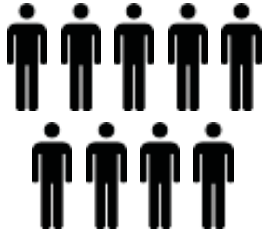
Increase in compliance

T2 Reciprocity

No average effect depending on the outcome

T3 Peer-effects

No average effect



Mechanisms - Deterrence Message

Mechanism:

Did you know that if you do not pay the CVP on time for a debt of AR$ 1,000 you will have to disburse AR$ 268 in fines at the end of the year and the Municipality can take administrative and legal action?

Mechanisms - Deterrence Message

Mechanism: **Fine**

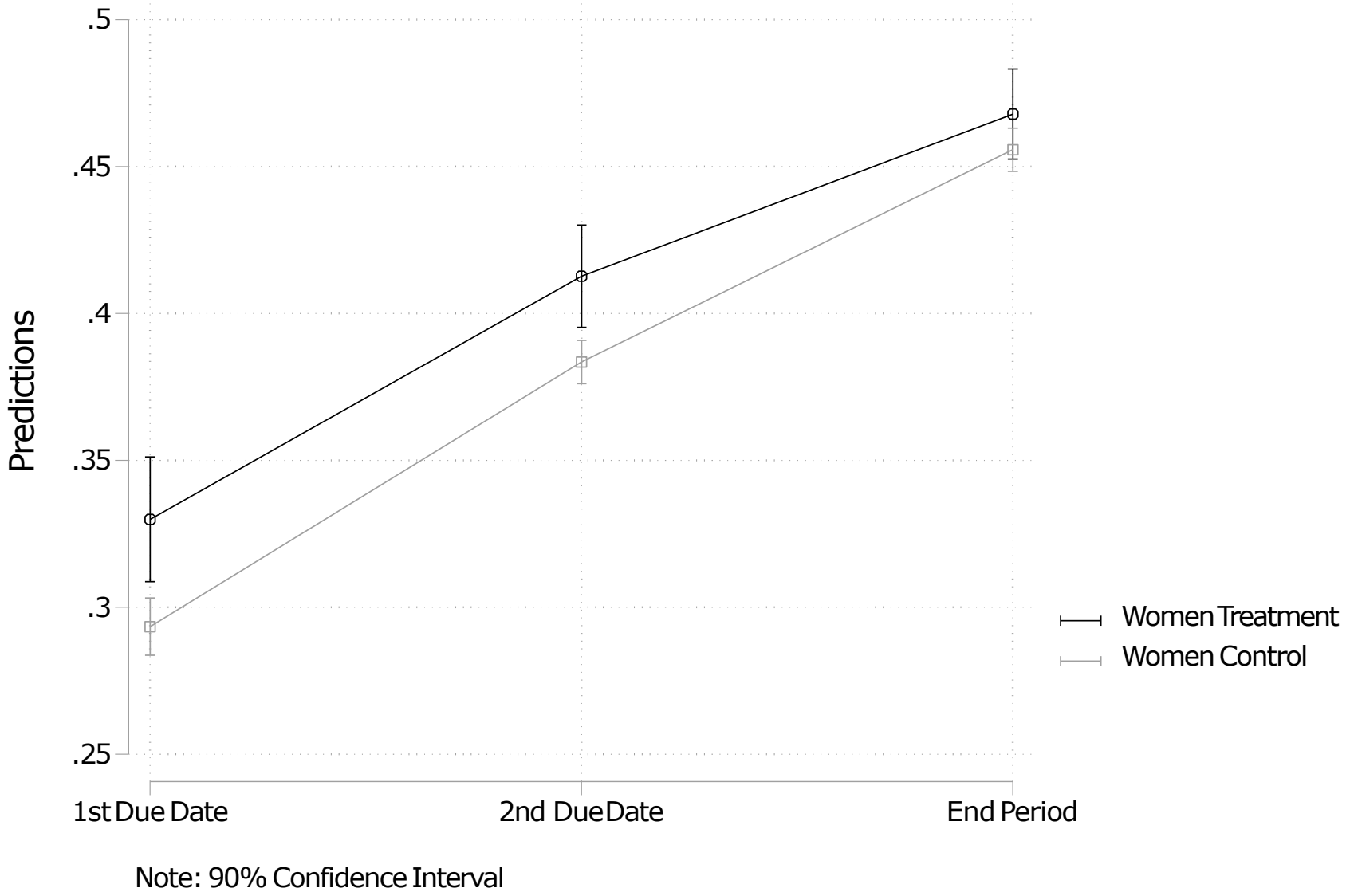
Did you know that if you do not pay the CVP on time for a debt of AR$ 1,000 you will have to disburse AR$ 268 in fines at the end of the year and the Municipality can take administrative and legal action?

Mechanisms - Deterrence Message

Mechanism: **Probability of Enforcement**

Did you know that if you do not pay the CVP on time for a debt of AR$ 1,000 you will have to disburse AR$ 268 in fines at the end of the year and **the Municipality can take administrative and legal action?**

Probability of Paying

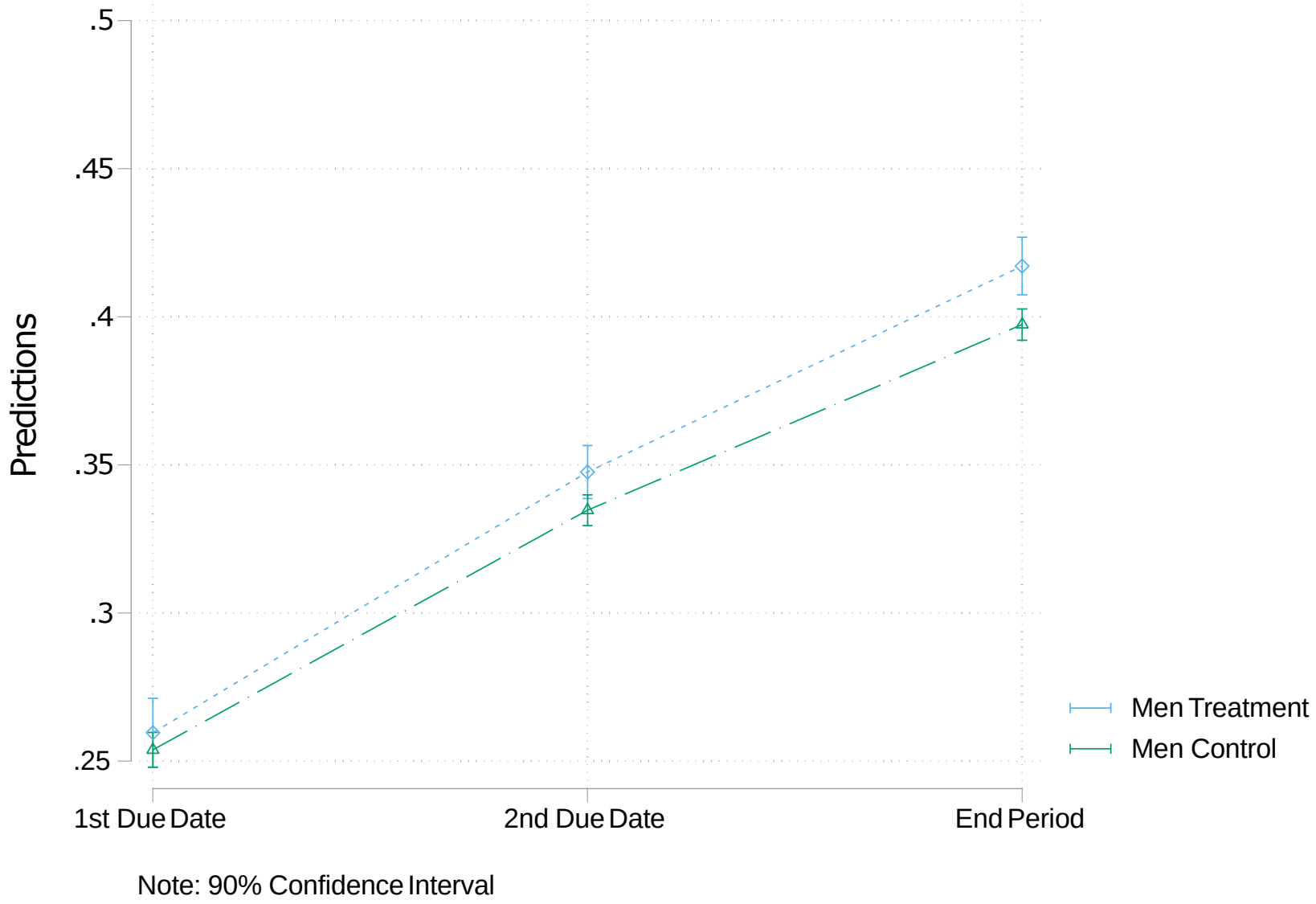


Note: 90% Confidence Interval

Women:

- 1st due date: Increase of 4 percentage points
- 2nd due date: Increase of 3 percentage points

Probability of Paying

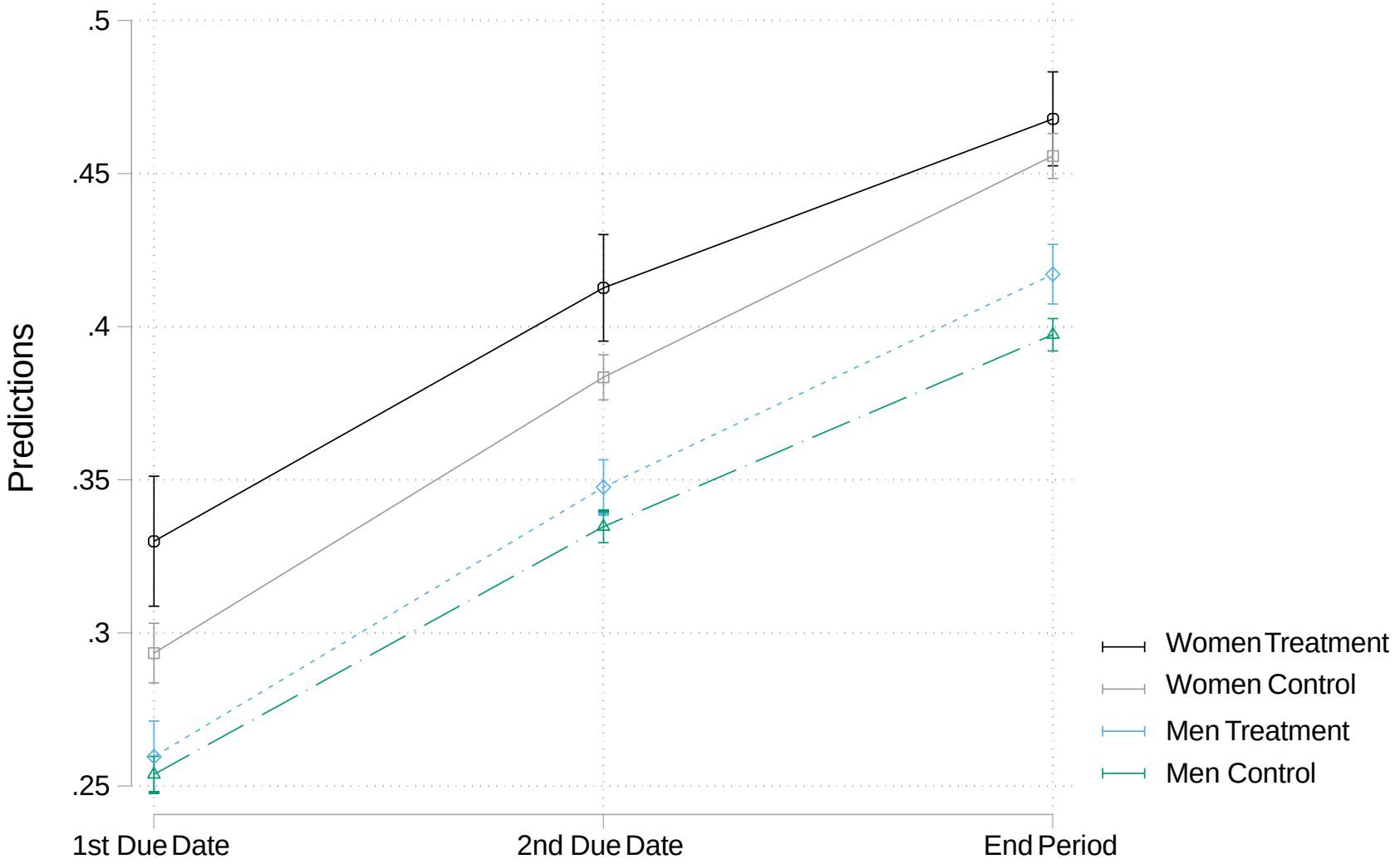


Note: 90% Confidence Interval

Men:

- Pay overall: Increase of 2 percentage points.

Probability of Paying



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Heterogeneous Effect - Where?

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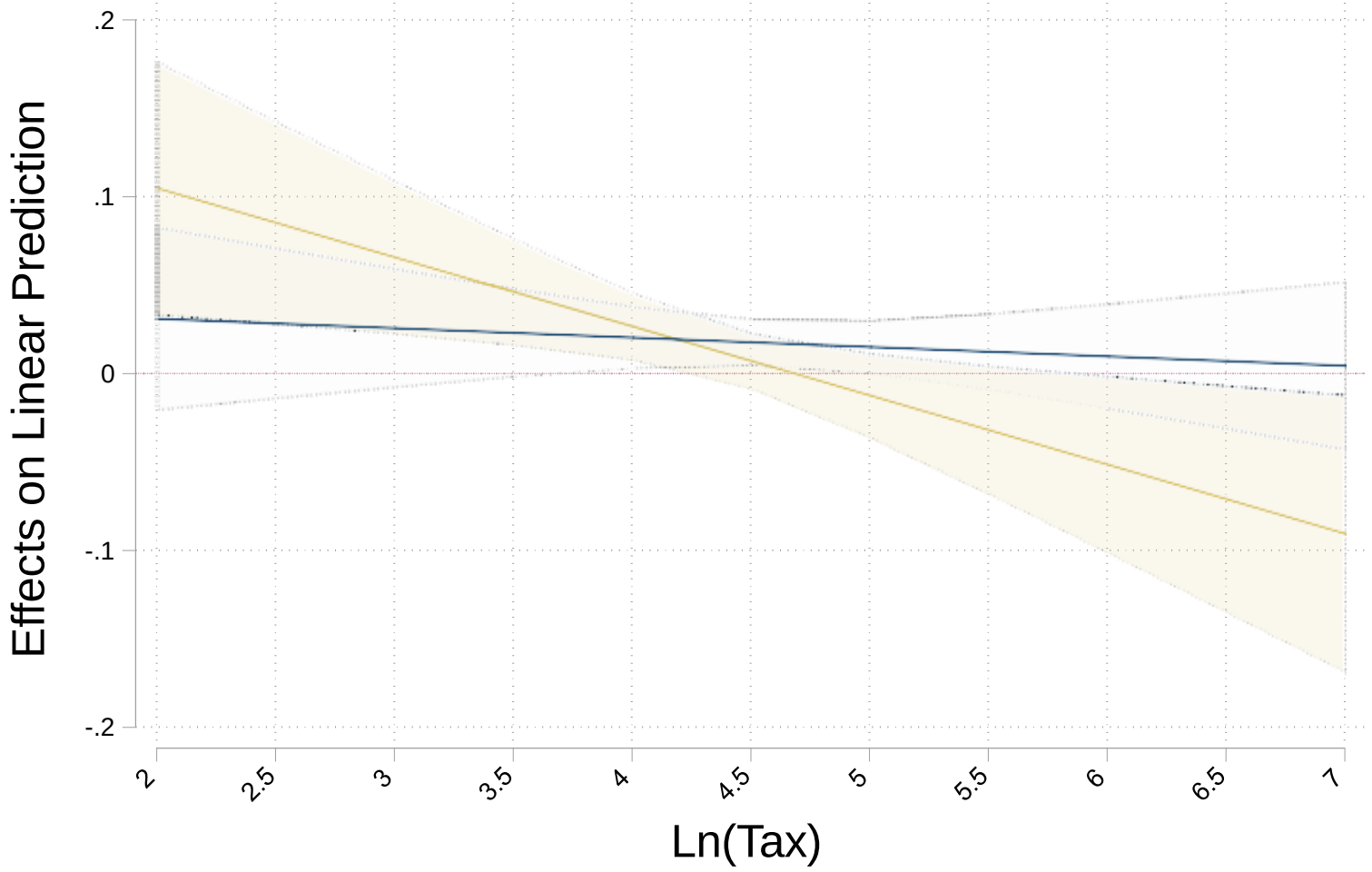
Probability of paying by the end of the period

Women (yellow) Men (blue)



Model pay or not

- Not paying is equivalent to playing a lottery with probability of been caught.

Model pay or not

- Not paying is equivalent to playing a lottery with probability of been caught.

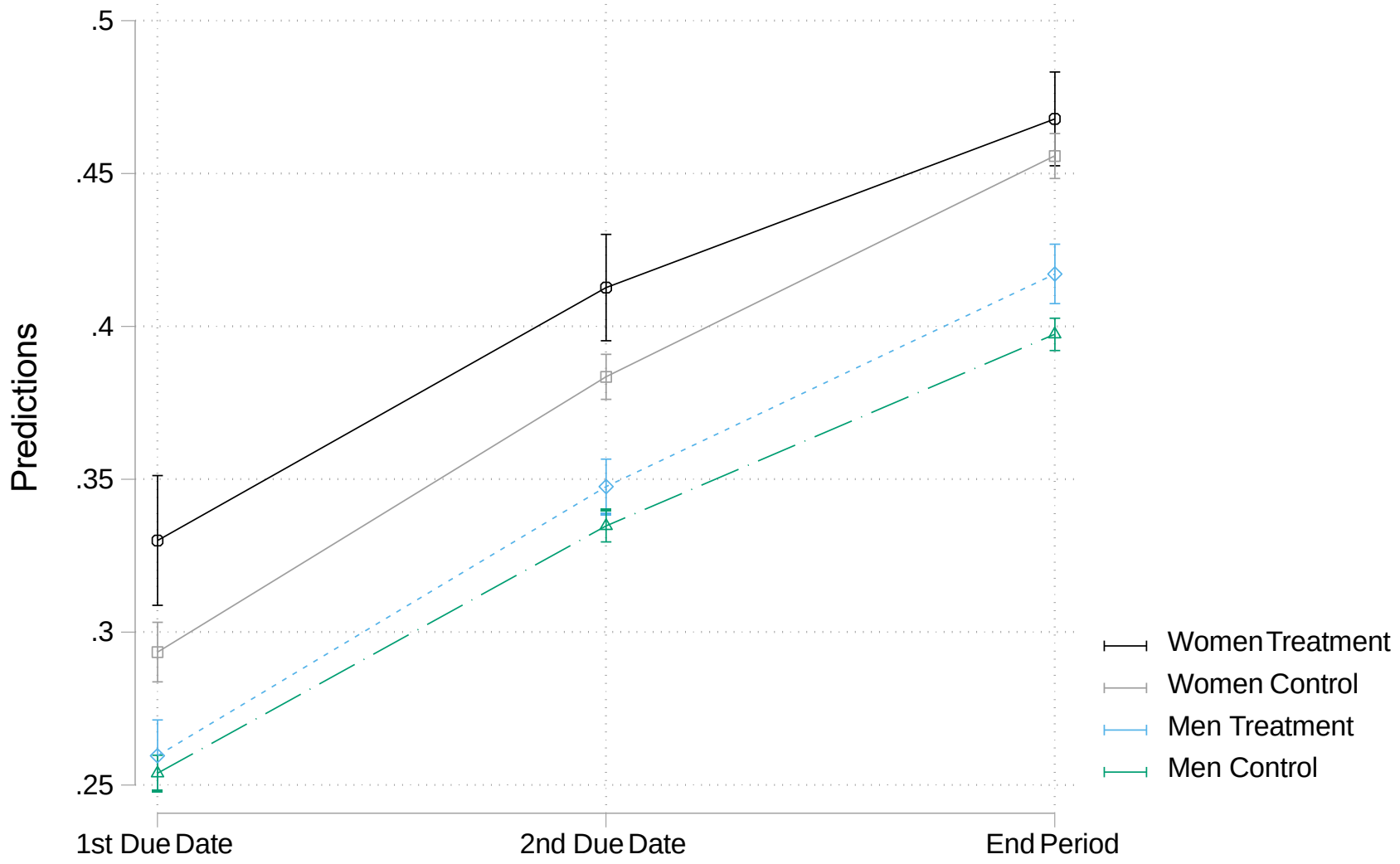
- BUT the tax does not depend on income, so the budget constraint matters.

$$max \quad \{U(Y - T + S), (1 - p)U(Y) + pU(Y - \theta T)\}$$

$$s.t. \quad U^* > U(\bar{C})$$

- Once a budget constraint is introduced, there is the possibility of corner solutions

Probability of Paying



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Complementary Survey Data

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- Survey made by the city government of Junin and the IADB to taxpayers of the property tax in 2015 (years after the experiment).
  Difference in perceptions about the tax.

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We do not have a survey with the same individuals of the RCT, but we can look at the population of Junin.

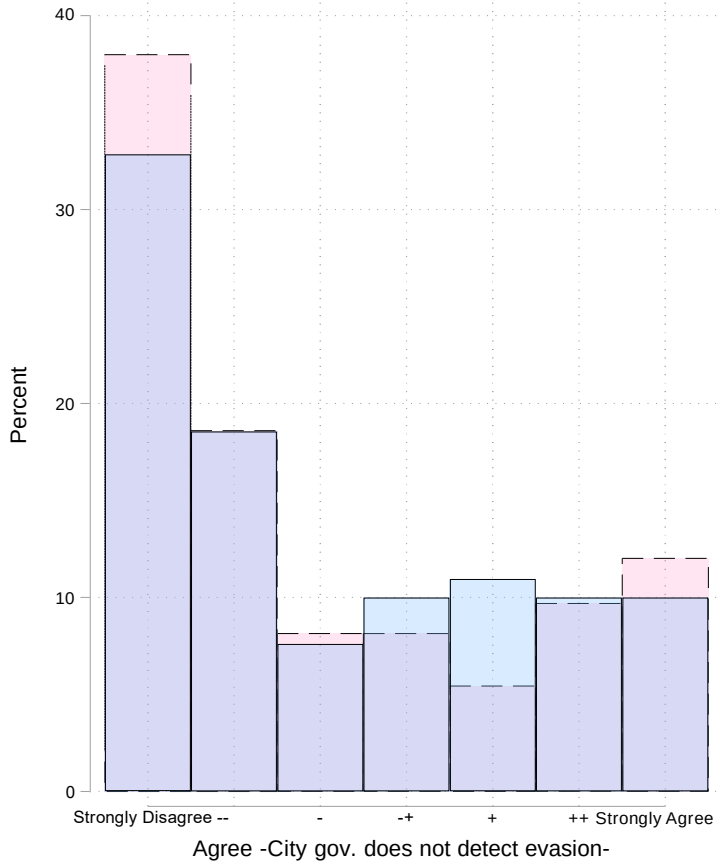
- Survey made by the city government of Junin and the IADB to taxpayers of the property tax in 2015 (years after the experiment).
  Difference in perceptions about the tax.

- Urban household survey - 2011 (same year of the experiment).
  Income differences between female and male headed households.

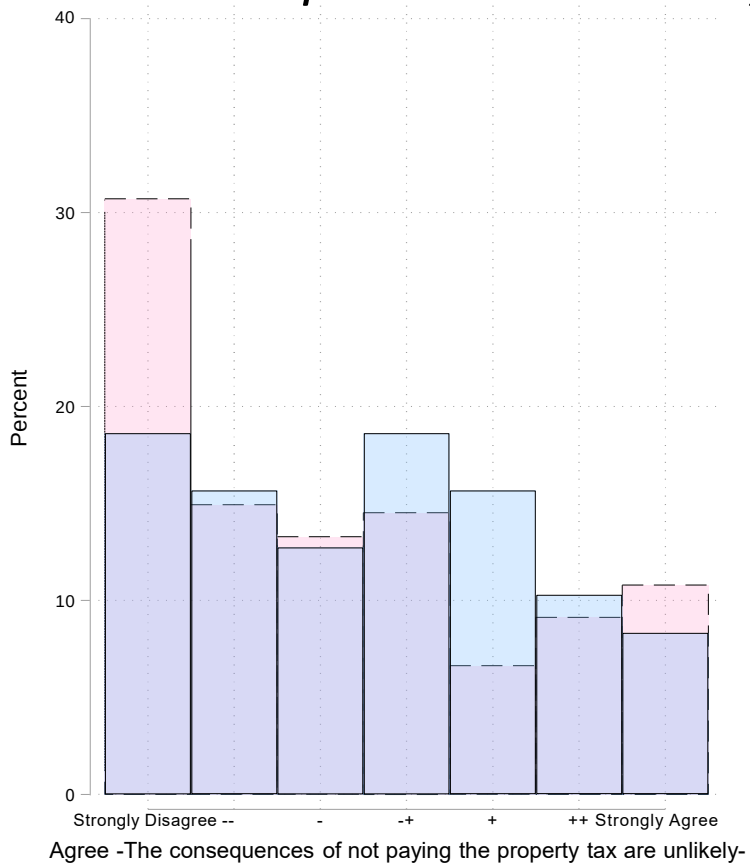
Perceptions about enforcement

Women tend to think that the city government detects evasion and takes action.

Gov. does not detect evasion



Consequences are unlikely

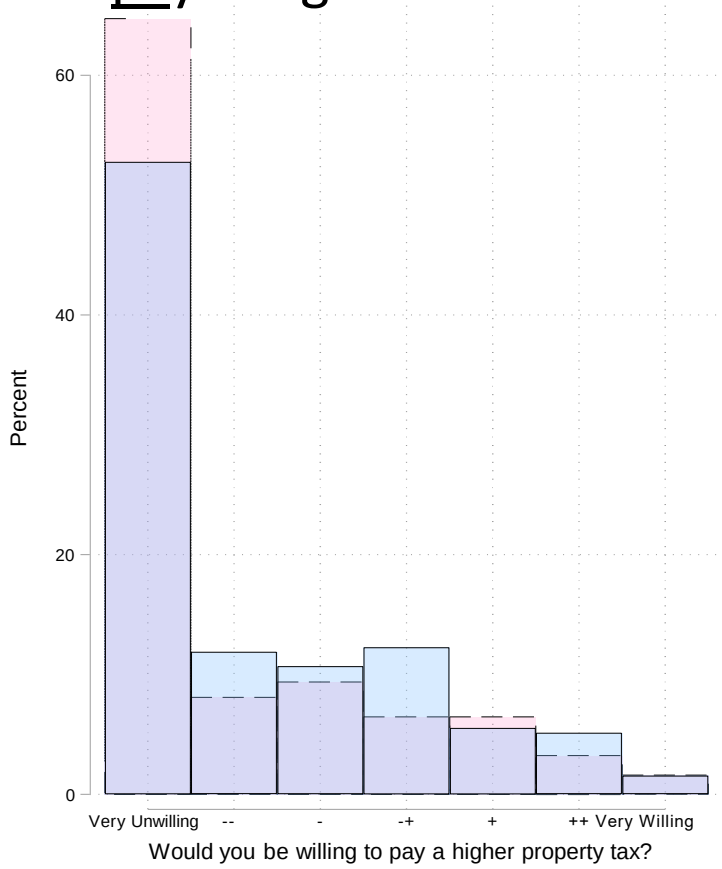


Women Men

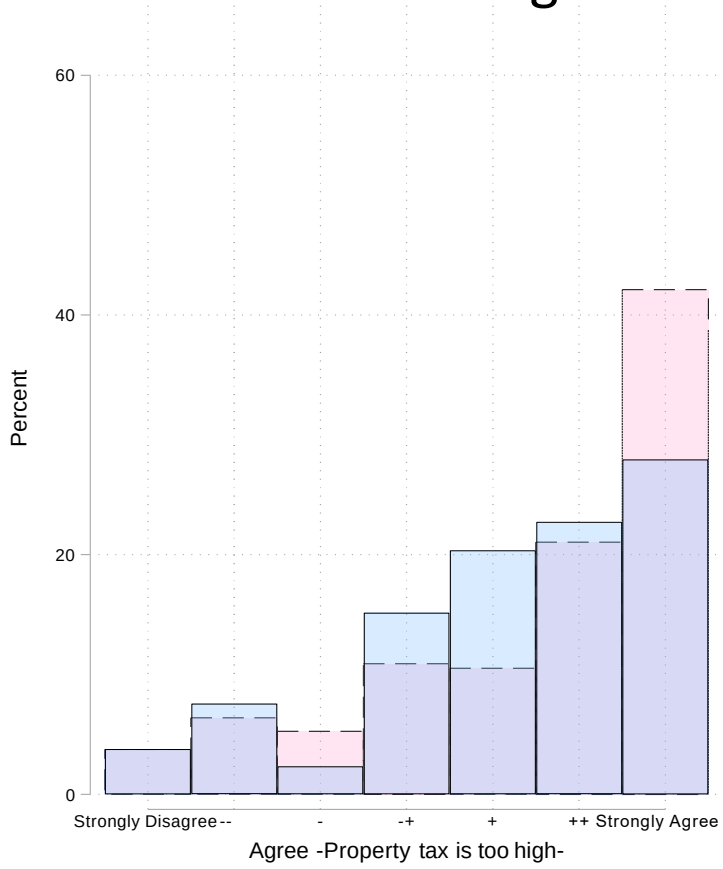
Perceptions about tax burden

Women tend to think that the property tax is too high and are not willing to pay more.

Willingness to pay a higher tax



The tax is too high

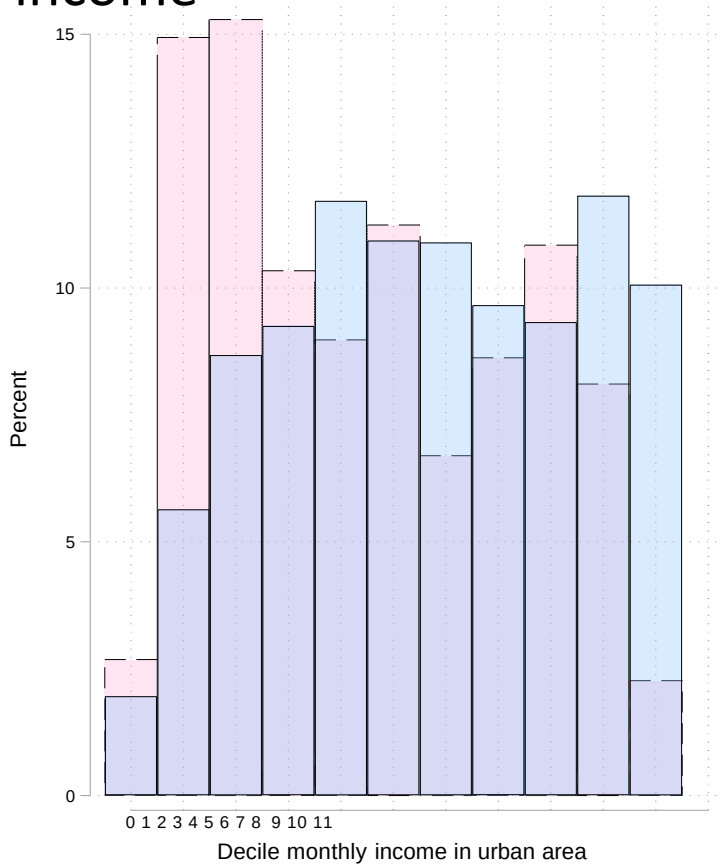


Women Men

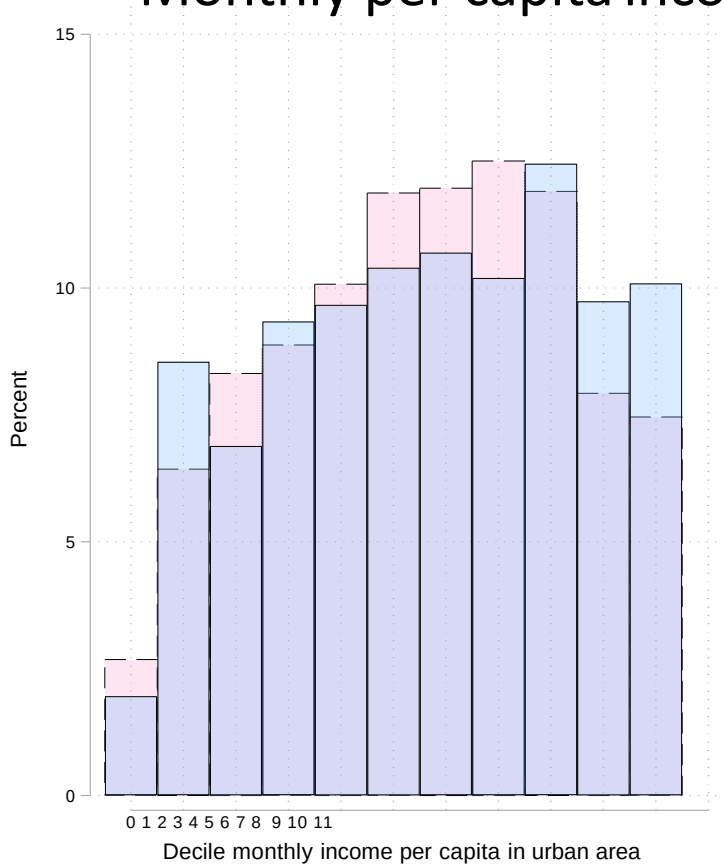
Household income

Women headed households have lower income.

Monthly income



Monthly per capita income



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Our interpretation of the results

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- Women have a stronger reaction to the interventions, but they are budget constrained. Therefore, there is no overall increase of compliance for women.
- The evidence for men is consistent with the existing evidence for the overall population.

Final remarks

- Our study underscores that in contexts where tax enforcement is relatively lax and evasion is substantial, tax policy and enforcement could exacerbate income inequality between men and women.
- Women not only earn lower salaries than men but are also more likely to pay their taxes. This phenomenon may worsen pre-existing income disparities in developing countries, particularly where a small portion of taxation is proportional to income.
- Consequently, tax policy and enforcement campaigns must account for these differential impacts. For a given tax policy, stronger enforcement should aim to alleviate, not augment, inequality.

Thank you!

Who Sells Cryptocurrency?

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Disclaimer

All data work for this project involving administrative tax data was done on IRS computers, by IRS employees. The views expressed here are those of the authors alone, and do not reflect the views of the Internal Revenue Service.

What

Why

How

IRS

Market failures

Unique enforcement

CRYPTOCURRENCIES

Black Wealth on the Rise With Progressive Cryptocurrency Investors

PUBLISHER
CultureBanx

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NOV 17, 2021 10:20AM EST

CNN US Crime + Justice Energy + Environment Extreme Weather Space + Science

Cryptocurrency has been touted as the key to building Black wealth. But critics are skeptical

By Nicquel Terry Ellis, CNN
Updated 8:45 AM EDT, Sat August 20, 2022

The Atlantic

IDEAS

The Black Investors Who Were Burned by Bitcoin

Neglected by the traditional financial system, they got into cryptocurrency with gusto—but late.

By Annie Lowrey

Identifying cryptocurrency transactions

How

- IRS forms 1099-B (Third-party reported) and Schedule D, Form 8949 (Self-Reporting)
- Textual analysis of descriptions
- Bitcoin and Ethereum

Concerns

- Tax Avoiders/Non-reporters
- Buy and Hold

So, who are they?

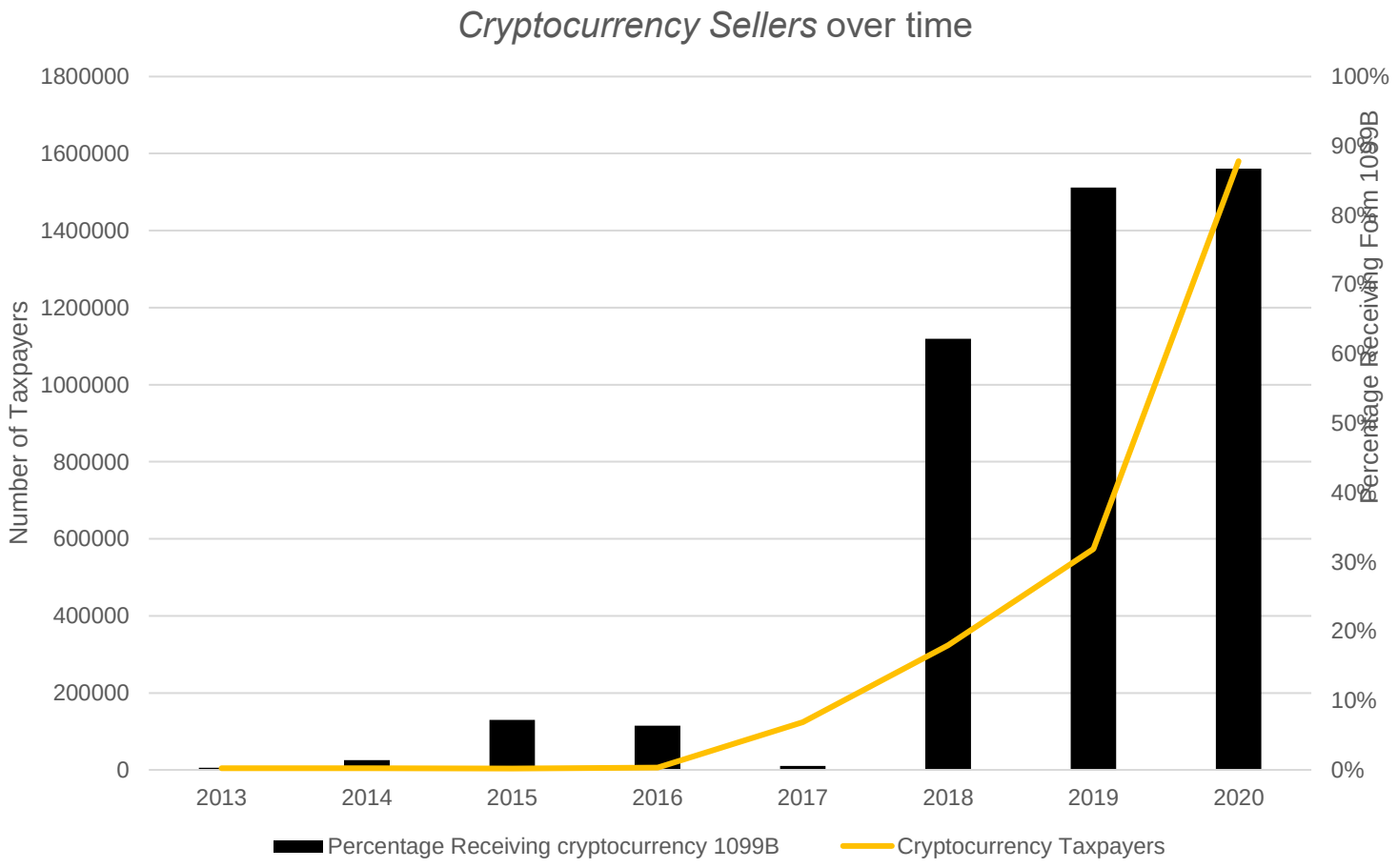
(Results)

What do we know already?

	Country	Years	Crypto Users	Total Sample	Direct Holding	Indirect Holdings
Our Paper	US	2013-2020	2,162,289	202,523,891	Y	Y
Hasso et al. (2019)	UK	2014-2017	~148,288	465,926	?	?
Hackethal et al. (2021)	Germany	2003-2017	872	100,053		Y

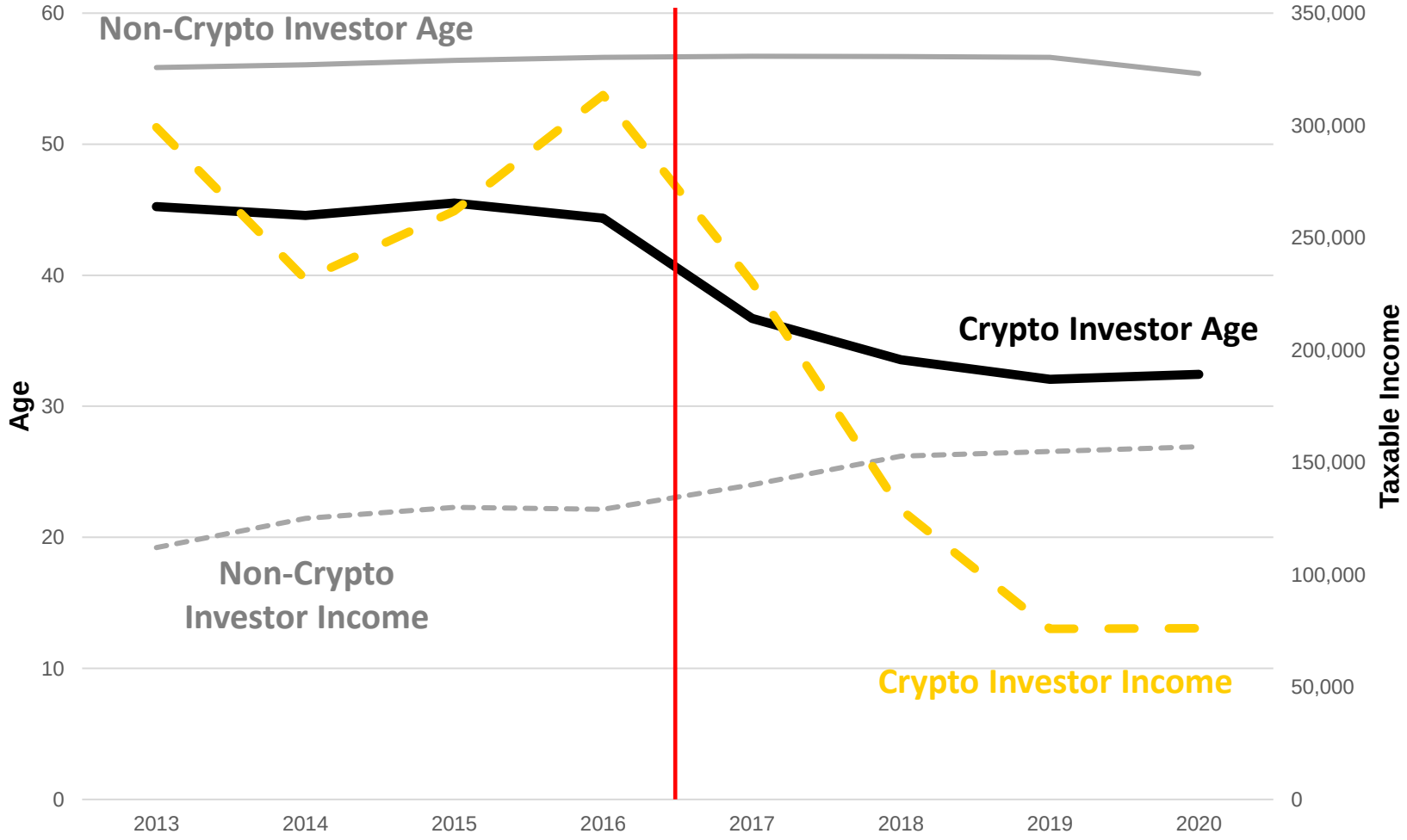
Cryptocurrency Sellers

- 2.16 Million Unique crypto tax returns
- Cryptocurrency gains
  - Average: $12,484
  - Median*: $27



*Median is the average around the median per IRS disclosure guidelines

Cryptocurrency Sellers v. Non-Crypto Investors



Are their racial disparities?

- Problem:
  - IRS does not have taxpayer level racial data

- Solution:
  - US Census, zip code level data
  - Aggregate IRS data by zip code of the tax return

*Additional note, we standardize all variables to (0,1) to aid comparison between groups

Racial Characteristics: Sellers

Dependent Variable:
Percent Cryptocurrency Seller

Independent Variables	(1) 2017	(2) 2018	(3) 2019	(4) 2020
Percent Hispanic	0.0053** (2.14)	0.0519*** (17.79)	0.0562*** (16.93)	0.1344*** (18.45)
Percent African American	-0.0050*** (-4.55)	-0.0055*** (-2.81)	0.0002 (.05)	0.0722*** (13.06)
Percent Asian	0.0596*** (15.95)	0.1443*** (21.13)	0.1488*** (24.35)	0.2991*** (27.27)
Other/Multiple Races	0.0024* (1.96)	-0.0098*** (-3.49)	-0.025*** (-7.50)	-0.0613*** (-9.62)
Controls				
Income	YES	YES	YES	YES
Age	YES	YES	YES	YES
Education	YES	YES	YES	YES
Adjusted R-squared	0.3086	0.3190	0.2848	0.3823
Observations	30,347	30,314	30,255	29,973
Yearly Buy and Hold Bitcoin Return	1243%	-71%	88%	310%

Racial Characteristics: Gains

Dependent Variable:
LN(Per Capita Cryptocurrency Gain)

Independent Variables	(1) 2017	(2) 2018	(3) 2019	(4) 2020
Percent Hispanic	0.1345***	-0.0302***	-0.0149***	0.064***
	(21.92)	(-4.78)	(-2.96)	(12.06)
Percent African American	0.0837***	-0.0391***	-0.0223***	0.0287***
	(14.86)	(-6.25)	(-4.68)	(6.19)
Percent Asian	0.1383***	-0.0212**	-0.0241***	0.0597***
	(20.01)	(-2.06)	(-2.92)	(9.50)
Other/Multiple Races	0.0044	0.0126***	0.0051	0.0029
	(1.04)	(2.96)	(1.49)	(.73)
Controls				
Income	YES	YES	YES	YES
Age	YES	YES	YES	YES
Education	YES	YES	YES	YES
Adjusted R-squared	0.2893	0.0121	0.0021	0.1132
Observations	30,355	30,323	30,262	39,982
Yearly Buy and Hold Bitcoin Return	1243%	-71%	88%	310%

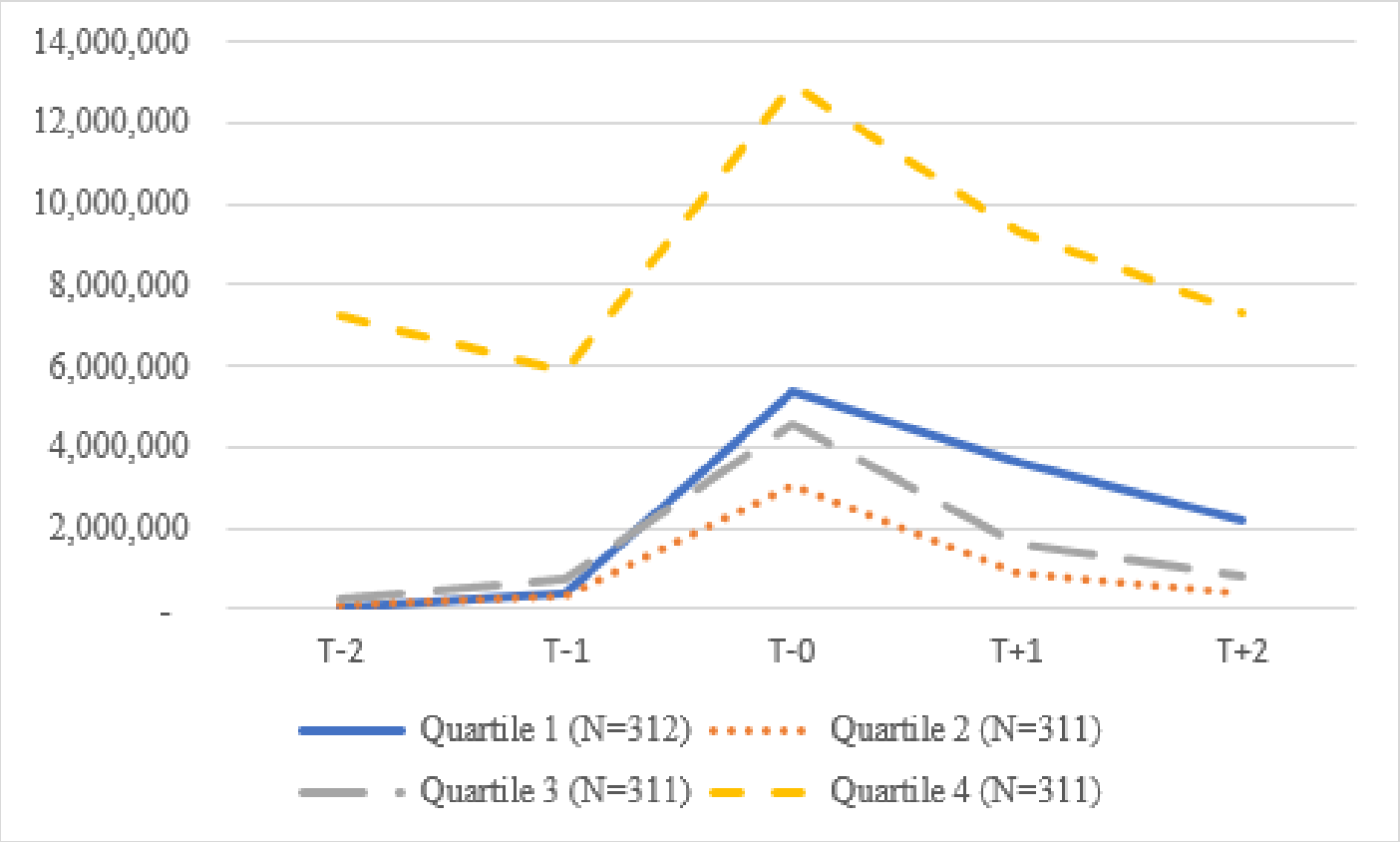
Other Observations

- Increased Geographic dispersion over time
- Increasing adoption by a wide range of professions
- Cryptocurrency may have long-term wealth implications

Takeaways

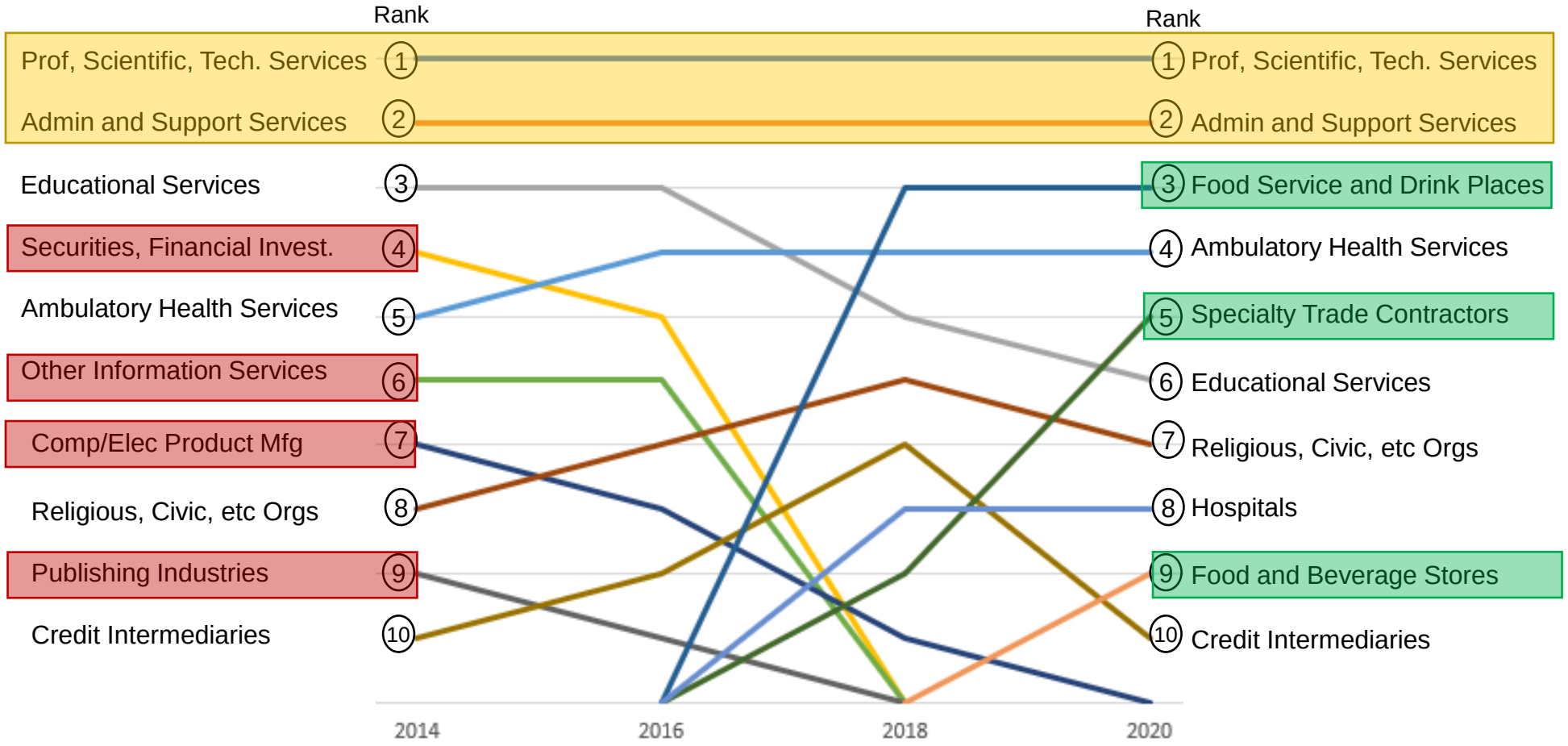
- Cryptocurrency user base is not stable over time
- Demographics continue to rapidly change
- Geography, Profession, and Racial composition continue to change

What if you had a $1 Million Gain?



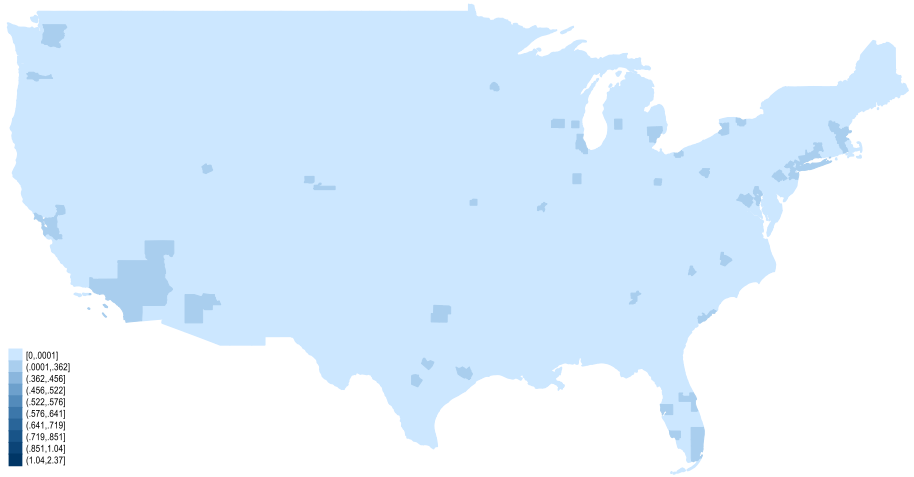
Occupation over Time

(Rank of Raw Count)

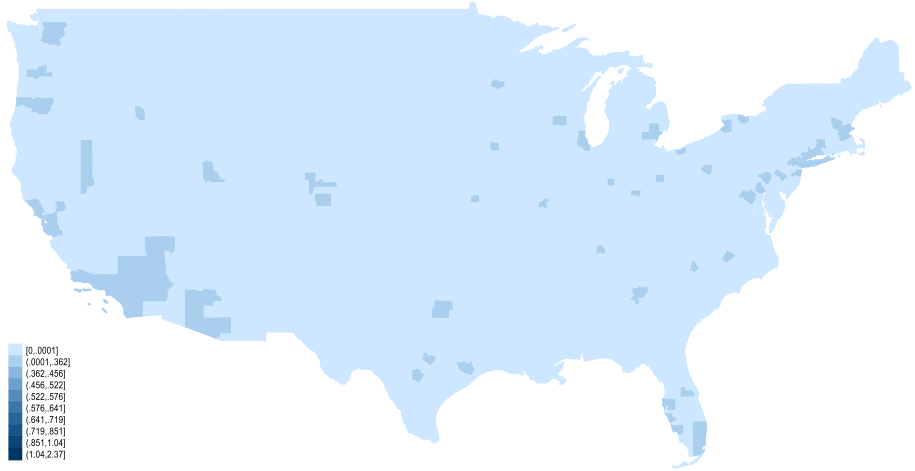


Geographic Spread

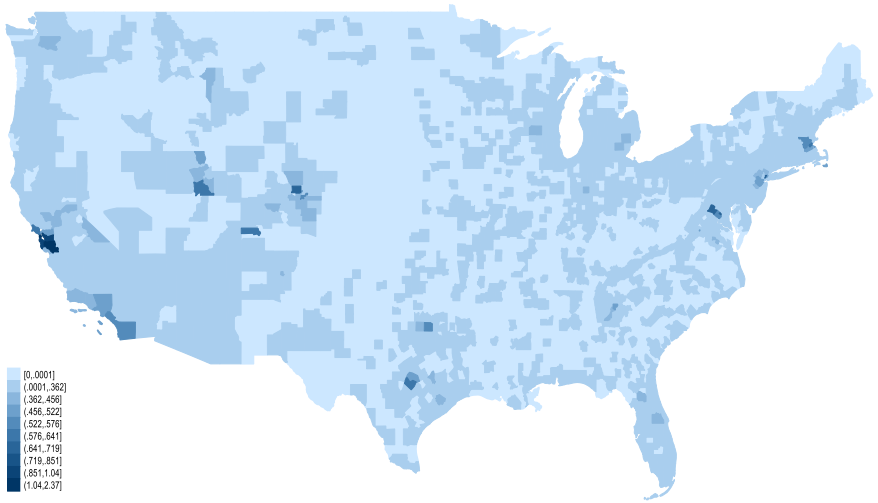
2014



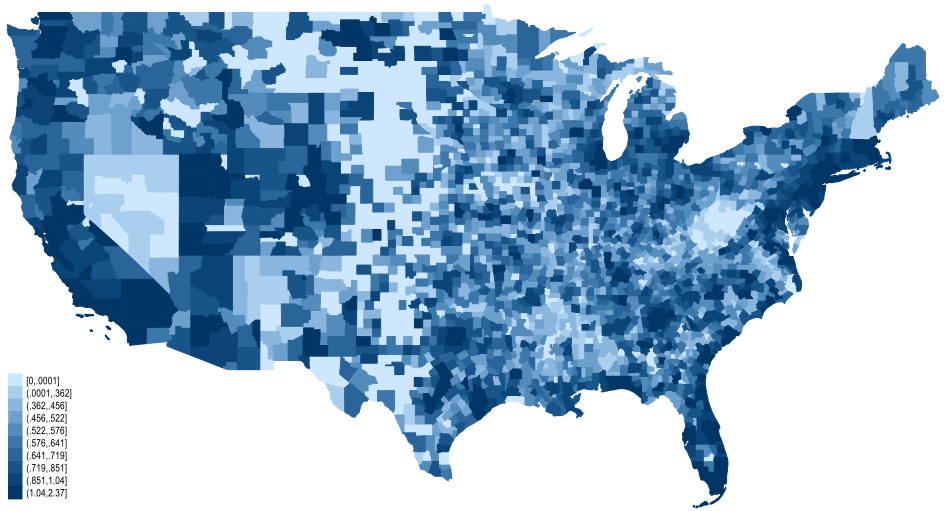
2016

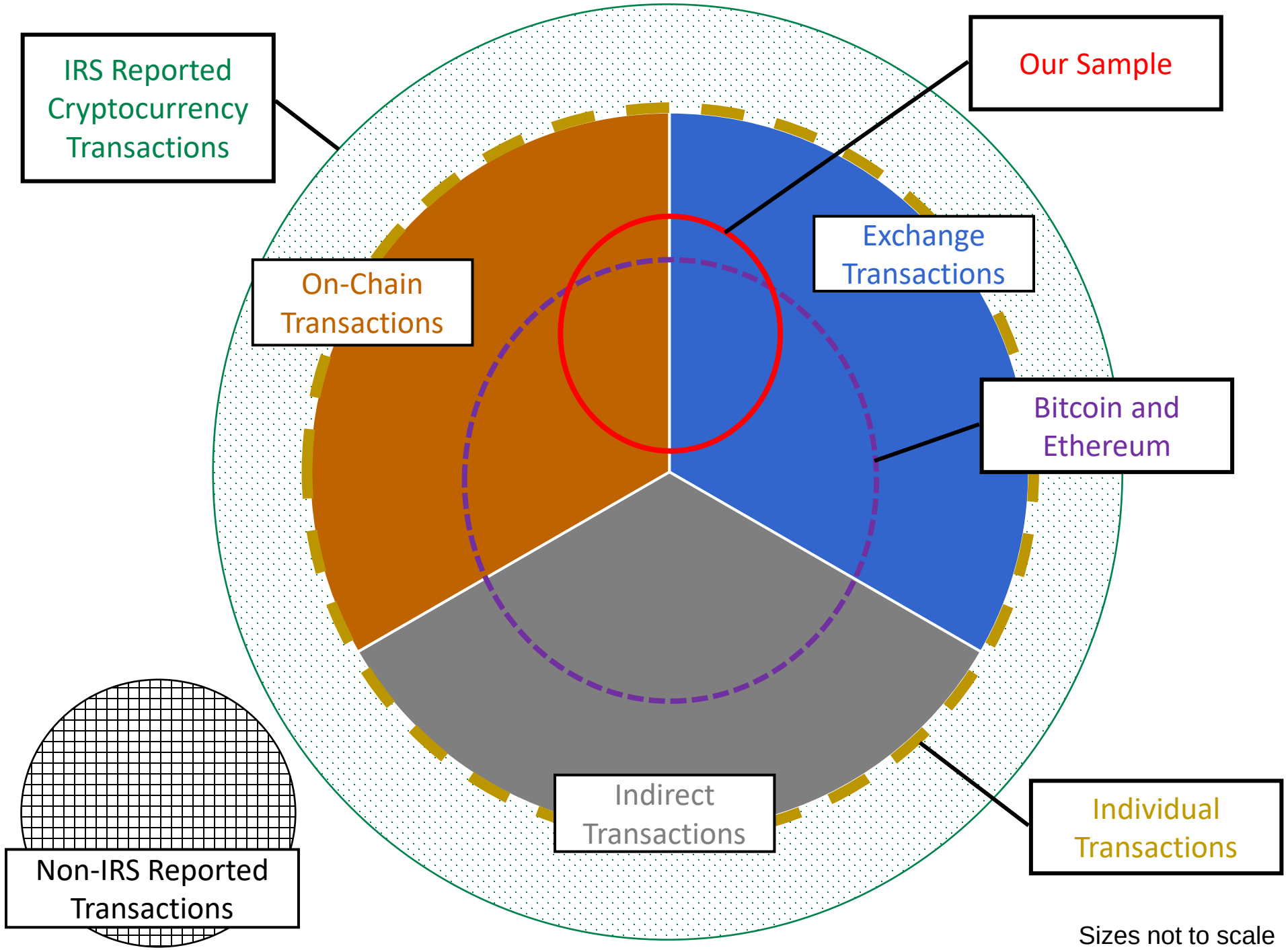


2018



2020




IRS Reported Cryptocurrency Transactions
Our Sample
On-Chain Transactions
Exchange Transactions
Bitcoin and Ethereum
Indirect Transactions
Individual Transactions
Non-IRS Reported Transactions
Sizes not to scale

Determinants Model

- Full sample of over 1 billion
- Random sampling
  - 10 million draws using a simple random sample from population
  - Repeat the process 10 times
- Descriptive statistics for samples are very similar to whole population
- Variables based on prior survey evidence

Cryptocurrency Seller Determinants

Variable	Avg. Coef (Avg. Std. Err)	†
AGE (UNDER 24)	0.00458	10
	(0.000062)	
AGE (25-44)	0.00466	10
	(0.000054)	
AGE (45-64)	0.00113	10
	(0.000036)	
LN WAGES	0.00006	10
	(0.000004)	
LN DIVIDENDS	0.00035	10
	(0.000007)	
MARRIED	0.00247	10
	(0.000035)	
SINGLE MALE	0.00353	10
	(0.000041)	
HOMEOWNER	0.00029	10
	(0.000036)	
DEPENDENTS	-0.00031	10
	(0.000017)	
STUDENT	0.00380	10
	(0.000126)	
Intercept	-0.00031	10
	(0.000017)	
Observations	10,000,000	
Year Fixed Effects	YES	
Baseline Full Sample Probability of Crypto Seller	0.00243	
Average Adj R-Squared	0.002	

† indicates number of significant coefficients out of 10

Cryptocurrency Sellers Compared

	Non-Investors	Non-Cryptocurrency Investors	Cryptocurrency Sellers
AGE	41.47	56.26	32.78
SINGLE MALE	31.4%	18.2%	54.1%
STUDENTS	6.2%	3.1%	19.7%
TAXABLE INCOME	34,346	138,353	91,421

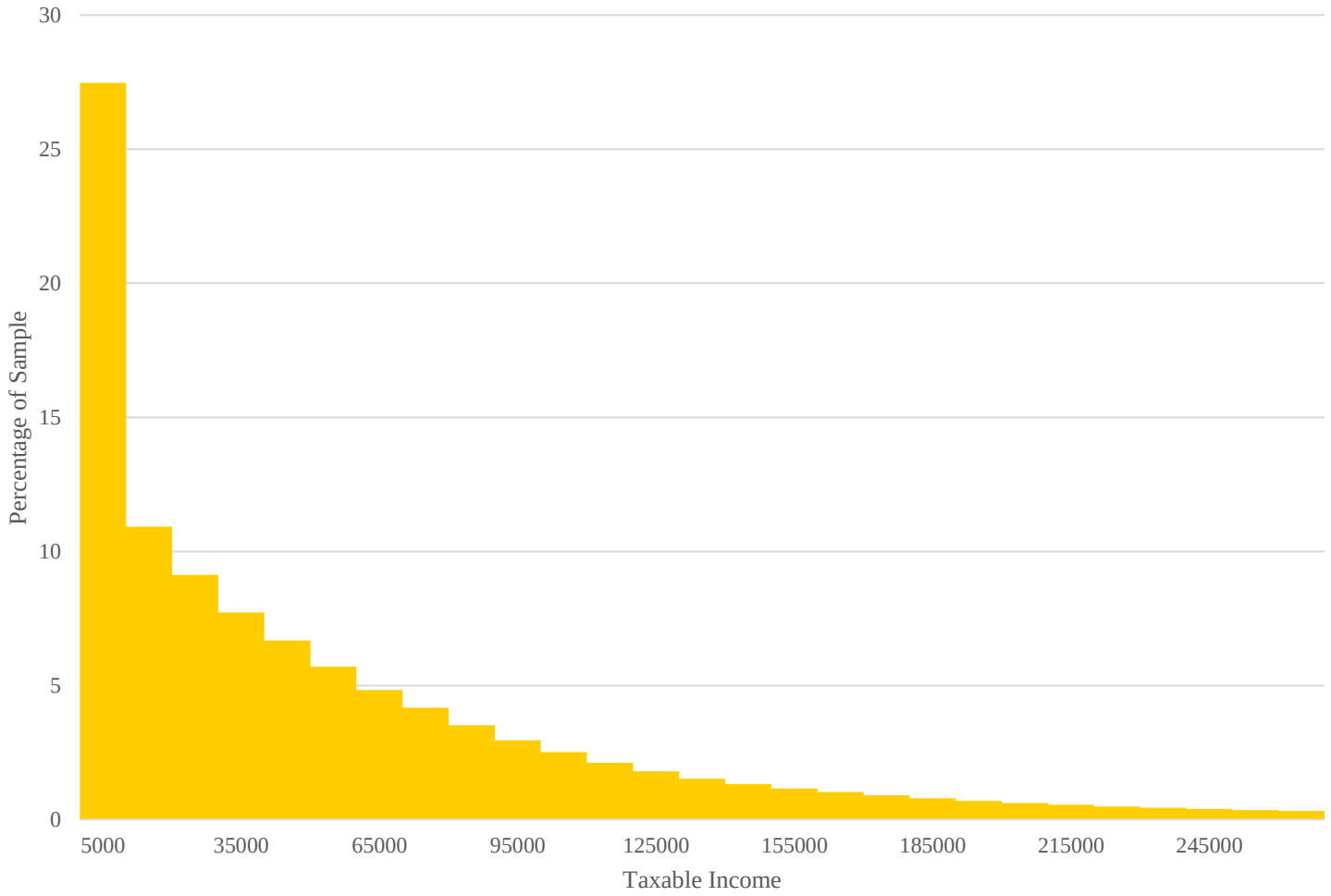
Identifying Cryptocurrency Transactions

- On-Chain and exchange-based transactions
- Attachments and summaries – generic search terms such as Crypto and Virtual
- Both self-reported and third-party reported
- Captures non-standard formats
- Low false positive rates, less than 1% for recent years

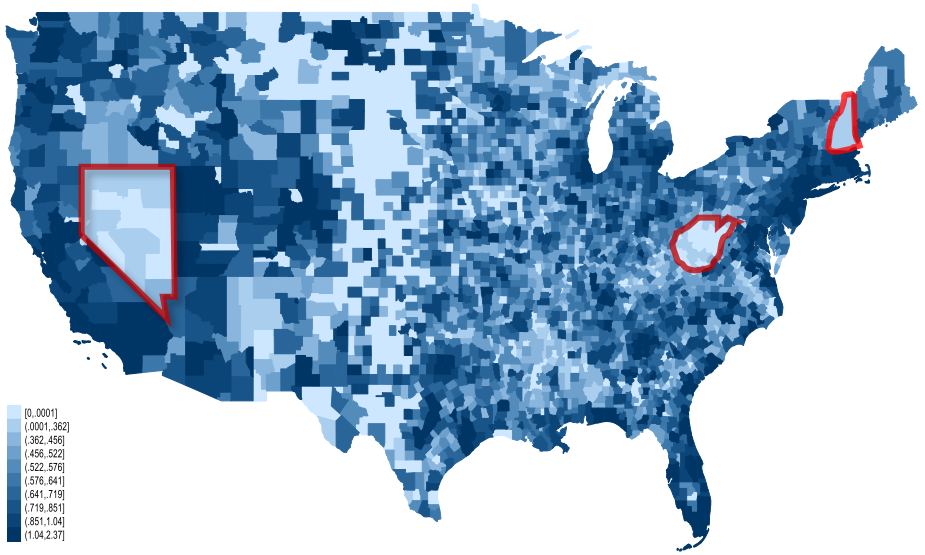
Identifying Cryptocurrency Transactions

- Excludes indirectly held transactions
  - Coinbase, Greyscale Bitcoin Trust, Public Mining companies
- Excludes attachments combined with other stocks (e.g. "Robinhood LT")
- Spelling mistakes and errors
- Relies on uniqueness
- Does not capture Schedule C or miscellaneous income reporting

Histogram of Crypto Sellers By Taxable Income



Location over Time



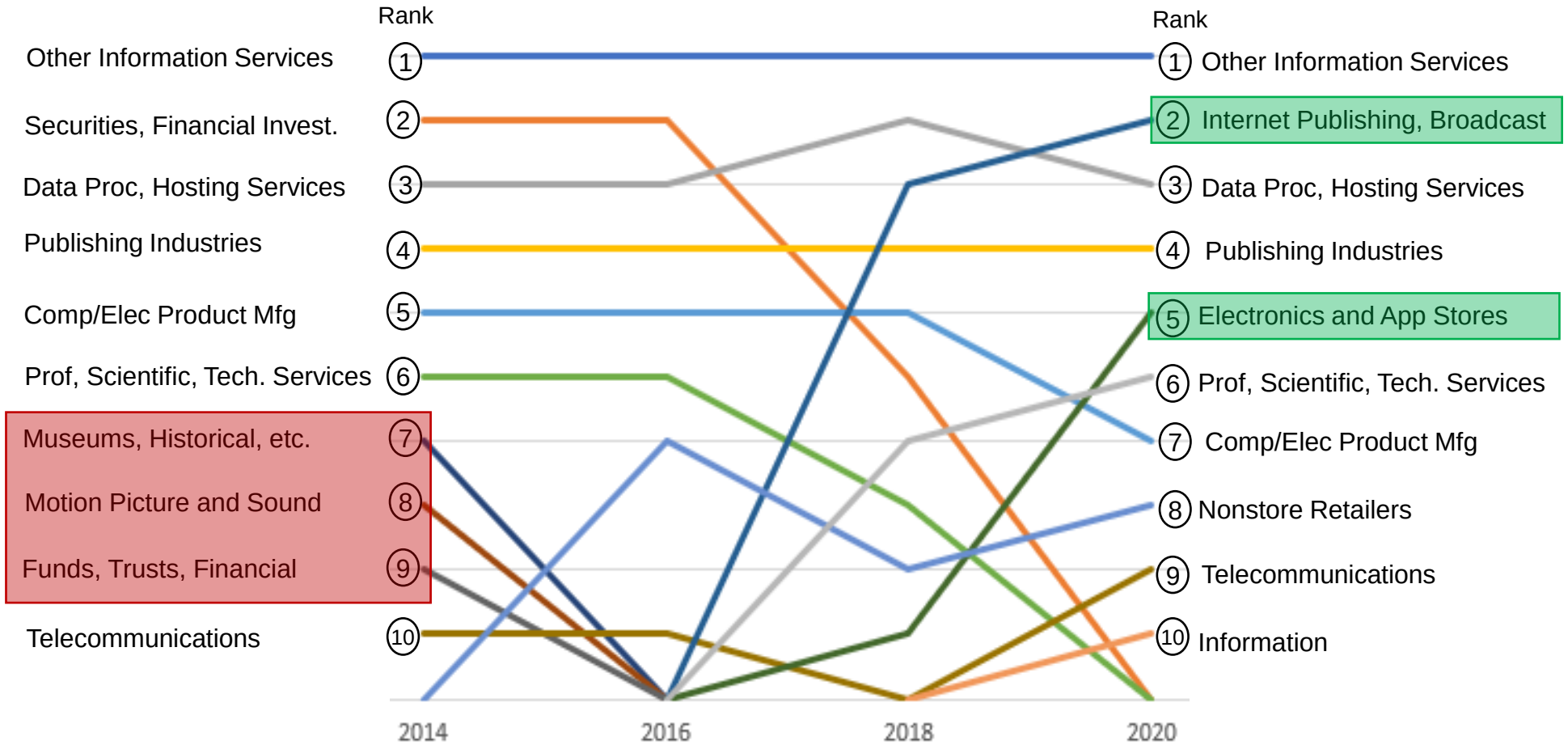
Google Trends for 2020 – “Bitcoin”

1	Nevada	100
2	California	93
3	Washington	89

49	South Dakota	41
50	Mississippi	37
51	West Virginia	34

Occupation over Time

(Rank of Percent)



Trends Model

Variable	Avg. Coef (Avg. Std. Err)	†
TREND	-0.00140	10
	(0.000018)	
AGE (UNDER 24) * TREND	0.00232	10
	(0.000034)	
AGE (25-44) * TREND	0.00227	10
	(0.000028)	
AGE (45-64) * TREND	0.00048	10
	(0.000018)	
LN WAGES * TREND	0.00002	10
	(0.000002)	
LN DIVIDENDS * TREND	0.00015	10
	(0.000003)	
MARRIED * TREND	0.00125	10
	(0.000019)	
SINGLE MALE * TREND	0.00179	10
	(0.000022)	
HOMEOWNER * TREND	0.00011	10
	(0.00002)	
DEPENDENTS * TREND	-0.00018	10
	(0.00001)	
STUDENT * TREND	0.00163	10
	(0.000053)	
Main Effects	YES	
Observations	10,000,000	
Year Fixed Effects	NO	
Baseline Full Sample Probability of Crypto Seller	0.00243	
Average Adj R-Squared	0.002	

† indicates number of significant coefficients out of 10

VARIABLE	DESCRIPTION
Variables of Interest	
CRYPTOCURRENCY SELLERS	1 if either the description of a Form 8949 transaction is identified as cryptocurrency or a description from Form 1099-B is identified as cryptocurrency for tax return$_i$ in year$_t$. 0 otherwise. See online appendix A for a description of the textual analysis which identifies transactions as cryptocurrency.
NON-CRYPTO SELLING INVESTOR	1 if tax return in year$_t$ reports either a non-zero amount for dividends or a non-zero amount for capital gain on Form 1040, and is not identified as a CRYPTOCURRENCY SELLERS in year$_t$. 0 otherwise.
NON-INVESTOR	1 if a tax return is neither a CRYPTOCURRENCY SELLERS nor a NON-CRYPTO SELLING INVESTOR, 0 otherwise.
CRYPTOCURRENCY GAIN*	Sum of the total gain or loss reported on form 8949 for transactions identified as cryptocurrency for tax return$_i$ in year$_t$
NUM OF CRYPTO TRANSACTIONS*	Number of separate lines which are identified as cryptocurrency transactions on Form 8949 for tax return$_i$ in year$_t$
CRYPTOCURRENCY 1099B	An indicator equal to 1 if the primary or secondary taxpayer received any Form 1099-B which includes a transaction identified as cryptocurrency. See Online Appendix A. 0 Otherwise.
TREND	A year trend variable which takes the value of 0 in 2013 and increases in increments of 1.
Continuous/Discrete Variables	
AGE	The year in which tax return$_{it}$ was filed less the birth year for the primary taxpayer on tax return$_i$
WAGES	Wages as reported on Form 1040 for tax return$_i$ in year$_t$.
TAXABLE INTEREST	Taxable Interest as reported on Form 1040 for tax return$_i$ in year$_t$.
TAXABLE DIVIDENDS	Taxable Dividends as reported on Form 1040 for tax return$_i$ in year$_t$.
CAPITAL GAIN/LOSS†	Capital Gain/Loss as reported in Form 1040 for tax return$_i$ in year$_t$.
TAXABLE INCOME	Taxable income after all deductions reported on Form 1040 for tax return$_i$ in year$_t$.
DEPENDENTS	Number of dependents reported on a taxpayer's return for year$_t$. This variable ranges from 0 to 4 dependents due to restrictions in IRS data.
Indicator Variables	
MARRIED	1 if tax return$_i$ in year$_t$ reports both a primary taxpayer and a spouse, 0 otherwise.
SINGLE MALE	1 if tax return$_i$ in year$_t$ does not report a spouse and census data lists the primary taxpayer as male. 0 if census data lists the primary taxpayer as female. Missing otherwise.
SCH A‡	1 if tax return$_i$ in year$_t$ had Schedule A for Itemized deductions attached. 0 otherwise.
EIC TAX CREDIT‡	1 if tax return$_i$ in year$_t$ included Schedule EIC for the Earned Income Tax Credit. 0 otherwise.
HOMEOWNER‡	1 if tax return$_i$ in year$_t$ receives a Form 1098 for mortgage interest.
GAMBLER‡	1 if tax return$_i$ in year$_t$ receives a W-2G for gambling winnings with reported amounts in Box 1 or Box 7
STUDENT‡	1 if tax return$_i$ in year$_t$ receives a 1098-T for tuition and has reported amounts in Box 1 for Tuition and Fees in Box 1
CANCELLATION OF DEBT‡	1 if tax return$_i$ in year$_t$ receives a 1099-C for the cancellation of debt and reports an amount in Box 2

Descriptive Statistics

	NON-INVESTOR (N=845,102,236)			NON-CRYPTOCURRENCY INVESTOR (N=230,965,310)			CRYPTOCURRENCY SELLERS (N=2,620,926)		
Variables of Interest	**Mean**	**Std. Dev.**	**Median**	**Mean**	**Std. Dev.**	**Median**	**Mean**	**Std. Dev.**	**Median**
AGE	41.47	16.72	39	56.26	18.52	58	32.78	10.75	30
WAGES	39,506	257,012	26,604	86,318	392,742	37,413	77,049	355,060	46,010
TAXABLE INTEREST	98	49,955	0	2,757	152,022	47	1,733	1,263,304	0
TAXABLE DIVIDENDS	0	0	0	7,882	267,688	469	1,649	81,328	0
SCH A	0.168	0.374	0	0.442	0.497	0	0.131	0.338	0
MARRIED	0.316	0.465	0	0.584	0.493	0	0.378	0.485	0
MALE	0.314	0.464	0	0.182	0.385	0	0.541	0.498	0
STUDENT	0.062	0.242	0	0.031	0.174	0	0.197	0.398	0
LN WAGES	8.877	3.611	10.19	7.491	5.263	10.53	9.724	3.309	10.74
LN DIVIDENDS	-	0.000	0	5.663	3.194	6.15	1.686	2.690	0
Descriptive Variables									
CAPITAL GAIN/LOSS*	0	0	0	22,512	856,090	24	18,765	1,167,616	0
TAXABLE INCOME	34,346	88,971	19,747	138,353	1,079,166	67,115	91,421	1,086,150	36,372
CRYPTOCURRENCY GAIN	-			-			12,484	824,804	27
NUM OF CRYPTO TRANSACTIONS	-			-			9.90	100.40	1
EIC TAX CREDIT	0.173	0.378	0	0.015	0.123	0	0.066	0.249	0
GAMBLER	0.009	0.096	0	0.010	0.099	0	0.009	0.094	0
CANCELLATION OF DEBT	0.018	0.134	0	0.007	0.085	0	0.017	0.129	0
CRYPTOCURRENCY 1099B	-			-			0.784	0.412	1

Descriptive statistics - millionaires

	NON-MILLIONAIRE									
	NON-INVESTOR (N=845,096,538)		NON-CRYPTO INVESTOR		CRYPTOCURRENCY SELLER (N=2,601,317)		EQUITY MILLIONAIRE (N=75,488)		CRYPTOCURRENCY MILLIONAIRE	
Variable	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**
AGE	41.47	16.72	56.26	18.52	32.69	10.67	46.76	13.37	40.53	11.49
WAGES	39,505	257,012	86,215	389,079	74,387	182,305	457,407	2,688,332	366,092	5,790,899
TAXABLE INTEREST	98	49,955	2,739	151,735	1,173	1,266,663	63,392	523,876	96,070	949,502
TAXABLE DIVIDENDS	-	-	7,853	267,254	797	24,845	102,780	513,208	165,186	2,225,614
SCH A	0.17	0.37	0.44	0.50	0.13	0.33	0.81	0.40	0.57	0.50
MARRIED	0.32	0.46	0.58	0.49	0.38	0.48	0.75	0.43	0.56	0.50
SINGLE MALE	0.31	0.46	0.18	0.39	0.54	0.50	0.22	0.42	0.41	0.49
STUDENT	0.06	0.24	0.03	0.17	0.20	0.40	0.02	0.13	0.03	0.16
*CAPITAL GAIN/LOSS**	0	0	22,207	839,433	5,682	536,312	1,065,872	8,058,907	2,397,415	20,173,968
TAXABLE INCOME	34,345	88,960	137,908	1,068,095	74,386	355,173	1,699,424	8,233,654	2,833,299	16,598,034
CRYPTOCURRENCY GAIN	0	0	0	0	3,402	33,204	-33,068	3,801,461	1,753,248	8,722,526
NUM OF CRYPTO TRANSAC	0.00	0.00	0.00	0.00	9.57	92.93	15.23	214.31	54.57	404.87
EIC TAX CREDIT	0.17	0.38	0.02	0.12	0.07	0.25	0.00	0.05	0.01	0.08
GAMBLER	0.01	0.10	0.01	0.10	0.01	0.09	0.01	0.11	0.02	0.12
CANCELLATION OF DEBT	0.02	0.13	0.01	0.09	0.02	0.13	0.00	0.07	0.01	0.08
CRYPTOCURRENCY 1099B	0.00	0.00	0.00	0.00	0.79	0.41	0.03	0.16	0.02	0.15

Table 4. Determinants of Cryptocurrency Sellers

	(1)		(2)	
Dependent Variable: *CRYPTOCURRENCY SELLERS*				
Independent Variables				
		†		†
AGE (UNDER 24)	0.00458	10	-0.00395	10
	(0.000062)		(0.000068)	
AGE (25-44)	0.00466	10	-0.00372	10
	(0.000054)		(0.000058)	
AGE (45-64)	0.00113	10	-0.00073	10
	(0.000036)		(0.000039)	
LN WAGES	0.00006	10	-0.00004	10
	(0.000004)		(0.000005)	
LN DIVIDENDS	0.00035	10	-0.00021	10
	(0.000007)		(0.000007)	
MARRIED	0.00247	10	-0.00333	10
	(0.000035)		(0.000057)	
SINGLE MALE	0.00353	10	-0.00482	10
	(0.000041)		(0.000066)	
HOMEOWNER	0.00029	10	-0.00012	6
	(0.000036)		(0.00004)	
DEPENDENTS	-0.00031	10	0.00032	10
	(0.000017)		(0.000019)	
STUDENT	0.00380	10	-0.00487	10
	(0.000126)		(0.00016)	
TREND			-0.00140	10
			(0.000018)	
*AGE (UNDER 24) * TREND*			0.00232	10
			(0.000034)	
*AGE (25-44) * TREND*			0.00227	10
			(0.000028)	
*AGE (45-64) * TREND*			0.00048	10
			(0.000018)	
*LN WAGES * TREND*			0.00002	10
			(0.000002)	
*LN DIVIDENDS * TREND*			0.00015	10
			(0.000003)	
*MARRIED * TREND*			0.00125	10
			(0.000019)	
*SINGLE MALE * TREND*			0.00179	10
			(0.000022)	
*HOMEOWNER * TREND*			0.00011	10
			(0.00002)	
*DEPENDENTS * TREND*			-0.00018	10
			(0.00001)	
*STUDENT * TREND*			0.00163	10
			(0.000053)	
Intercept	-0.00031	10	0.00032	10
	(0.000017)		(0.000019)	
Observations	10,000,000		10,000,000	
Year Fixed Effects	YES		NO	
Baseline Full Sample Probability of Crypto Seller	0.00243		0.00243	
Average Adj R-Squared	0.002		0.002	

Online Appendix Table 1. Sample Splits for Cryptocurrency Determinants

	(1)		(2)		(3)		(4)	
Sample	Early Sample 2013-2016		Late Sample 2017-2020		Only Crypto Sellers and Investors		Only Crypto Sellers and non-Investors	
Dependent Variable: *CRYPTOCURRENCY SELLERS*								
Independent Variables								
		†		†		†		†
AGE (UNDER 24)	0.00004	8	0.00850	10	0.03255	10	0.00380	10
	(0.000012)		(0.000117)		(0.000574)		(0.000063)	
AGE (25-44)	0.00007	10	0.00856	10	0.02076	10	0.00348	10
	(0.000013)		(0.000098)		(0.000272)		(0.000053)	
AGE (45-64)	0.00004	7	0.00189	10	0.00090	10	0.00064	10
	(0.000012)		(0.000064)		(0.000135)		(0.000039)	
LN WAGES	0.00000	1	0.00010	10	0.00011	10	0.00004	10
	(0.000001)		(0.000008)		(0.000015)		(0.000005)	
LN DIVIDENDS	0.00002	10	0.00062	10	-0.00342	10	0.16578	10
	(0.000002)		(0.000012)		(0.000029)		(0.00085)	
MARRIED	0.00003	10	0.00469	10	0.00694	10	0.00256	10
	(0.000006)		(0.000067)		(0.000137)		(0.00004)	
SINGLE MALE	0.00004	10	0.00661	10	0.01865	10	0.00327	10
	(0.000006)		(0.000076)		(0.000257)		(0.000041)	
HOMEOWNER	0.00001	2	0.00051	10	-0.00788	10	0.00029	10
	(0.000007)		(0.000069)		(0.000155)		(0.000041)	
DEPENDENTS	0.00000	2	-0.00058	10	0.00006	0	-0.00030	10
	(0.000003)		(0.000033)		(0.000096)		(0.000017)	
STUDENT	0.00000	0	0.00413	10	0.02613	10	0.00363	10
	(0.000016)		(0.000163)		(0.000912)		(0.000126)	
Intercept	0.00000	2	-0.00058	10	0.00006	0	-0.00030	10
	(0.000003)		(0.000033)		(0.000096)		(0.000017)	
Observations	10,000,000				10,000,000			
Year Fixed Effects	YES		YES		YES		YES	
Baseline Full Sample Probability of Crypto Seller	0.00004		0.00459		0.00309		0.01122	
Average Adj R-Squared	0.000		0.005		0.011		0.003	

Comments on: "Session 3: Understanding Contemporary Taxpayers"

Yan Sun

June 22, 2023

IRS-TPC

“Who are Married-Filing-Separately Filers and Why Should We Care?”

By Lin, Emily and Navodhya Samarakoon

Overview

- **Interesting Paper Examining Married-filing-separately (MFS) Filing Status**
  - MFS returns, 2013-2021
  - Link an MFS return to the spouse's MFS return
  - TAXSIM model to simulate tax liability
  - Calculate tax penalty/bonus

- **Key Findings**
  - Most MFS filers face a separate filing penalty
  - MFS is susceptible to misreporting

Contribution of the Paper

- **Quantify the MFS penalty/bonus**
- **MFS is linked to inequality**
- **Taxes vs. tax credit**

The Paper Would Be More Interesting If

- **Discuss the scenarios under which MFS are better/worse**
- **Examine heterogeneity in the MFS sample**
- **Impact of MFS**
- More Reference
  - “Holtzblatt, et. al. 2023. Racial Disparities in the Income Tax Treatment of Marriage. Tax Policy Center.

“Willing but Unable to Pay? The Role of Gender in Tax Compliance”

By Lopez-Luzuriaga, Andrea and Carlos Scartascini

Overview

- **Use an experimental method to inform policy**
  - Municipality in Argentina
  - Examine how taxpayers respond to an intervention from city government on property tax payment
- **Main findings**
  - Deterrence message was the most successful on average for increasing compliance
  - Women maybe more motivated to pay, but they fact significant liquidity constraints
  - Conversely, men who receive a deterrence letter are more likely to improve overall compliance

Contribution of the Paper

- **Develop a compliance analytical framework**
- **Beyond risk aversion and tax morale**
- **Carefully conducted empirical analysis**

Gain More Insights from the Experiment

Experiment specificity

- Latin American country vs. developed countries
- Property tax vs. income tax
- Local government vs. central government

- **Something may affect your result**
  - Property joint owners
  - People may react different in another time

“Who Sells Cryptocurrency”

By Hoopes, Jeffrey, Tyler Menzer, ad Jaron Wilde

Overview

- **Examine cryptocurrency sellers who report cryptocurrencies sales to IRS**
  - **Use tax data to identify cryptocurrency users**
    - 2013 -- 2020
    - Form 8949.
    - Form 1099B.
    - Form 1040 (and its related schedules)
    - Social Security Administrative data
  - **Three groups**: non-investor, non-crypto selling investor, cryptocurrency seller
- **Provide information on the general characteristics of cryptocurrency users who report their sales to IRS**

Contribution of the Paper

- **Use administrative tax data to understand the relatively new financial product**
- **Offer the first broad-sample descriptive evidence on US taxpayers selling cryptocurrency**
- **Provide empirical evidence on cryptocurrency users**

Some Questions

- **Underreporting**
- **Other factors affecting the investor behavior**
- **Network externality and complementarity**
- **Minor data issues**
  - Sample selection
  - Form 1098 T
  - Income