Appendix

Title: Behavioral effects of tax withholding on tax compliance: Implications for information initiatives

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Note: Replication data for this article can be found at
https://dataverse.harvard.edu/dataset.xhtml?persistentId=doi:10.7910/DVN/WUDL2X

Appendix A. Supplemental materials

Figure A.1   Subject screen for risk elicitation task

SCENARIO	LOTTERY	SHOW-UP FEE	YOUR CHOICE	
	Choice A	Choice B		
1	10% chance of $10 and 90% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	
2	20% chance of $10 and 80% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	On the left are 10 scenarios which allow you to exchange your show-up fee of $5.00 for a lottery.
3	30% chance of $10 and 70% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	
4	40% chance of $10 and 60% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	**Please choose either A or B for each scenario.**
5	50% chance of $10 and 50% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	At the end of the experiment the computer will randomly select ONE of these 10 scenarios.
6	60% chance of $10 and 40% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	If you selected the lottery, choice A, for the randomly selected scenario, the computer will determine the outcome based on the chances associated with the selected scenario.
7	70% chance of $10 and 30% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	
8	80% chance of $10 and 20% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	Otherwise you will receive your show-up fee.
9	90% chance of $10 and 10% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	
10	100% chance of $10 and 0% chance of $0	$5 show-up fee	Choice A ○ ○ Choice B	Submit

Figure A.2   Subject screen for tax withholding

Round — Training2

Income Distribution (you are in the RED group)
(bar chart with axis labels 500, 1000, 1500, 2000, 2500, 3000)

Current Situation

Your...	Is...
Income	Between $1750 and $2750
Deduction (Standard)	Either $250 or $500
Deduction (Itemized)	Between $0 and $500

U.S. Department of Treasury

Tax Withholding Exemption Declaration

	ALLOWANCES	TAX WITHELD
ZERO	0	$1500
ONE	1	$1250
TWO	2	$1000
THREE	3	$750
FOUR	4	$500

Tax Policy

tax = rate * (income - deductions)

The tax rate is 50%

Audit Chance

(The likelihood of an audit)

If you file taxes   10%

If time runs out before filing   100%

Enforcement Policy

penalty = rate * unpaid taxes

The penalty rate for under-reporting taxes is 300%.

Withholding Policy

The cost of withholding is 10%.

The penalty rate for under-withholding is 20%.

3

Figure A.3   Subject tax filing screen (liability information service available)

Figure A.4   Audit determination screen (animated)
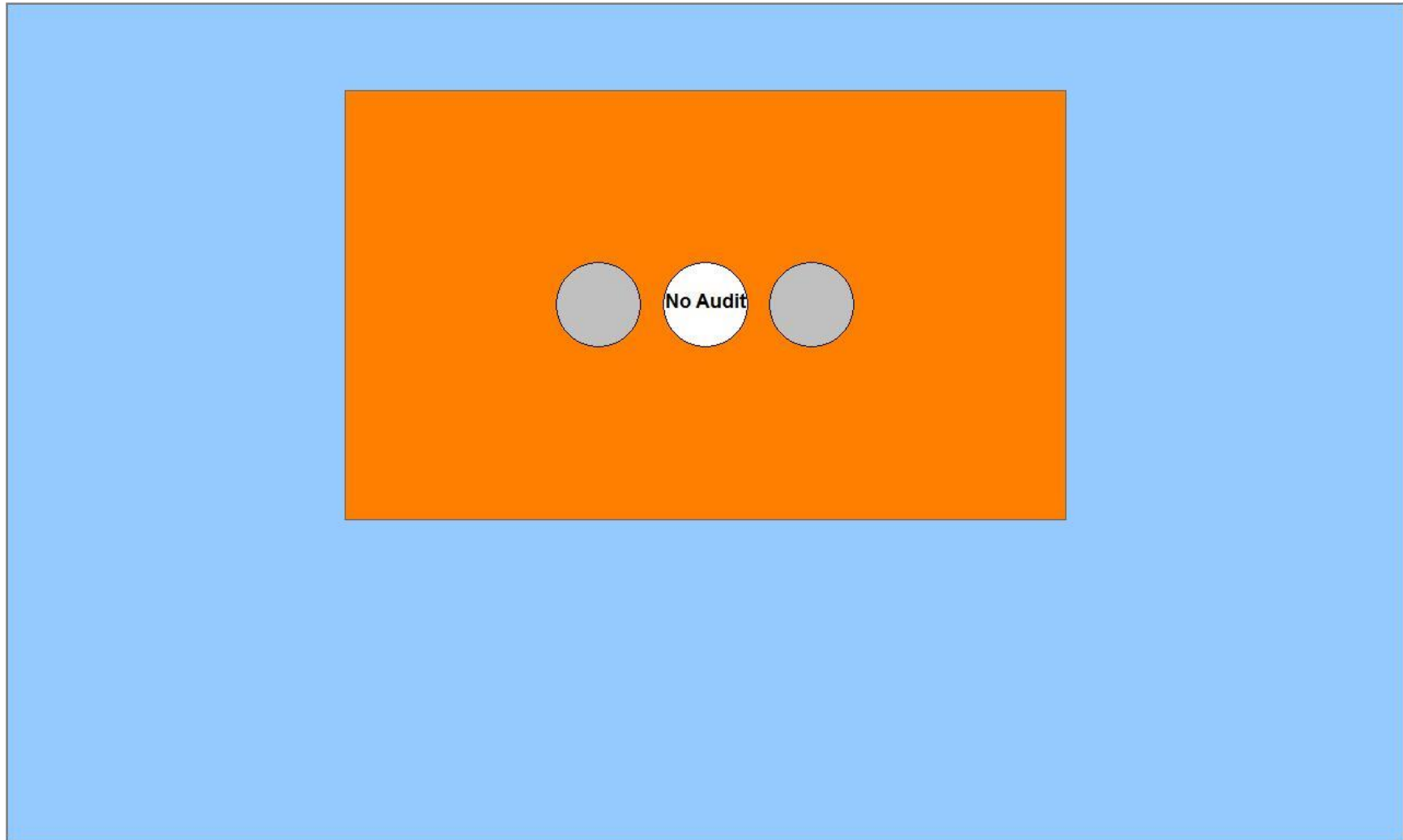
Figure A.5   Subject screen for end of round summary (tax compliance and fiscal exchange features active)

Example Instructions – Treatment 4

Introduction

You are about to participate in an experiment in economic decision making. Please follow the instructions carefully, as the amount of money you earn in the experiment will depend on your decisions. At the end of today's session, you will be paid your earnings privately and in cash. Please do not communicate with other participants during the experiment unless instructed.

Today's experiment will involve several decision "rounds". You will not know the number of rounds until the end of the experiment. The rounds are arranged into multiple series. After all decision rounds are finished, we will ask you to complete a questionnaire.

Aside from decisions in "training" rounds, each decision impacts your earnings, which means that it is very important to consider each decision carefully prior to making it. Each decision round is separate from the other rounds, in the sense that the decisions you make in one round will not affect the outcome or earnings of any other round. All money amounts are denominated in lab dollars, and will be exchanged at a rate of 300 lab dollars to US$1 at the end of the experiment.

There are four parts to each decision round: the Tax withholding stage, the Tax reporting stage, the Audit determination, and the Round summary. We will now describe each part.

Tax withholding stage

The beginning of each round reflects the beginning of a tax year. At this point you choose how much in taxes to have withheld. This is a pre-payment of taxes. To reflect the fact that pre-paying taxes means you cannot use the money to buy other things during the year, there is an added cost of withholding equal to 10% of your withholding. For example if you choose to withhold 100 dollars you will pay 10 dollars.

The total amount you withheld will be returned to you as a tax credit when you file your tax return. Only the added cost of 10% will directly affect your earnings.

On this decision screen, to help you decide your tax withholding, you will be provided some information about your income and deductions, both of which determine the amount of taxes you are likely to owe for the round (tax year). In particular, the amount of taxes you owe is determined as the difference between your income and deductions multiplied by a tax rate of 50%.

Since it is the beginning of the year, you will not know your income exactly but will know the range of possible income amounts. Any number in this range has an equal chance of being your actual income. You will also not know the exact amount you are allowed to claim in either standard or itemized deductions but will know the range of possible amounts. Any number in the itemized deduction range displayed has an equal chance of being your actual deduction.

If you withhold more than you report in taxes, you will receive a refund when you file. If you withhold less than your reported taxes, this means you will pay additional taxes when you file.

<u>Tax Reporting Stage</u>

When the tax year has finished, you enter the tax reporting stage. Since the tax year has ended you will have a better idea of your income and your allowable deductions, and the ranges you saw in the withholding stage will now be smaller. Your task is to report an income and a deduction amount.

Your taxes are determined by subtracting what you report in deductions from what you report in income, and multiplying this difference by the tax rate of 50%. On your screen, this amount is included among the tax form calculations as "Reported Taxes".

Reporting your income

You will not know your income for sure. You will instead be shown a range of possible income amounts. Any number in this range has an equal chance of being your actual income. You are free to report amounts within, below or above your income range. The more you report in income, the higher your reported taxes will be.

Reporting your deduction

You have the option to claim a standard deduction OR an itemized deduction (but not both). The more you report in deductions, the lower your reported taxes will be.

There are two standard deduction amounts to choose from. You can choose either amount. You will know your actual standard deduction amount prior to filing. If you choose to claim a standard deduction, please enter 0 for your itemized deduction.

You will not know the amount you are allowed to claim in itemized deductions. You will instead be shown a range of possible itemized deduction amounts. Any number in this range has an equal chance of being your actual itemized deduction. You are free to report amounts within, below or above your itemized deduction range.

Information Service

You have the option of paying a fee to obtain better information. When you click on the "Information" button you will be asked if you want to pay for the information. If you choose "Yes" you will be shown your actual income and allowable itemized deduction.

Your tax bill

After you choose income and deduction amounts to report, you click on the "Do the Math" button to calculate your tax payment or tax refund based on these amounts.

As mentioned previously, the amount of tax you withheld will be credited when you file the tax form. This amount is indicated as "Withholding". The difference between your reported taxes and your tax withheld determines what you pay, or receive, upon filing your tax form.

If your reported taxes are higher than your taxes withheld, you owe additional taxes upon filing. In particular, your "Tax Payment" is calculated by subtracting your "Withholding" from your "Reported Taxes".

The tax authority imposes an interest and under-payment penalty for under-withholding. A penalty equal to 20% of your tax payment is assessed in the event you owe additional taxes upon filing (i.e., whenever your tax payment is greater than 0).

If your reported taxes are instead are less than your taxes withheld, you receive a tax refund. Your "Tax Refund" is calculated by subtracting your "Reported Taxes" from your "Withholding".

You are free to alter your income and deduction amounts prior to filing. To file the tax return, first enter the income and deduction amounts you want to submit and click the "Do the Math" button. Then, click the "FILE TAXES" button.

There is a timer on the tax reporting screen. If you do not file the tax form before time runs out, this will be treated as if you reported 0 in income and 0 in deductions. Your tax form will automatically be audited. In other words, it is not in your best interest to let the tax reporting screen time out!

Audits

There is a chance you will randomly be selected for audit. You will know this chance prior to making your tax withholding and tax reporting decisions. The chance does not increase or decrease depending on your current or past reporting choices or on the decision made by others in the group. This is a random selection process.

After you file the tax form, you will see an audit screen. While you are on this screen the computer is randomly determining whether to select you for audit. This selection is done separately for each participant and each round.

If you are selected for audit, your reported income and deductions will be checked against your actual income and deductions. If you underreported your taxes, all unpaid taxes will be discovered. If you are not audited, however, no unpaid taxes will be discovered.

Unpaid taxes

If audited, you will have unpaid taxes if you reported too little in income or too much in deductions. Unpaid taxes are calculated as the difference between your actual and reported amounts multiplied by the tax rate. Any unpaid taxes discovered in the audit must be paid back.

Penalty

If you have unpaid taxes, a penalty of 300% will be assessed. What this means is that, if you are audited, for every lab dollar in unpaid taxes you will have to pay back the 1 dollar you owed and in addition pay 3 lab dollars in penalties.

Know that any taxes you <u>overpaid</u> will not be refunded to you. In this sense, the audit process can never increase your earnings.

<u>Round summary</u>

After the audit determination, you will see a summary screen that provides a detailed breakdown of your earnings.

Transfer Payment

Know that a fraction of the taxes collected from you and other members of your group will be paid to you in the form of a Transfer Payment. Each group member receives the same (equal) share. You may think of this as the service provided by government such as roads, police, and the courts.

Your round earnings depend on many factors, including the audit process. After you submit a tax form, three things can happen: (1) you are <u>not</u> audited; (2) you are audited but did <u>not</u> underreport your taxes; or (3) you are audited and you did underreport your taxes.

Your earnings (if you are not audited OR you are audited but did not underreport taxes)

In both cases, there is no adjustment to your earnings based on the audit process. Your earnings for the round are equal to your actual income plus transfer payment, less your withholding cost, information cost of information (if applicable), your tax bill and any under-withholding penalty.

	Income	Your actual income
–	Cost of Withholding	Tax you withheld + 10%
–	Cost of Information	(if you requested Information)
–	Tax Payment	(when applicable)
–	Under-Withholding Penalty	20% of your Tax Payment (0 if Tax Refund)
+	Tax Refund	(when applicable)
+	Transfer Payment	Your share of the transfer paid from taxes reported
=	Earnings	

Your earnings (if you are audited and underreported your taxes)

Since the audit will reveal all unpaid taxes, you are responsible for the unpaid taxes and further must pay a penalty. These adjustments are reflected below.

	Income	Your actual income
−	Cost of Withholding	Tax you withheld + 10%
−	Cost of Information	(if you requested Information)
−	Tax Payment	(when applicable)
−	Under-Withholding Penalty	20% of your Tax Payment (0 if Tax Refund)
−	Unpaid Taxes	Difference of what you owed and what you paid
−	Penalties from audit	300% of Unpaid Taxes
+	Tax Refund	(when applicable)
+	Transfer Payment	Your share of the transfer paid from taxes reported
=	Earnings	

Tax compliance

In addition to a detailed breakdown of your earnings, the round summary screen includes a graph illustrating tax compliance. The graph shows, separately for each income group, the average taxes reported and the average taxes actually owed.

The Series

After the second training round, you will first be asked to complete a task to earn your income. Your performance in the earning task will determine whether you are in the high, medium or low income group. Roughly one-third of the players will be placed in each group. From time to time a new series of rounds will begin and you will be asked to complete a new earnings task prior to this.

At the beginning of a new series some of the tax settings will change, including the chance of audit. When a new series begins please pay close attention to any information that has changed prior to making any decision.

Beginning the experiment

We have now finished the instructions. We will continue on to a second raining round. As with the first, your decisions in the training round will not affect your earnings. After the training round you will have a final opportunity to ask questions.

Figure A.6   U.S. Internal Revenue Service tax withholding form for tax year 2016

------------------------------ Separate here and give Form W-4 to your employer. Keep the top part for your records. --------------------------------

Form **W-4**	**Employee's Withholding Allowance Certificate**	OMB No. 1545-0074
Department of the Treasury Internal Revenue Service	▶ Whether you are entitled to claim a certain number of allowances or exemption from withholding is subject to review by the IRS. Your employer may be required to send a copy of this form to the IRS.	20**16**

1 Your first name and middle initial	Last name	2 **Your social security number**

Home address (number and street or rural route)	3 ☐ Single ☐ Married ☐ Married, but withhold at higher Single rate.
	Note: If married, but legally separated, or spouse is a nonresident alien, check the "Single" box.
City or town, state, and ZIP code	4 **If your last name differs from that shown on your social security card, check here. You must call 1-800-772-1213 for a replacement card. ▶ ☐**

5	Total number of allowances you are claiming (from line **H** above **or** from the applicable worksheet on page 2)	5	
6	Additional amount, if any, you want withheld from each paycheck	6	$
7	I claim exemption from withholding for 2016, and I certify that I meet **both** of the following conditions for exemption.		
	• Last year I had a right to a refund of **all** federal income tax withheld because I had **no** tax liability, **and**		
	• This year I expect a refund of **all** federal income tax withheld because I expect to have **no** tax liability.		
	If you meet both conditions, write "Exempt" here . . . . ▶	7	

Under penalties of perjury, I declare that I have examined this certificate and, to the best of my knowledge and belief, it is true, correct, and complete.

Employee's signature
(This form is not valid unless you sign it.) ▶   **Date ▶**

8	Employer's name and address (Employer: Complete lines 8 and 10 only if sending to the IRS.)	9 Office code (optional)	10	Employer identification number (EIN)

For Privacy Act and Paperwork Reduction Act Notice, see page 2.   Cat. No. 10220Q   Form **W-4** (2016)

Table A.1   Experiment schedule

Session	Treatment	Location	Group 1 Audit Sequence	Group 2 Audit Sequence	Participants
1	T1	UT	10-30-50	30-50-10	23
2	T1	UT	50-10-30	50-30-10	23
3	T1	ASU	10-50-30	30-10-50	19
4[*]	T2	UT	10-30-50	10-50-30	21
5	T2	UT	30-10-50	30-50-10	20
6	T2	UT	50-10-30	50-30-10	21
7	T2	ASU	10-30-50	10-50-30	19
8	T2	ASU	30-10-50	30-50-10	19
9	T2	ASU	50-10-30	50-30-10	19
10	T3	UT	10-50-30	30-10-50	22
11	T3	ASU	10-30-50	30-50-10	17
12	T3	ASU	50-10-30	50-30-10	17
13	T4	UT	10-30-50	10-50-30	24
14	T4	UT	30-10-50	30-50-10	22
15	T4	UT	50-10-30	50-30-10	17
16	T4	ASU	10-30-50	10-50-30	19
17	T4	ASU	30-10-50	30-50-10	18
18	T4	ASU	50-10-30	50-30-10	19

Notes: Order of session implementation was random. [*]Due to time constraints, only 15 of 18 periods were completed.

Appendix B. Using the theoretical framework to derive point predictions

Tax reporting predictions

     Table B.1 presents point predictions of reporting for a representative set of parameters. In particular, the focus is on the middle-income class, and the presented scenarios correspond to a subset of possibilities based on the actual allowable standard deduction, and whether the allowable itemized deduction falls within a high or low interval. Calculations directly follow from the theory under the assumption that the taxpayer optimally claims a refund, and ignores behavioral motives which involve unknown parameters. At the audit rate of 10%, and given our audit penalty rate ($\beta = 3$), the optimization model [1] predicts zero tax reported. In this case, $p(\beta + 1) = 0.10 \cdot (3 + 1) < 1$ and a corner solution of maximal evasion arises. While there are multiple ways to report income and deductions so that they exactly offset, taxpayers are best-off claiming their true, allowable standard deduction (for which there is zero risk of audit penalties) and then reporting an equal amount in income.

     For 30% and 50% audit rates, $p(\beta + 1) > 1$, optimal reporting is defined by [2]. As we use uniform distributions for income and itemized deductions, $F(R^*) = \frac{a - R^*}{a - b}$, and it is optimal to report $R^* = \frac{a - b}{p \cdot (\beta + 1)} + b$. Although this formula is associated with reported *liability*, we can readily use the same formula directly to the income and deduction amounts, and then convert these figures to liabilities by applying the tax rate. When one is contemplating whether to report the standard deduction or not, as the allowable standard deduction is known with certainty, that $p(\beta + 1) > 1$ is sufficient to make truthful reporting optimal. One then must weigh whether reporting this allowable standard deduction is more beneficial than making an optimal itemized deduction choice.

     At the 30% audit rate, it is optimal to partially evade. For example, when income is

uniformly distributed between 1375 and 2125 it is optimal to report $R^* = \frac{1375-2125}{0.3 \cdot (3+1)} + 2125 =$

1500, which is 250 less than expected income. When the expected value of the itemized deduction is at least 25 dollars higher than the true standard deduction, it is optimal to claim the itemized deduction; otherwise, one claims the true standard deduction. Even when the two are equal in expectation, there is still a chance of audit penalty when claiming the itemized deduction, due to the liability uncertainty. When one reports the itemized deduction, it is optimal to overclaim. If the true itemized deduction is uniformly distributed within the interval [312.5, 687.5], and noting that this reflects a negative liability, it optimal to report $R^* = \frac{-687.5+312.5}{0.3 \cdot (3+1)} - 312.5 = -625$. In other words, the taxpayer claims a deduction of 625, which is 125 more than the expected value of the actual deduction.

At the 50% audit rate, and liability is uncertain, it is optimal to report an amount equal to the expected value of the true liability. In particular, one reports expected income, and either the true standard deduction or the expected value of the itemized deduction. When the expected value of the itemized deduction is at least 93.5 dollars higher than the true standard deduction, it is optimal to claim the itemized deduction; otherwise, one claims the true standard deduction.

Tax reporting calculations associated with other optimal reporting models presented in the article can be undertaken in a straightforward way. For example, [3] implicitly defines optimal reporting when one is in an optimal under-withholding position. Noting that $F(R^{**}) = \frac{a-R^{**}}{a-b}$, it follows that $R^{**} = \frac{(a-b)(1+\varphi)}{p \cdot (\beta+1)} + b$, which can be applied to determine optimal income and itemized deduction reporting amounts at the 30% and 50% audit rates. At the 10% audit rates it will continue to be optimal to claim the true standard deduction and report an income amount such that reported taxable income is zero.

Tax withholding predictions

Table 3 in the article provides insight on the relationship between reporting and withholding for different levels of expected tax liability, defined as taxable income multiplied by the tax rate. Several scenarios arise in the experiment that coincide with the specific expected tax liability amounts in the table. For a participant in the middle income class, for example, this occurs when: (1) the income range is [1250, 2000] and the true standard deduction is 250; or (2) the income range is [1500, 2250] and the true standard deduction is 500. For instance, with (1) the expected taxable income is 1625 – 250, which equates to 687.5 in expected liability. The optimal tax reporting amounts tied to these scenarios were calculated using procedures described previously, with consideration over whether [1] is maximized by reporting R^* or R^{**}, conditional on W.

To determine optimal withholding amounts reported in Table 3, for each income class we considered the set of six possible reporting scenarios that arise when one "plans" to report the true standard deduction (i.e., there are three possible income ranges and two possible standard deductions). It is optimal under the 10% audit rate to reduce the decision problem in this way. For the 30% and 50% audit rates, as suggested by Table B.1, this represents a reasonable approximation and it is optimal to select the true standard deduction over an itemized amount in 75% of the cases. Focusing on these scenarios is also convenient as it gives rise to the special case where expected liability from the perspective of the withholding stage coincides with the expected liability that can arise for at least some possible reporting scenarios. Then, the maximand in [18] is computed for each possible withholding choice to determine optimal withholding from the discrete set of amounts available in the experiment.

Table B.1 Selected theoretical predictions of tax reporting

Audit Rate	Information at filing			Predicted tax reporting			
	Income*	Standard Deduction	Itemized Deduction*	Income	Standard Deduction	Itemized Deduction	Tax Reported
10%	1750	250	250	250	250	–	0
10%	1750	500	250	500	500	–	0
10%	1750	250	500	250	250	–	0
10%	1750	500	500	500	500	–	0
30%	1750	250	250	1500	250	–	625
30%	1750	500	250	1500	500	–	500
30%	1750	250	500	1500	–	625	437.5
30%	1750	500	500	1500	500	–	500
50%	1750	250	250	1750	250	–	750
50%	1750	500	250	1750	500	–	625
50%	1750	250	500	1750	–	500	625
50%	1750	500	250	1750	500	–	625

Notes: Expected values are reported for random variables, which are denoted by *. Predictions correspond with a taxpayer for whom it is optimal to claim a refund, and ignore possible behavioral drivers (social norms, fairness, and reference dependence), which rely on unknown parameters. "Tax reported" is calculated as the difference between reported income and deductions, multiplied by the tax rate of 50%.

Appendix C. Instrumental variables estimation

We include the withholding choice, and an indicator for those who purchased the liability information service in models of tax reporting. For the latter, identification is aided by having (counterfactual) treatments where no service is available. For the former, the uncertainty over one's true income and deduction in the withholding stage, and the exogenous "shocks" to income and deductions that take place after withholding but prior to reporting, also aids identification. The specifications reported in the paper also include participant and decision round fixed effects to capture unobserved factors. Nevertheless, it is ultimately an empirical question whether our tax reporting regressions suffer from bias due to inclusion of endogenous variables.

To address this question, we implemented a System 2SLS FE estimator (see Wooldridge, 2005). Relative to the more standard 2SLS estimator for panel data, the System estimator allows for the set of instruments to vary across time periods and further exploits time-varying relationships between potential endogenous explanatory variables and instruments, which can increase efficiency.

Within this framework, we consider the various covariates tied to withholding position and liability services as potentially endogenous. We treat as exogenous variables the remaining model regressors, along with the variables *Audited*, *Unexpected Tax Increase*, and *Unexpected Tax Decrease*. The latter set of variables are all excluded from the reporting regressions, and as they are determined by random draws may be treated as strictly exogenous. The reduced form equations include all of these exogenous variables along with one-period lags of these variables.

Table C.1 presents System 2SLS FE estimation results that correspond with Models 1 – 3 reported in Table 5 of the article. For each model specification, using Wooldridge's (1995) robust regression-based test we fail to reject the null hypothesis that the covariates tied to withholding position and liability services are exogenous. Moreover, for each "first stage" regression, we

strongly reject the null hypothesis that the instrumental variables are uncorrelated with the (potential) endogenous covariate, with p<0.0001. Although some estimates are noisier, as expected, the main implications from these models reflect Result 1 – Result 4 from the article. The main differences are that uptake of the liability service is not a statistically significant factor in the more restrictive Model 1 and Model 2, although the estimated magnitude of the effect is about the same. In Model 2 and Model 3, the effects of tax over-withholding are no longer significant although the important asymmetry between being in an under- versus over-withholding position nevertheless remains.

In a similar vein, endogeneity concerns arise when including variables related to tax withholding in the regressions of tax liability information service uptake. Using the System 2SLS FE estimator, and the same identification strategy discussed above, Table C.2 presents estimation results that correspond with Model 4 and Model 5 reported in Table 6 of the article. We again fail to reject the hypothesis that these suspect regressors are exogenous. The first-stage regression(s) further reveal that the strength of instrumental variables is strong. For Model 4, the corresponding F-statistic is 179.72 (p<0.0001). For Model 5, the F-statistics are 74.16 (p<0.0001) and 104.98 (p<0.0001). Relative to the models reported in the paper, the main difference of note is that the effect of tax under-withholding in Model 5 is no longer statistically significant. However, the coefficients on the tax withholding variables are statistically different from one another (p=0.020), which continues to support the claim that those in a tax under-withholding position are less likely to purchase the information service.

Table C.1 Tax reporting regressions, System 2SLS FE estimates

Dependent Variable: reported tax liability, in lab dollars (Tax Reported)

	Model 1	**Model 2**	**Model 3**
Tax Withheld	0.15^{***} (0.05)		
Tax Under–withheld		-0.47^{***} (0.14)	-0.42^{***} (0.15)
Tax Over–withheld		-0.03 (0.08)	0.00 (0.08)
Liability Service	94.07 (85.73)	97.99 (83.23)	273.31^{*} (164.70)
Liability Service × Under–withheld			155.33^{**} (69.41)
Compliance Norm	0.10^{***} (0.02)	0.09^{***} (0.02)	0.09^{**} (0.04)
Compliance Norm × Under–withheld			0.01 (0.11)
Fairness	0.14^{***} (0.05)	0.15^{***} (0.05)	0.19^{***} (0.07)
Fairness × Under–withheld			-0.15 (0.13)
Liability Service × Social Interactions			-325.76^{*} (186.94)
Earned Income	0.30^{***} (0.02)	0.38^{***} (0.01)	0.38^{***} (0.01)
High Standard	-18.69^{***} (4.98)	-27.35^{***} (6.04)	-28.88^{***} (6.06)
Itemized	-0.10^{***} (0.02)	-0.14^{***} (0.02)	-0.14^{***} (0.02)
Audit Rate	216.28^{***} (28.73)	192.16^{***} (28.77)	182.09^{***} (28.78)
Liability Service Not Purchased	12.07 (18.77)	13.70 (18.39)	10.94 (18.54)
Social Interactions	-55.02^{***} (18.21)	-55.28^{***} (17.92)	34.03^{*} (18.3)
Participant characteristics			
Risk Averse	34.03^{**} (16.17)	32.29^{**} (15.78)	36.65^{**} (15.86)
Employed Full–time	-18.34 (22.40)	-15.40 (21.87)	-12.76 (21.93)
Female	42.21^{**} (17.57)	43.38^{**} (17.09)	47.48^{***} (17.20)
Age	3.02^{***} (0.97)	3.09^{***} (0.95)	2.89^{***} (0.96)
College Degree	-6.95 (21.29)	-7.24 (20.95)	-8.96 (21.12)
UT Lab	-66.06^{***} (18.98)	-63.94^{***} (18.41)	-61.48^{***} (18.47)
Total Income	0.19 (0.53)	0.09 (0.51)	0.10 (0.51)
Non–matched Income	-46.46^{**} (18.27)	-47.21^{***} (17.81)	-45.77^{**} (17.94)
Asked for Advice	42.85^{**} (21.76)	40.47^{*} (21.41)	36.88^{*} (21.48)
Used Prep Service	31.30^{*} (18.13)	31.91^{*} (17.60)	30.33^{*} (17.86)
Reported Taxes Owed	-36.01^{*} (21.25)	-38.86^{*} (20.69)	-36.01^{*} (20.40)
Filed Jointly	39.28^{*} (22.47)	37.43^{*} (21.93)	40.97^{*} (22.01)
Itemized Deductions	-51.95^{**} (22.14)	-54.43^{**} (21.47)	-53.55^{**} (21.67)
Constant	-177.46^{***} (37.95)	-213.81^{***} (36.67)	-228.51^{***} (37.01)
Exogeneity test (p-value)	0.834	0.698	0.618
Number of Observations	6022	6022	6022
R^2	0.715	0.717	0.711

Notes: *, ** and *** denote estimates that are statistically different from zero at the 10%, 5% and 1% significance levels, respectively. Standard errors (parentheses) are clustered at the participant-level. Participant and decision round fixed effects are included in all models. Coefficients on variables that do not vary across rounds are estimated by regressing the estimated participant fixed effects on these variables.

Table C.2 Liability information acquisition regressions, System 2SLS FE estimates

Dependent Variable: =1 if liability service purchased; =0 otherwise (Liability Service)		
	Model 4	**Model 5**
Tax Withheld	0.019^{**} (0.009)	
Tax Under–withheld (Info)		–0.035 (0.024)
Tax Over–withheld (Info)		0.009 (0.015)
Compliance Norm (Info)	0.008^{*} (0.005)	0.009^{*} (0.005)
Fairness	0.008 (0.009)	0.009 (0.009)
Earned Income	–0.007 (0.005)	0.002 (0.003)
High Standard	–0.018 (0.012)	-0.029^{**} (0.013)
Itemized	0.0032 (0.005)	–0.001 (0.005)
Audit Rate	0.285^{***} (0.057)	0.271^{***} (0.056)
Social Interactions	–0.080 (0.059)	–0.083 (0.059)
Participant characteristics		
Risk Averse	–0.009 (0.065)	–0.007 (0.064)
Employed Full–time	–0.048 (0.082)	–0.047 (0.081)
Female	-0.222^{***} (0.064)	-0.221^{***} (0.064)
Age	–0.002 (0.003)	–0.002 (0.003)
College Degree	0.128^{*} (0.071)	0.129^{*} (0.070)
UT Lab	-0.120^{*} (0.069)	-0.115^{*} (0.069)
Total Income	0.000 (0.002)	–0.000 (0.002)
Non–matched Income	0.072 (0.063)	0.070 (0.063)
Asked for Advice	–0.010 (0.077)	–0.014 (0.076)
Used Prep Service	0.020 (0.070)	0.019 (0.069)
Reported Taxes Owed	–0.034 (0.090)	–0.040 (0.089)
Filed Jointly	–0.044 (0.085)	–0.047 (0.085)
Itemized Deductions	–0.014 (0.068)	–0.019 (0.068)
Constant	0.062 (0.117)	0.054 (0.118)
Exogeneity test (p-value)	0.242	0.383
H$_0$: $\beta_{\text{Tax Under–withheld (Info)}} = \beta_{\text{Tax Over–withheld (Info)}}$		z=-2.32, p=0.020
Number of Observations	2970	2970
R^2	0.632	0.633

Notes: *, ** and *** denote estimates that are statistically different from zero at the 10%, 5% and 1% significance levels, respectively. Standard errors (parentheses) are clustered at the participant-level. Participant and decision round fixed effects are included in all models. Coefficients on variables that do not vary across rounds are estimated by regressing the estimated participant fixed effects on these variables. Variables measured in lab dollars are scaled by 100.