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Reminders and Recidivism: Using Administrative Data to Characterize Nonfilers and Conduct EITC Outreach†

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Each year, millions of individuals do not file a tax return despite having income reported by third parties to the United States Internal Revenue Service (IRS). This project uses third-party information reporting and population-level administrative data to identify nonfilers and conduct mailing outreach to nonfilers who were potentially eligible for Earned Income Tax Credit (EITC) benefits.

I. Identifying and Characterizing Nonfilers

The non-filing population in a given year is determined by starting with a list of all valid social security numbers and individual taxpayer identification numbers. This list is then matched to information returns (for example, W-2s, 1099-MISCs, etc.) to determine the set of all individuals who have valid identification numbers and gross income reported to the IRS from third parties. Next, we remove the individuals who are either primary or secondary taxpayers on filed federal income tax returns for that year. The remaining population is considered the non-filer population for that year. For each tax year from 2005 through 2013, there are roughly 11 to 14 million nonfilers between ages 25 and 60, about 60 percent are male, and median gross income from third-party reported information returns is between $9,000 and $11,000.

More recent tax years show slightly higher counts of nonfilers, and this may be because would-be late-filers simply have not yet filed. The counts also illustrate that the number of nonfilers in Tax Year 2007 is noticeably lower than other years. This year corresponds to the Economic Stimulus Act of 2008 which required individuals to file TY2007 returns to receive stimulus checks.[1] This suggests that many nonfilers may be responsive to financial incentives or information on financial incentives for filing tax returns. Nonetheless, the counts also suggest significant recidivism into non-filing following the stimulus year because the counts after the stimulus are similar to the counts before the stimulus.

II. Experimental Analysis

A. *Hypotheses and Experimental Sample*

Individuals with incomplete filing histories may be inattentive to, or unaware of, potential tax refunds from withholdings or refundable tax credits that they may be eligible for. Our primary hypothesis is that reminders about potential EITC benefits may increase awareness of potential tax refunds and hence increase tax

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[1] The maximum amount of the stimulus rebates was $600 per individual. Not all low-income individuals were eligible for stimulus checks or for the full amount of the stimulus. See Ramnath and Tong (forthcoming) for an analysis of the impacts of the economic stimulus on tax filing.

filing. This hypothesis is based on recent work highlighting inattention (DellaVigna 2009, Taubinsky 2013) and reminders (see for example Bergman 2015; Castleman and Page 2015; Royer, Stehr, and Sydnor 2015; Calzolari and Nardotto 2016; Karlan et al. 2016; and Allcott and Taubinsky 2015).

We tested the impacts of reminders using an experimental sample of potentially EITC-eligible nonfilers for tax years 2011 and 2012. To focus on nonfilers who were alive and potentially EITC-eligible, we started with the population of nonfilers for tax years 2011 and 2012 and then filtered out individuals who were deceased as of January 1, 2014, did not have positive earned income in at least one of the study years (TY2011 or TY2012) based on information return data, or were not US citizens or residents. Next, individuals were matched to potential qualifying children using Social Security Administration birth record data. Potential EITC benefits were then estimated based on income information and the number of qualifying children.[2] Individuals who had positive estimated EITC benefits were retained for the experimental population. Lastly, other filters were applied (such as receipt of combat pay based on an assumed extension to file, a past or present EITC ban, or any current enforcement action). The experimental population of potentially EITC-eligible nonfilers from tax years 2011 and 2012 consisted of roughly 6.3 million individuals (2.8 million for TY2011 and 3.5 million for TY2012).

The experimental sample was randomly drawn from this experimental population. First, we randomly drew 200,000 nonfilers from each tax year from the experimental population. National Change of Address data from the United States Postal Service was used to obtain updated address information for this sample. Updated address information was unavailable for about 10 percent of the sample. From the roughly 360,000 individuals with verified address information, 200,000 individuals were randomly selected for treatment (100,000 from each tax year), and the remaining individuals were assigned to the control group. Guyton et al. (2016) present summary statistics on the treatment and control groups. Average wage income and total gross income are roughly $5,000 and $7,000, respectively, so these potentially EITC-eligible nonfilers have lower income levels than typical EITC recipients (see Manoli and Turner 2015).

[2] An individual's child who was under the age of 19 and not claimed as a dependent on anyone else's return for the study year was considered a qualifying child.

B. *Experimental Treatments*

The analysis consisted of two randomized controlled trials (RCTs) to test the hypotheses described above. The first RCT was in 2014 and the second was in 2015. The 2014 experimental treatments were as follows. The control group received no intervention. Individuals in the treatment group were randomly assigned one of six treatments: (i) an early postcard; (ii) an early brochure; (iii) an early postcard and a late brochure; (iv) an early brochure and a late postcard; (v) an early postcard and a late postcard; or (vi) an early brochure and a late brochure. The early mailing occurred on March 21, 2014, and the late mailing occurred on April 2, 2014. The mail was tracked so that undeliverable mail was identified and recorded. Guyton et al. (2016) provide examples of the postcard and brochure. The mailing documents did not include any personally identifying information; only general information on EITC eligibility, maximum credit amounts, and filing information were included. We have analyzed the different treatment groups separately and did not find any evidence of significant differences across the treatments (see Guyton et al. 2016). For the current analysis, we pool all of the treatment groups into a single treatment group.

The second RCT was conducted during the 2015 tax-filing season, and it built upon the 2014 RCT. The experimental sample for the 2015 RCT was individuals in the 2014 RCT who filed their TY2013 tax returns during the 2014 tax-filing season after the 2014 experimental mailings were sent out. Out of this sample, 30,000 individuals were randomly selected for treatment and the remaining individuals were retained as a control group. This treatment group received two identical experimental postcards that were mailed on February 23, 2015, and March 23, 2015. The experimental postcards for the 2015 RCT were the same as those sent out in the 2014 RCT, but the wording was updated for the 2015 tax-filing season and deadlines.

Table 1—2014 RCT Impacts on Filing

	No controls		
	Treatment	Control	Difference
Fraction filing TY2010 return	0.021 (0.000)	0.015 (0.000)	0.006 (0.001)
Fraction filing TY2011 return	0.046 (0.001)	0.037 (0.000)	0.009 (0.001)
Fraction filing TY2012 return	0.112 (0.001)	0.105 (0.001)	0.008 (0.001)
Fraction filing TY2013 return	0.378 (0.002)	0.368 (0.001)	0.010 (0.002)
Fraction filing any return	0.402 (0.002)	0.389 (0.001)	0.013 (0.002)
Fraction filing multiple returns	0.113 (0.001)	0.103 (0.001)	0.010 (0.001)
Fraction filing TY2014 return	0.322 (0.001)	0.322 (0.001)	−0.001 (0.002)

Notes: Column 3 shows the difference between treatment and control group. Standard errors are in parentheses.

C. *Outreach Results*

Table 1 presents the main empirical results from the 2014 RCT. The table presents the filing fractions for the treatment and control groups separately and for prior-year tax returns (TY2010–TY2012), current-year tax returns (TY2013), and the next-year tax returns (TY2014). The table highlights that receiving treatment increased filing rates for current and prior-year returns by roughly 0.5 percent to 1 percent. More specifically, the treatment group was more likely to file multiple returns than just one or zero returns, suggesting that the specific informational content of the experimental reminders may have increased awareness regarding filing unfiled prior-year returns. As a result of the higher filing rates, the treatment group had higher rates of EITC claiming than the control group. Additionally, the treatment group had higher likelihoods of receiving refunds and paying taxes. Some individuals paid taxes owed to the IRS because they voluntarily reported self-employment income or because they filed as married filing jointly and the combined income of the tax unit was sufficiently high to owe taxes.

The results from Table 1 also show that the treatment and control groups had virtually identical filing rates for TY2014 returns which were filed one year after the 2014 RCT treatments were sent out. Thus, the mailing did not have persistent effects; the treatment appears to only have addressed inattention in the year it was sent out.

Table 2—2015 RCT Impacts on Filing TY2014 Tax Returns

	Fraction filing TY2014 return		
	Treatment	Control	Difference
Full 2015 RCT sample	0.675 (0.003)	0.631 (0.001)	0.044 (0.003)
Subsamples			
In 2014 RCT control group	0.678 (0.004)	0.635 (0.002)	0.043 (0.005)
In 2014 RCT treatment group	0.673 (0.004)	0.629 (0.002)	0.045 (0.004)
Balance due on TY2013 return	0.578 (0.010)	0.477 (0.004)	0.101 (0.011)
0 Balance due or received refund from TY2013 return	0.685 (0.003)	0.654 (0.002)	0.031 (0.003)
Had preparer for TY2013 return	0.688 (0.004)	0.632 (0.002)	0.056 (0.004)
Self-prepared TY2013 return	0.661 (0.004)	0.630 (0.002)	0.030 (0.005)

Notes: Column 3 shows the difference between treatment and control group. Standard errors are in parentheses.

Table 2 presents the results from the 2015 recidivism RCT. The 2015 treatment increased filing and EITC participation, even though the sample population all filed a TY2013 return in the prior year. The results for the control group indicate that roughly 63 percent of the 2013 filers filed TY2014 returns, and the treatment increased this filing rate by 4 percent to 67 percent. Moreover, results for the 2014 and 2015 treatment and control groups indicate that there were no statistically significant differences in the effects of the 2015 outreach based on whether or not individuals also received treatment in 2014. The effects of the 2015 reminder were not diminished or amplified based on having received a 2014 reminder.

Furthermore, the results for the control group show that individuals with a previous balance due had a lower likelihood of filing than individuals with a previous refund. This is consistent with previous work on recency effects (Hogarth and Einhorn 1992; Cushing and Ahlawat 1996; Davelaar et al. 2005) and the withholding phenomenon (Schepanski and Shearer 1995; Elffers and Hessing 1997; Yaniv 1999; and Fochmann and Wolf 2015). Only 48 percent of individuals who had a balance due on the 2013 return filed

TY2014 returns, and the treatment increased filing to about 58 percent. Individuals who previously filed tax returns and had a balance due may have had particularly low expectations for getting a refund or potential refund amounts compared to people who previously filed and received refunds, and the IRS mailings may have been particularly effective at increasing expectations of tax refunds for these individuals. It is also possible that the IRS mailings conveyed the message that the IRS expected recipients to file, particularly for individuals who previously owed balances. The results in Table 2 also indicate that reminders appear to have been more effective among individuals who used a paid tax preparer to file their 2013 return.

We note that about 50 percent of individuals in the experiment who previously owed a balance due in 2014 qualified for a refund in 2015. Thus, it may be erroneous or suboptimal for some individuals to conclude that they are likely to owe a balance due in the current year simply because they owed a balance due in the previous year.

IV. Conclusion

Our analysis demonstrates how third-party information reporting and population-level administrative tax data can be used to identify nonfilers and conduct mailing outreach. This research lays the foundation for the development of research and data products that allow aggregate identification of underserved populations and outreach methods that can overcome barriers to tax benefit take-up.

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