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DOES INFORMING EMPLOYEES ABOUT TAX BENEFITS INCREASE TAKE-UP? EVIDENCE FROM EITC NOTIFICATION LAWS

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Incomplete take-up of the Earned Income Tax Credit (EITC) is a source of persistent policy concern, with an estimated one-fifth of eligible households failing to claim the credit. To promote take-up, a growing number of jurisdictions require employers to provide EITC information to employees. We study the effect of these requirements, linking state and time variation in the adoption of the notification laws to administrative tax data. Our preferred specification yields precise null effects on EITC claiming, filing behavior, and labor force participation. The results cast doubt on the effectiveness of the notice requirements as implemented and suggest further research into other avenues for increasing tax benefit take-up.

Keywords: EITC, welfare programs, information provision, notification law

JEL Codes: K34, H53

I. INTRODUCTION

Among the most important anti-poverty programs in the United States today is the Earned Income Tax Credit (EITC). Over 27 million households received an income transfer through the EITC in 2016, representing 20 percent of all taxpayers and 44 percent of taxpayers with children (Internal Revenue Service, 2017b). For the low-income taxpayers who claim the credit, the monetary benefits are significant. The average credit amount among claimants is about $2,500, and for taxpayers with multiple children, the value of the credit can exceed $6,000. A large body of research documents a range of benefits associated with the EITC for the families that receive it, from financial security (Halpern-Meekin et al., 2015) to health outcomes for adults and children (Hoynes, Miller, and Simon, 2015; Evans and Garthwaite, 2014). Despite its benefits, incomplete take-up of the EITC by eligible households is an issue of persistent policy concern (National Conference of State Legislatures, 2018), with

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recent estimates suggesting that approximately 20 percent of those qualifying for the credit (about 5 million households per year) do not claim it (U.S. Census Bureau, 2014).[1]

To increase EITC take-up, a growing number of jurisdictions require employers to provide informational notices about the EITC to their employees. As of 2016, such laws covered approximately 46 million employees, or 28 percent of all U.S. employees. We study the effect of these laws by linking state and time variation in their adoption to administrative tax data on EITC claiming, tax filing, and employment. Drawing on the universe of U.S. tax data allows us to minimize variability in our estimated coefficients caused by sampling error and to study heterogeneity in the effect of the laws on employee behavior.

Our results provide no evidence that EITC notification laws increase EITC take-up, at least as they are currently being implemented. In our simplest difference-in-differences specification, we find that a state's adoption of a notification law is associated with a modest *decline* in the share of employees claiming the EITC. We interpret this surprising result as most likely being due to secular trends in EITC claiming in the states in which the requirement is adopted — a violation of the parallel trends assumption underlying the analysis. If, however, adoption of state notification laws is uncorrelated with non-trend innovations in EITC claiming behavior in the state, accounting for the trends yields an unbiased estimate for the notification laws' effect. Once we include state trends in our analysis, the estimated effect of the notification laws on the share of employees claiming the EITC declines in magnitude to near zero. This null effect is precisely estimated, with a 95 percent confidence interval (CI) that excludes increases in the EITC claim rate of 0.35 percentage points or more.

In additional analyses, we investigate why notification laws appear unsuccessful at raising EITC take-up. Our results suggest the laws do not affect the rate of tax filing, labor force participation, or EITC claiming among filers. Restricting the analysis to very low income or childless employees yields estimated effects that are slightly larger but still statistically indistinguishable from zero. We also investigate potential non-compliance by employers and the possibility that employees throw out the notices without reading them as possible factors contributing to the null effect of the laws but do not find evidence supporting these explanations. We conclude by discussing approaches other than raising awareness of the EITC that may be more effective for increasing take-up of the credit.

A number of recent studies investigate the effect of EITC knowledge, taxpayer behavior, and benefit take-up. Bhargava and Manoli (2015) and Manoli and Turner (2017) study notices and claiming forms sent by the Internal Revenue Service (IRS) to tax filers who appeared eligible for, but did not claim, the EITC. They find that these interventions significantly raise the rates at which taxpayers receiving the notices claim the EITC. Along similar lines, Chetty and Saez (2013) study an experimental interven-

[1] A related concern, which has received at least as much policy attention (especially by critics of the EITC), is over-claiming of the credit by taxpayers who fail to meet its eligibility requirements.

tion in which tax preparers explain the EITC's incentive effects to taxpayers claiming the credit and find that taxpayers who receive this information are more likely to report subsequent year income that generates a higher credit amount.

We contribute to this line of research by studying an intervention aimed at promoting EITC awareness that has already been widely adopted and that additional jurisdictions are currently considering adopting. Unlike the studies described above, the policy we focus on is aimed not only at current tax filers but also at non-filers who may be eligible for the EITC. This difference is significant given recent estimates that approximately two-thirds of eligible households failing to claim the EITC do not file a tax return in the first place (U.S. Census Bureau, 2014). In addition, we shed light on the mechanism underlying whether various policy efforts to raise take-up will be successful. For example, the IRS-provided EITC notices studied by Bhargava and Manoli (2015) and Manoli and Turner (2017) may raise take-up either by increasing awareness or by simplifying the credit-claiming process. By focusing on employer-provided notices, our results can isolate the effect of interventions that provide awareness alone, without a change in the credit-claiming process. This distinction is important because EITC outreach campaigns of the type commonly undertaken by local governments and non-profit organizations can increase awareness of the credit but typically cannot alter the credit-claiming process.

Another recent paper that studies the link between EITC awareness and take-up is Guyton et al. (2016), which analyzes the effect of EITC informational mailings sent to non-filing households that were identified from administrative data as likely eligible for the credit. The study finds small but statistically significant effects of the notices on EITC take-up. Our study complements this research, as well as the EITC take-up studies cited above, by shedding light on a type of EITC awareness intervention that realistically can be required of employers — since entities other than the IRS typically lack information about which households have not filed a tax return or are likely to be eligible for the EITC. In a related context, Jones (2010) documents small effects of an employer-run program designed to increase take-up of the Advance EITC — a program that previously allowed EITC recipients to spread their benefit receipt over the course of the year. This intervention is similar to ours in that it was targeted to employees via their employer; however, although it also relates to the EITC, the factors that might impede EITC take-up are likely quite different from those that would impede participation in the Advance EITC program, conditional on claiming EITC in the first place (Currie, 2004; Jones, 2010).

Outside of the EITC setting, several papers examine the relationship between benefit knowledge and take-up in other contexts. Several studies report the results of experimental interventions and other outreach designed to increase take-up of the Supplemental Nutrition Assistance Program (SNAP), with mixed results (Brandon, Plotnick, and Stockman, 1994; Dickert-Conlin, Fitzpatrick, and Tiehen, 2014; Daponte, Sanders, and Taylor, 1999). In a different context, Bettinger et al. (2012) report positive results on educational loan take-up from an in-person intervention that provided information about available financial aid options as well as a simplified aid application process. In contrast

to these positive results regarding financial aid, Bergman, Denning, and Manoli (2018) study an informational intervention about tax credits for higher education and report a null result on college enrollment. Because the credits that were the focus of that study also operate through the tax code, the Bergman, Denning, and Manoli results may be particularly comparable to our setting. On the other hand, educational credit take-up may face barriers with respect to increasing college enrollment that do not apply in the EITC context, such as the fact that the information must come at the right time to induce both the college application and matriculation.

The remainder of the paper proceeds as follows. Section II provides background information about EITC take-up and about the notification laws we study. Section III describes our data. Section IV describes our empirical strategy. Section V presents our results. Section VI presents two robustness checks: a synthetic control analysis and a randomization inference approach for conducting statistical inference. Section VII concludes by briefly discussing the implications of our findings for efforts to increase EITC take-up. The Online Appendix contains supplementary analyses.

II. BACKGROUND

This section provides background information about the EITC, the problem of incomplete take-up, and the EITC notification laws that some jurisdictions have enacted.

A. Incomplete Take-Up of the EITC

The EITC is a refundable tax credit for low-income taxpayers. The credit amount varies based on the income and composition of the taxpayer's household.[2] In 2016, the maximum credit ranged from $506 for a taxpayer with no qualifying children to $6,269 for a taxpayer with three or more qualifying children. The income limit for claiming the credit also varies by the number of children in a household: in tax year 2016, the maximum income at which married households could claim the credit was $20,430 for taxpayers with no qualifying children, $44,846 for taxpayers with one qualifying child, $50,198 for taxpayers with two qualifying children, and $53,505 for taxpayers with three or more qualifying children. Because the EITC is administered through the tax code, individuals wishing to benefit from the credit must file a tax return. In addition to the federal EITC, a number of states operate their own EITC that supplements the federal credit for certain taxpayers (Rueben, Sammartino, and Stark, 2017). For a recent summary of the voluminous research that has been done on the EITC, see Nichols and Rothstein (2015).

Since the creation of the EITC, a persistent source of policy concern has been incomplete take-up, i.e., that some individuals who are eligible to claim the credit fail to do so. This lack of take-up is potentially worrisome for at least two reasons. First, non-

[2] By "household," we mean an individual's tax-filing unit, which, for purposes of the EITC, includes the income of a taxpayer along with his or her spouse. For a detailed explanation of the rules for claiming the EITC, refer to Internal Revenue Service (2017c).

claiming households miss out on the income transfer associated with the credit and the corresponding welfare gain. Second, if eligible households are not aware of the EITC, they may fail to respond to the pro-work incentives built into the credit. Throughout, we use the phrase "EITC participation rate" to refer to the share of EITC-eligible individuals within a population who claim the credit and "EITC claim rate" to refer to the share of a population that claims the credit (regardless of eligibility).[3]

Estimating the EITC participation rate is challenging because many of the potentially eligible but non-claiming individuals do not file a tax return in the first place, making it difficult for researchers to assess their eligibility. In addition, self-reported survey data may not reliably characterize the income of potentially eligible households or whether households actually received the credit. Researchers have surmounted these problems, in part, by linking survey data, which includes information about family composition for households that do and do not file a return, with administration tax data, which includes reliable information about credit claiming as well as reliable information about certain sources of income, such as employer wages (Plueger, 2009; Jones, 2014; Dickert-Conlin, Fitzpatrick, and Hanson, 2005). The most recently available estimates of the EITC participation rate suggest that approximately 80 percent of eligible taxpayers claim the credit, with taxpayers whose potential credits are the largest disproportionately likely to claim (U.S. Census Bureau, 2014). Consistent with this view, in 2014, the average unclaimed credit among EITC-eligible non-claimants was approximately $1,554,[4] whereas the median unclaimed credit among this group was estimated to be between $250 and $500. The EITC participation has remained fairly stable in recent years (Internal Revenue Service, 2017a), although there have been fluctuations in both eligibility and take-up coinciding with business cycles (Jones, 2014).

Of households that qualify for the EITC but do not claim it, approximately two-thirds do not file any tax return (U.S. Census Bureau, 2014). Thus, in addition to failing to claim the EITC, such households may be missing other refundable credits for which they qualify, such as the child tax credit, or a refund of withheld wages. On the other hand, some EITC-eligible non-filing households have positive tax liability; if that liability is large enough, they can face a net negative financial incentive to filing a tax return. Of those households that would be due a refund upon filing a return, potential explanations for non-filing likely include the financial cost of tax preparation,[5] the hassle of record-keeping and filing itself, or possibly social stigma against claiming government transfers such as the EITC (Currie, 2004).[6] Finally, it could be that some individuals would qualify for a substantial refund if they were to file, but

[3] Because the notification laws mandate the provision of information to employees, for the most part, we will focus on the EITC claim rate among this group.

[4] This estimate is based on the authors' calculations from the data reported in U.S. Census Bureau (2014) and other publicly released statistics for tax year 2013.

[5] Virtually all EITC-eligible households qualify for free methods of assisted tax preparation, such as the Volunteer Income Tax Assistance and Free-File programs. However, take-up of such programs is extremely low (Goldin, 2017).

[6] For an interesting discussion of such issues in the context of the EITC, see Halpern-Meekin et al. (2015).

because they lack knowledge of the EITC or other refundable credits, they anticipate that the costs of filing will not be worth the benefits and, hence, choose not to file.

In sharp contrast to non-filers, a large majority (91.5 percent) of EITC-eligible households that do file a return claim the credit (U.S. Census Bureau, 2014). Those that do not may fail to do so for some of the same reasons as non-filers, such as social stigma, or lack of awareness that they qualify.

B. EITC Notification Laws

As of 2015, seven states and one city have enacted legislation that requires employers to provide written information about the EITC to their employees. As summarized in Table 1, these laws differ in the frequency with which notices are required to be issued, the pool of employees required to be notified, and the informational content of the notices themselves.

With respect to the frequency of the required notification, notification laws fall into two main categories. California, Illinois, Maryland, New Jersey, Philadelphia, and Texas require employers to notify employees about the EITC annually. Most of the jurisdictions in this group mandate that employers provide the notice either before March 1 or within one week of distributing an employee's Form W-2.[7] By contrast, Louisiana and Virginia require the posting of EITC notices year-round in the employee's workspace.[8] In addition, Louisiana, but not Virginia, requires employers to provide a one-time EITC notice directly to new hires.

Jurisdictions also vary concerning which employees are covered by the notification requirement. In Illinois, Louisiana, Maryland, and New Jersey, employers are required to provide notices only to those employees whose annual earnings from the employer fall below the maximum income amount that could potentially qualify them for the credit. In 2014, the last year of our sample, this threshold was $52,427, corresponding to the EITC income limit for a married taxpayer claiming three or more qualifying children.[9] In California, Texas, and Philadelphia, by contrast, employers are required to notify employees of all incomes, even those whose wages paid by the employer disqualify them from receiving the credit. California and Illinois additionally limit the notification requirement to employees covered by the state's unemployment insurance system. There are benefits and costs to each of these approaches. On the one hand, although employers do not generally know the full household income, marital status, or

[7] An exception is Maryland, which requires only that employers comply by December 31st of each calendar year — potentially far from the start of the tax filing season. In conversations with the authors, the Maryland Comptroller's office estimates that most employers send the notices between October, when the Comptroller's office sends employers a reminder about the employee notification requirements, and December 31st.

[8] Louisiana exempts employers with fewer than 20 employees.

[9] The income threshold for Louisiana appears to coincide with the income limit for claiming the EITC of a single parent with three or more qualifying children.

Table 1
State and City EITC Notification Laws

(1) Jurisdiction	(2) First Year Effective	(3) Scope	(4) Yearly Notice	(5) Required Notification Text
CA	2007	All employees covered by unemployment insurance.	Y	Specified text (Appendix Figure 3a)
IL	1992	All employees covered by unemployment insurance who earn gross wages less than the maximum EITC income limit.	Y	IRS Notice (N797) (Appendix Figure 3d)
MD	2012	All employees who earn gross wages less than the maximum EITC income limit.	Y	Specified text (Appendix Figure 3e)
Philadelphia, PA	2014	All Philadelphia residents whose employers withhold taxes from their wages or who work as independent contractors.	Y	Specified text and notice design (Appendix Figure 3b)
NJ	2005	All employees who earn gross wages less than the maximum EITC income limit.	Y	Specified text and notice design (Appendix Figure 3f)
TX	2010	All employees.	Y	IRS Notice 797
LA	2005	Individual notification required for all new employees who earn gross wages less than an income threshold published annually by the Louisiana Workforce Commission. Notification poster is required to be displayed by all employers with 20 or more employees.	N	New employees: IRS Notice 797. Poster: specified text and design.
VA	2009	All employees.	N	Specified text and design.

Notes: "Scope" refers to the universe of employees who are required to be provided with notices under the law. The "maximum EITC income limit" refers to the maximum income at which a married taxpayer with three children would qualify for a positive value of the credit. "Yearly Notice" refers to whether the jurisdiction requires employers to provide an annual individual notice to employees (as opposed to displaying a poster).

number of EITC-qualifying children of their employees, the employers would know if the wages they pay to an employee exceed the maximum income threshold at which the employee could qualify for the EITC (even assuming the employee was married with three or more qualifying children). Hence, limiting the notice requirement to employees with wages in the potentially qualifying range may be a good way to limit the cost of the program without sacrificing much of the potential benefit. On the other hand, even employees who earn too much to qualify for the EITC may spread information about the credit to others who are eligible for it, such as their neighbors, children, or co-workers (Chetty and Saez, 2013).

Finally, jurisdictions vary with respect to the content of the notices they require employers to provide. All of the notices inform employees that they may be eligible for the federal EITC. Some also mention employees' potential eligibility for a state EITC (in states where one exists). The notices also differ in their level of detail, with some listing all of the eligibility requirements a taxpayer must satisfy to claim the EITC and others referring employees to IRS publications for details. Six of the notices describe the maximum income at which taxpayers may qualify for the EITC. Only Philadelphia's notice describes the maximum credit amount for which a taxpayer may qualify. Finally, some jurisdictions mandate the exact notice to be provided, whereas others require only that the notice include specific mandated statements. Appendix Figure 1 provides the text of the notification laws in each of the jurisdictions we consider.

In addition to the state and city notification laws, the federal government also requires employers to provide EITC notices to employees from whom they did not withhold income taxes (and who did not claim an exemption from the withholding requirement). The IRS publishes Notice 797 for use by employers in satisfying this requirement (reprinted in Appendix Figure 1). Three states (Illinois, Louisiana, and Texas) allow employers to discharge their notification responsibilities by providing employees with the federal N797 form instead of or in addition to the state-created notice. The federal employee notice requirement has been in place since 1987 and does not vary during our sample period.

III. DATA

Our data are drawn from administrative tax records housed by the IRS. To identify the population of employees potentially affected by the notification requirements, we draw on the universe of wage and tax statements filed by employers (Form W-2). These information returns from employers report salary and wage information to the IRS for the vast majority of employees, regardless of whether the employee files his or her taxes. The information return data do not contain wage information for individuals whose sole earnings are from self-employment or who are paid under the table. We exclude these two groups from our sample: the former lacks an employer to provide the EITC notice and employers in the latter group are unlikely to comply with the notification requirement.

Our baseline sample is constructed from the universe of employees receiving W-2s from U.S. employers in tax years 2000–2014. The jurisdictions that enacted EITC notification laws in these years (and that contribute to the identification of the laws' effects) are California, Louisiana, Maryland, New Jersey, Philadelphia, Texas, and Virginia.[10]

To investigate the effect of the notices, we link the employer-filed information returns to employees' individual income tax returns. We use the tax return data to investigate EITC claiming, tax filing behavior, and labor supply of the employees in our sample. We focus on whether a taxpayer reports the EITC on his or her return, rather than on whether the IRS ultimately accepts that claim. Because not all of the employees in our sample are eligible for the EITC, we also study whether the notices are associated with changes in the rate at which the IRS denies or reduces the EITC claimed on a return.

The variation we study is primarily at the state-year level. The one exception is the city of Philadelphia, which implemented a notice requirement for its employers that did not affect employers located in other parts of the state. To capture this variation, we treat the city of Philadelphia as if it were its own state, separate from the rest of Pennsylvania. Hence, our main analysis uses 52 "states" (the 50 states plus Philadelphia and the District of Columbia) and 15 years (tax years 2000–2014). Because the notification laws govern employers located in the state that passed the law, we define an employee's state as the state in which his or her employer is located. That is, an employee who lives in Wisconsin but who works for a Michigan employer would be assigned the treatment corresponding to Michigan. The variation we study is at the state-year level, so we aggregate the individual data to state-year cells in our main specification. For other analyses, we aggregate subgroups of employees to the state-year level.

IV. EMPIRICAL STRATEGY

To study the effect of the EITC notification laws, we primarily rely on a difference-in-differences estimation design, in which we exploit state-by-year variation in the timing of when states adopted the notification law.[11] The baseline empirical specification is given by

$$y_{st} = \beta NOTICE_{st} + \gamma X_{st} + \alpha_s + \delta_t + \varepsilon_{st}$$

where y_{st} denotes the outcome variable (e.g., the EITC claim rate) for state s in tax year t; $NOTICE_{st}$ indicates whether employers in state s were required to notify employees about the EITC for tax year t; X_{st} reflects time-varying state characteristics; and ε_{st} is the error term.

[10] We define a state to have adopted a notification law in the first tax year for which the law is effective. For example, a state might require an employer to send EITC notices to its employees between January and March 2012, to alert the employee about the EITC for purposes of filling out the employee's 2011 tax return. We would define this state's notification law as having been effective beginning in year 2011.

[11] We complement this approach with a synthetic control analysis in Section VI.

The identifying assumption underlying this approach is the standard parallel trends assumption, i.e., that the outcomes we study would have evolved similarly in the treatment and control states if the treatment states had not enacted a notification law (apart from those differences explained by the variables for which we control). One potential concern with this assumption in our setting is the possibility of mean reversion: the states that chose to adopt notification laws may have experienced a recent decline in EITC take-up and would have experienced an increase in take-up even absent adoption of the law. To assess this possibility, we investigated legislative transcripts and sponsor statements associated with passage of the legislation in adopting states.[12] In each state we studied, supporters of the bill justified it in terms of helping low- and middle-income residents of the state. In some cases, media coverage of the bills did make reference to incomplete take-up of the EITC but in no cases appeared to reference a recent decline or increase. In addition, bills adopting the notification requirement were introduced but did not pass one to five times in at least three of the treatment states (California, Maryland, and New Jersey) before ultimately succeeding, which suggests that the motivation for the requirement may have been present in years other than the specific year of adoption. Finally, note that a mean-reversion story of enactment would bias the difference-in-differences estimates upwards, assuming that states would be most likely to enact notification laws when EITC take-up was abnormally low rather than abnormally high.

Second, jurisdictions that implement an EITC notification law might tend to take other steps at the same time to encourage EITC take-up that would conflate the effect of the notification laws, such as expanding the resources allocated to EITC outreach. We investigated this concern in our treatment jurisdictions and found that Philadelphia initiated a new EITC outreach campaign in the same year that it enacted the employer notification requirement (Philadelphia Department of Revenue, 2015). In unreported analyses, we confirm that our results are robust to excluding Philadelphia from the sample. As above, to the extent such programs confound the estimated effect of the notification law, they would bias us towards finding a positive effect of the notification laws on take-up.

Finally, other violations of the parallel trends assumption are possible as well. One concern is that the adopting states happen to be characterized by different (secular) trends in take-up over the sample period compared to the non-adopting states. Below, we investigate this concern by considering the robustness of our results to the inclusion of state-specific time trends and to alternative constructions of the control group.

V. RESULTS

This section presents the results of our analysis. Subsection A provides descriptive statistics for our sample. Subsection B presents our main analysis: investigating the effect of the notification requirement on EITC take-up as well as other margins on which

[12] Specifically, we focused on each adopting state other than Virginia and Louisiana, where the legislative history materials were not readily available to us.

the notices may affect behavior. Subsection C investigates the effect of the notification laws on labor supply. Subsection D investigates heterogeneous treatment effects. Subsection E considers possible explanations for why the notice requirements do not appear to increase EITC claiming.

A. Sample Characteristics

Table 2 provides descriptive statistics for our sample, broken out by whether the state implemented a notification requirement by the conclusion of our sample period. The figures in the table are from tax year 2014, the final year covered by our data.

Table 2

Characteristics of Employees by Notification Law Coverage

	(1) All States	(2) States with Notification	(3) States without Notification
Total employees (thousands)	158,536	48,756	109,253
Covered employees (thousands)	44,510	44,510	0
Age (mean)	41	41	41
Fraction female	0.487	0.489	0.486
Filing rate	0.891	0.891	0.891
Wages (mean – $)	42,428	46,766	40,406
EITC claim rate (mean)	0.164	0.162	0.165
Population-weighted EITC participation rate	0.796	0.783	0.803
Estimated fraction of EITC-eligible, non-claiming employees	0.032	0.034	0.031
	Characteristics Conditional on Filing		
Fraction married filing jointly	0.478	0.474	0.479
Children per household (mean)	0.702	0.727	0.691
Household income (mean – $)	79,291	86,975	75,751
EITC take-up rate (mean)	0.184	0.182	0.185
Number of states	52	8	44

Notes: "Employee" is defined as a W-2 recipient with positive wages. "EITC claim rate" refers to the fraction of employees who file a tax return claiming EITC. "EITC participation rate" refers to the estimated, population-weighted fraction of individuals eligible for the EITC who file a tax return claiming EITC. Source: IRS. EITC participation rate figures are based on authors' calculations from Internal Revenue Service (2017a). The calculation of EITC-eligible non-claiming employees is described in Section V (subsection A). Quantities are calculated based on data and policy classifications corresponding to tax year 2014.

Approximately 49 million employees worked for employers in states that implemented a notice requirement. Of this group, almost all (approximately 45 million) had wages in the range that was covered by their state's requirement. For context, in 2014, the IRS received information returns for 159 million distinct employees in the United States. The notice requirements thus apply to the employers of approximately 28 percent of all U.S. employees.[13]

Employees in states with a notification law exhibit similar demographic characteristics to those in states without a notification requirement. The makeup of the two groups is similar based on age, gender, marital status, and the number of children claimed per household. Tax filing rates are also similar in the two groups of states. However, the treatment and control states differ dramatically with respect to income, with mean wage income about 16 percent greater among employees in the treatment states than in the control states and total household income about 15 percent greater. Despite the difference in income distributions, the fraction of employees claiming the EITC is similar in the two groups of states.

Utilizing the state-by-state EITC participation rates published by the IRS for tax year 2014 (Internal Revenue Service, 2017a), we can roughly estimate the fraction of EITC eligible but non-claiming employees in the adopting and non-adopting states. Starting with the adopting states, 16.2 percent of employees claim the EITC. Assuming an EITC overclaim rate of 24 percent,[14] approximately 76 percent of these employees are, in fact, eligible to claim the credit, or 12.3 percent of all employees. The population-weighted EITC participation rate among the adopting states is 78.3 percent,[15] so the total share of EITC-eligible employees in the adopting states is $\frac{0.123}{0.783} \approx 0.157$. Hence, the share of employees in the adopting states who are both eligible for the credit and fail to claim it is 3.4 percent, since $0.157 - 0.123 = 0.034$. Similarly, among the non-adopting states, the population-weighted participation rate is 80.3 percent and the EITC claim rate among employees is 16.5 percent, so the estimated share of employees that qualify for the credit but do not claim it is 3.1 percent. These estimates provide context for interpreting our results; if the notification caused every eligible but previously non-claiming employee to learn about the EITC and begin claiming it, one would expect to observe an increase in the claim rate of just over 3 percentage points.

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[13] This calculation assumes that all employees for whom the employer provides an information return and whose wages are in the specified range are covered by the regulation. As described above, a small number of these employees are exempt from the regulation in certain states. In Illinois, for example, employers are not required to provide notices to employees who are exempt from the state's unemployment insurance system, suggesting that our calculation will yield a slight overestimate. On the other hand, in most states, employers are required to provide notices to employees even if there is no information reporting to the IRS, potentially biasing our calculation in the opposite direction.

[14] This figure comes from Internal Revenue Service (2014). This "overclaim rate" is an overestimate of the fraction of EITC-claiming taxpayers who are not eligible for the credit, since it treats as an overclaim EITC-eligible taxpayers who claim more EITC than is allowable. In addition, the reported overclaim rate may differ between the employee and non-employee populations.

[15] We assume that the participation rate among employees (our sample) is the same as the participation rate among the employed and self-employed (reported by the IRS). To our knowledge, the EITC participation rate among employees is not reported by the IRS. For Philadelphia, we use the overall participation rate for the state of Pennsylvania.

B. Effect of the Notification Requirement on EITC Claiming and Tax Filing

Figure 1 presents temporal data on EITC take-up among employees in each of the states that adopted an employee notification law during our sample period. In most states, EITC claim rates increased slightly over the sample period, with declines in some states in the early years of the Great Recession and increases in most states as the economy began to recover. The figure provides no visual evidence that the EITC claim rate increased systematically following a state's adoption of a notification law. However, the raw data in the figure may be confounded by other time-varying trends within or across states.

Table 3 presents the results from our main regression analysis, described in Section IV. The dependent variable is the EITC claim rate, i.e., the fraction of employees who claim the EITC in a given state in a given year.[16] Standard errors are clustered by state.[17] Column 1 presents results from the bare-bones regression of the EITC claim rate on state and year fixed effects. Surprisingly, the adoption of an employee notification law is associated with a statistically significant decline in the state's EITC claim rate of 0.9 percentage points (approximately 6 percent of the mean claim rate in the control states). One possibility is that the results in Column 1 are confounded by demographic or economic changes in states that adopt notification laws. To address this, Column 2 introduces time-varying, state-level demographic controls to the regression, consisting of population size, mean age, mean wage, fraction of households in the state that are linguistically isolated,[18] and variables denoting the share of employees whose wages fall below the EITC maximum eligibility cutoff and the eligibility cutoffs for 0 and 1 qualifying children, respectively.[19] Adding these control variables to the specification reduces the magnitude of the estimated decline in the EITC claim rate, but the estimated effect remains negative and statistically significant. Controlling additionally for annual measures of state-level transfer program generosity of state EITC, Temporary Assistance for Needy Families (TANF), and SNAP yields similar results as well (Column 3).[20]

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[16] Because the denominator of the EITC claim rate is the number of employees in the state, it can be affected by secular changes to the state's labor force as well as changes in labor supply resulting from growing awareness of the EITC associated with the EITC notification laws we study. Below, we control for demographic changes that might affect labor supply within a state. In Section V (subsection C), we investigate labor supply effects of the notification laws.

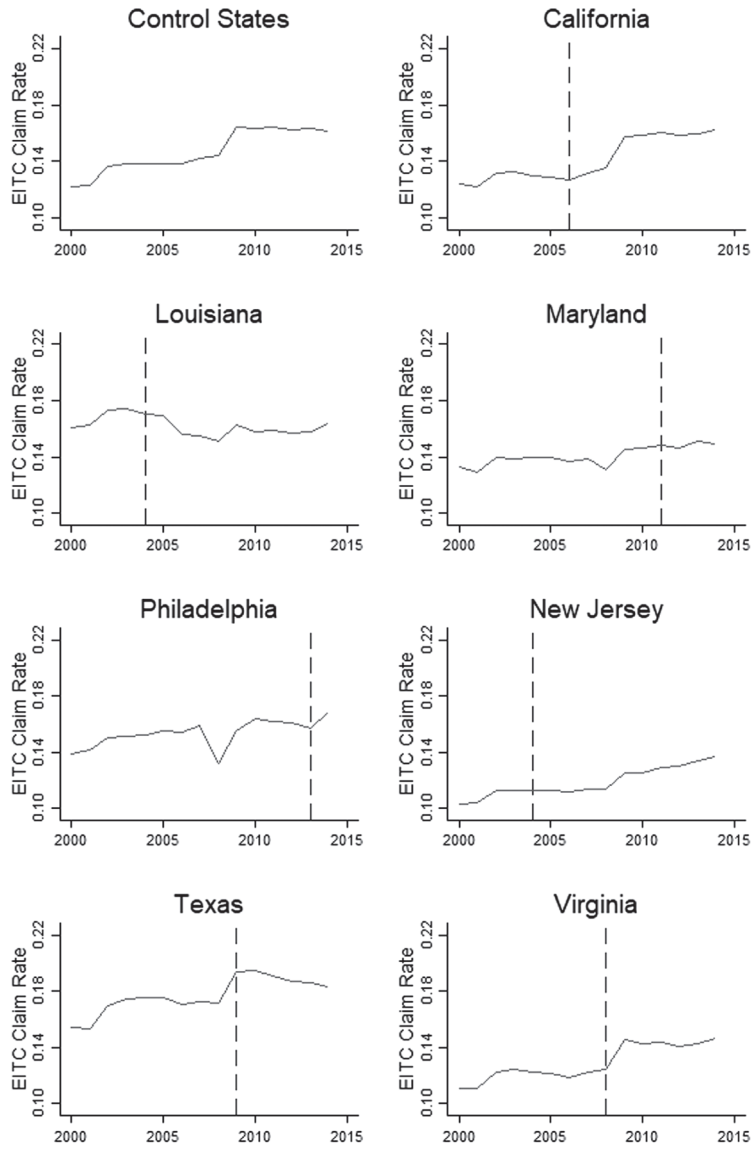
[17] Because clustered standard errors are known to perform poorly when there are relatively few treated clusters (Conley and Taber, 2011), below, we also consider a randomization inference test, which yields similar results.

[18] A linguistically isolated household is defined as a household in which all individuals over 14 years of age cannot speak English at all or cannot speak English very well. Data on linguistic isolation comes from the Decennial Census (for year 2000) and the American Communities Survey (for years 2005–2014). The variable is missing in years 2001–2004.

[19] Note that it is household, rather than individual, income that is relevant to determining EITC eligibility, but we do not observe household income for non-filing employees. A concern with including the economic control variables in the regression is that the effect of the laws could operate through the EITC, affecting employees' behavior along some of these margins, such as the wage distribution in the state. Online Appendix Table 1 shows that the results are similar when we exclude the state economic variables from the set of included controls.

[20] Data on state transfer program variables come from University of Kentucky Center for Poverty Research (2018).

Figure 1
EITC Claim Rate among Employees



Notes: The figure denotes the fraction of W-2 recipients claiming the EITC by jurisdiction by year. The vertical line indicates the year before the notification law first took effect.

Table 3
Effect of Notification Laws on Employee EITC Claim Rate

	(1)	(2)	(3)	(4)
Notification law	–0.0089*	–0.0053**	–0.0051**	0.0004
	(0.0044)	(0.0015)	(0.0016)	(0.0016)
State and year fixed effects	Yes	Yes	Yes	Yes
Demographic controls	No	Yes	Yes	Yes
Transfer policy controls	No	No	Yes	Yes
State-specific time trends	No	No	No	Yes
Control group mean	0.1471	0.1471	0.1471	0.1471
Observations	780	780	780	780

Notes: In each column, the outcome is the fraction of employees who file a tax return claiming the EITC. "Demographic controls" are log population, log mean age, log mean wage, share of linguistically isolated residents, and variables denoting the shares of employees whose wages fall below the cutoffs for the maximum EITC, one-child EITC, and childless EITC. "Transfer policy controls" are annual measures of generosity for state-level transfer programs such as state EITC, TANF, and SNAP. Standard errors clustered by state are in parentheses. Asterisks denote significance at the 1% (***), 5% (**) and 10% (*) levels.

It is difficult to imagine a plausible theoretical mechanism by which the adoption of EITC notification laws would reduce EITC claiming.[21] An alternative explanation for our findings is that, in violation of the identifying assumption described in Section IV, the states that adopt employee notification laws are characterized by secular time trends in EITC claiming not captured by the time-varying control variables included in Columns 2 and 3. In some cases, examining pre-treatment trends can shed light on this possibility. Figure 2 presents an event study analysis, using the following specification:

$$y_{st} = \sum_{j=-4}^{4} \beta^{j} NOTICE_{st}^{j} + \beta^{5'} Notice_{st}^{5'} + \beta^{5''} Notice_{st}^{5''} + \gamma X_{st} + \alpha_s + \delta_t + \varepsilon_{st}$$

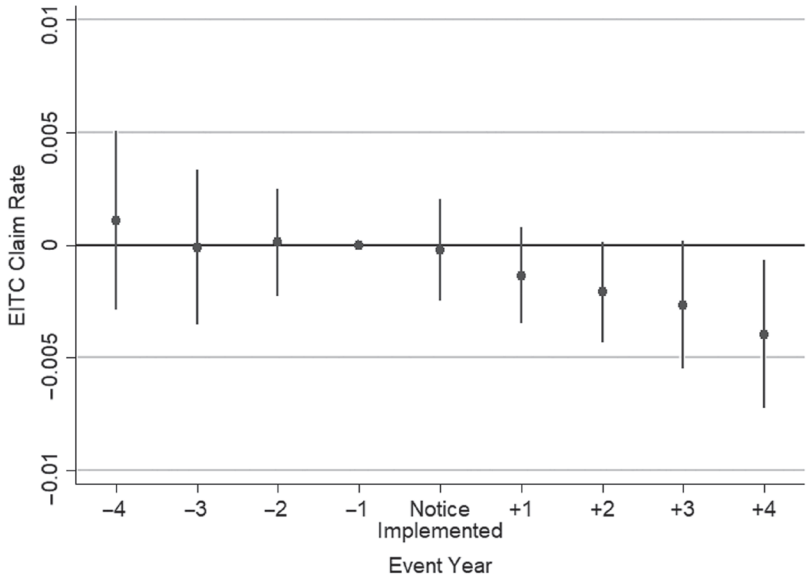
where $NOTICE_{st}^{j}$ indicates a notification law was first adopted in state s in year $t - j$, $Notice_{st}^{5'}$ and $Notice_{st}^{5''}$ indicate a notification law was first adopted in state s five or more years before or after t, respectively, and the term corresponding to $j = -1$ is excluded. Although the estimates are quite imprecise, the figure is consistent with the possibility that EITC claim rates began their decline in treatment states in the years before a notification law was adopted.

To further investigate a possible failure of the parallel trends assumption, we next consider a placebo test in which we drop state years in treated states after the law has

[21] One possibility is that the EITC information in the notices alerts some employees who were previously claiming the credit that they are, in fact, ineligible to do so. As described below, we find no evidence to support this explanation.

Figure 2

Effect of Notification Law Adoption: Event Study



Notes: The figure plots estimated coefficients from the event study specification described in Section V (subsection B). The regression includes state and year fixed effects and time-varying state controls. The coefficient for the year prior to the reform is normalized to zero. Vertical bars reflect 95 percent CIs for the estimated coefficients based on standard errors clustered by state.

been adopted and instead assume (counter-factually) that the law was adopted in such states at the midpoint of the pre-treatment years in our sample. For example, California adopted a notification law in 2007, so this exercise retains California observations for years 2000–2006 and assumes the California law was adopted in 2003. The results of this placebo test (Columns 1–3 of Table 4) closely mirror our main analysis, suggesting that secular trends in the treatment states, rather than the notification laws themselves, are responsible for the negative effects we estimate.

Given this evidence that treatment is confounded with secular state trends, we next consider the inclusion of state-specific, linear time trends into the analysis. This specification can be written as

$$y_{st} = \beta NOTICE_{st} + \gamma X_{st} + \varphi_s t + \alpha_s + \delta_t + \varepsilon_{st}$$

where φ_s denotes the slope of the state-specific trend. Once trends have been included, the identifying assumption underlying this analysis is that unobserved, out-of-trend shocks to a state's EITC claim rate must be uncorrelated with adoption of the notification law. Consistent with this assumption, once state-specific trends have been included

Table 4

Placebo Test: Notice Redefined to Midpoint of Pretreatment Years

	(1)	(2)	(3)	(4)
Placebo Notification Law	–0.0089***	–0.0052*	–0.0049*	0.0006
	(0.0025)	(0.0021)	(0.0021)	(0.0009)
State and year fixed effects	Yes	Yes	Yes	Yes
Demographic controls	No	Yes	Yes	Yes
Transfer policy controls	No	No	Yes	Yes
State-specific time trends	No	No	No	Yes
Control group mean	0.1471	0.1471	0.1471	0.1471
Observations	722	722	722	722

Notes: The table replicates the four specifications in Table 3 with the sample limited to pretreatment years and the treatment redefined to the midpoint of the pretreatment period. If a state had an even number of pretreatment years, the treatment was redefined to the midpoint minus one year. In each column, the outcome is the fraction of employees who file a tax return claiming the EITC. "Demographic controls" are log population, log mean age, log mean wage, share of linguistically isolated residents, and variables denoting the shares of employees whose wages fall below the cutoffs for the maximum EITC, one-child EITC, and childless EITC. "Transfer policy controls" are annual measures of generosity for state-level transfer programs such as state EITC, TANF, and SNAP. Standard errors clustered by state are in parentheses. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

in the analysis, the event study analysis (Figure 3) provides no visual evidence of pretreatment trends. Similarly, the placebo exercise described above for the specification with state-specific trends (Table 4, Column 4) yields an estimated coefficient that is near zero and statistically insignificant.

The results of the analysis with state-specific trends are presented in Column 4 of Table 3 (our preferred specification).[22] We estimate the effect of the notification laws to be a 0.04 percentage point increase in the EITC claim rate, corresponding to an increase in the EITC participation rate of approximately 0.3 percent[23] and a reduction in the share of EITC-eligible but non-claiming employees (the EITC participation gap) of approximately 1 percent.[24] In other words, our estimated effect is approximately 1

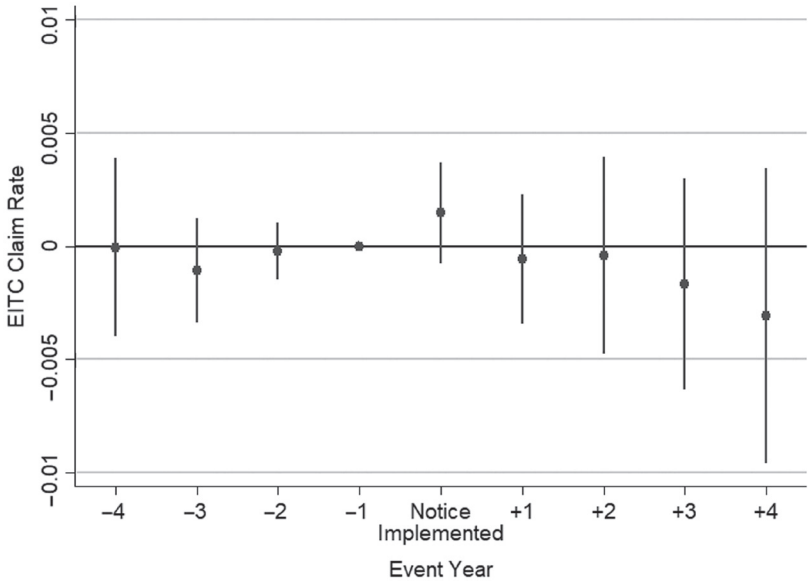
[22] We find similar effects using quadratic state-time trends instead of linear time trends (Online Appendix Table 2).

[23] To calculate the change in the EITC participation rate corresponding to our estimate, recall from the discussion in Section V (subsection A) that within the adopting states, an estimated 15.7 percent of employees are EITC-eligible. Assuming that each additional employee induced to claim the EITC because of the notification law is eligible to do so, a 0.04 percentage point increase in the EITC claim rate corresponds to a $\frac{0.0004}{0.157} \approx 0.25$ percentage point increase in the EITC participation rate, or an increase of approximately 0.3 percent relative to the baseline participation rate of 78.3 percent.

[24] To calculate the change in the EITC participation gap corresponding to our estimate, recall that Table 2 reports that 3.4 percent of all employees in treated states are EITC eligible but non claiming. If the effect of the treatment on the EITC claim rate is entirely driven by a reduction in the share of eligible but non-claiming employees, the treatment would have reduced the size of this group by approximately 0.0004/0.034 $\approx$ 0.012.

Figure 3

Effect of Notification Law Adoption: Event Study with State Trends



Notes: The figure plots estimated coefficients from the event study specification described in Section V (subsection B). The regression includes state and year fixed effects, time-varying state controls, and a linear-state specific time trend. The coefficient for the year prior to the reform is normalized to zero. Vertical bars reflect 95 percent CIs for the estimated coefficients based on standard errors clustered by state.

percent of the magntiude one would observe if the policy caused every eligible but non-participating employee in the treatment states to begin claiming the credit. In addition, the effect of the notification laws on the EITC claim rate is precisely estimated; the 95 percent CI around the point estimate is (–0.0027, 0.0035). When the difference-in-differences identifying assumption is satisfied by the inclusion of state-time trends, we can interpret the results in Column 4 as evidence the notification laws did not raise the EITC claim rate among employees by more than 0.35 percentage points, corresponding to a maximum increase in the EITC participation rate of 3 percent[25] and a maximum

[25] As above, assuming that 15.7 percent of employees in treated states are EITC-eligible and that each additional employee induced to claim the EITC because of the notification law is eligible to do so, a treatment effect of 0.35 percentage points implies a post-treatment participation rate of $\frac{0.123+0.0035}{0.157} \approx 0.806$, which represents a 2.9 percent increase relative to the baseline EITC participation rate of 78.3 percent.

reduction in the EITC participation gap of 10 percent.[26] Thus, although we find that the effect of the notices on the overall employee population (the group required to receive the notices) is quite small, we cannot rule out somewhat larger effects for the subpopulation of eligible but non-claiming employees. The visual evidence from the event study analysis in Figure 3 is consistent with these results as well, in that it does not provide evidence of a statistically significant short- or long-term effect on EITC take-up associated with adoption of the notification laws.

Despite finding evidence that notification laws do not substantially increase EITC take-up, it could be that the laws do have some effect on behavior. One possibility is that the notices may induce some employees to file their taxes who would not have done so otherwise, or, alternatively, increase EITC claiming among those who file. Columns 1 and 2 of Table 5 investigate these possibilities, using our preferred specification (Column 4 of Table 3), with the filing rate and the EITC claim rate among filers as the respective outcome variables. Here, too, our results support the finding of a precise null effect. The point estimate on filing is 0.0001 (95 percent CI: –0.0019, 0.0021). Similarly, the

Table 5

Other Behavioral Effects of Notification Laws

	(1) Filing Rate	(2) EITC Claim Rate (Among Filers)	(3) Log Total Employees	(4) Bunching (Employees)	(5) Bunching (Self-Employed)
Notification law	0.0001	0.0003	–0.0150	0.0011	0.0070
	(0.0010)	(0.0019)	(0.0348)	(0.0010)	(0.0042)
Control group mean	0.9150	0.1612	1,984,979	0.0379	0.1056
Observations	780	780	780	780	780

Notes: Specifications are based on Column 4 of Table 3, with the following five outcomes. Column 1: fraction of employees who file a tax return. Column 2: fraction of employees who claim the EITC (conditional on filing a tax return). Column 3: log quantity of employees in a jurisdiction. Column 4: fraction of employee EITC claimants whose reported earnings are within $500 of the first EITC kink point associated with their household size. Column 5: fraction of all EITC claimants with positive self-employment income whose total reported earnings are within $500 of the first EITC kink point associated with their household size. Standard errors clustered by state are in parentheses. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

[26] As above, assuming that 3.4 percent of employees in treated states are EITC-eligible but non-claiming, and that each additional employee induced to claim the EITC because of the notification law is eligible to do so, a treatment effect of 0.35 percentage points represents an approximately 10 percent reduction in the participation gap, $0.0035/0.034 \approx 0.103$.

estimated effect of the notices on the EITC claim rate among filers is 0.0003 (95 percent CI: –0.0034, 0.0040).[27]

C. Effect of the Notification Requirement on Labor Supply

Because the EITC affects the after-tax return to labor, increasing awareness of the credit could cause employees who receive a notice to adjust their labor supply, or at least their reported income. If the notices do increase EITC knowledge, such knowledge could have either positive or negative welfare effects; for example, it might strengthen the pro-work incentives of the credit (with positive social externalities) or it might emphasize the incentives for taxpayers to manipulate their reported earnings to maximize the amount of EITC for which they qualify.

On the extensive margin, the EITC provides a positive incentive for some individuals to participate in the workforce, depending on how much income the individual's household would have conditional on the individual earning income. For others, the EITC can actually dissuade labor force participation, such as for married individuals facing high marginal tax rates due to their spouse already receiving the EITC. A number of prior studies have documented an increase in labor force participation associated with the introduction of the EITC or its expansion (Meyer and Rosenbaum, 2001). Hence, if the notices are effective at increasing knowledge of the EITC, they may induce employees who receive the notices to remain in the workforce longer than they otherwise would, or they may induce new employees to enter the workforce who learn about the credit from notice recipients. On the other hand, to the extent the EITC disincentivizes labor force participation for some, the net effect of the increased knowledge may be zero, or even negative. Column 3 of Table 5 investigates these labor supply effects, using the log of the total number of employees in a state as the outcome variable. The analysis shows a small and statistically insignificant reduction in the size of the workforce associated with a state's adoption of a notice requirement.[28]

On the intensive margin, the EITC creates an incentive for employees with positive wages to increase their real or reported income when their income places them in the phase-in region of the credit, and it creates an incentive for such employees to reduce their real or reported income when their income places them in the phase-out region of the credit. If the EITC notices increase knowledge of the credit, one might observe an increase in the fraction of taxpayers whose reported income maximizes the credit amount. Following Chetty, Friedman, and Saez (2013), we measure this dimension of EITC knowledge by studying bunching around the EITC kink point where the phase-

[27] Online Appendix Table 3 reports regression results for these outcomes from analyses that do not include state-time trends.

[28] As noted above, inclusion of time-varying state economic variables as controls could bias the estimated effect of the notification law if part of the law's effect operates through those channels. However, Online Appendix Table 4 shows that the results are largely unchanged when these variables are excluded.

in region ends. Specifically, we define the degree of bunching by the fraction of EITC claimants with at least one qualifying child who report income within $500 of the first EITC kink point associated with their household size. Column 4 of Table 5 focuses on bunching by employees, the same population we focus on in our other analyses. Column 5 replicates the analysis for EITC claimants with at least some self-employment income — the population in which Chetty, Friedman, and Saez observe bunching. Many individuals in this group lack an employer and, therefore, would not receive a notice themselves, but nonetheless could learn of the EITC from some other individual who did receive a notice from an employer. With both populations, however, the point estimate on bunching is positive but far from statistically significant. Thus, we observe no evidence that the EITC notices affected taxpayers' labor supply, although these results are not as precise as the results related to EITC take-up and filing behavior.

D. Heterogeneous Treatment Effects

One explanation for the small effect could be that most employees are either ineligible for the EITC or, if eligible, would already claim it absent the notice. As discussed in subsection B, although our estimates allow us to rule out increases in the EITC participation rate of over 3 percent, we cannot rule out the possibility that the notification laws reduce the share of eligible non-claiming employees by up to 10 percent. In finite samples, it is possible that the effectiveness of the notices at raising take-up among this group could be masked by the fact that such individuals represent a small share of all employees. Hence, we might be more likely to observe an effect of the notices on take-up when the analysis is restricted to individuals who are more likely to fall into this (potentially) high-impact group. This section considers several restrictions along these lines.

The first restriction we consider limits the sample population to employees whose wage income potentially qualifies them for the EITC. That is, although a number of the state notification laws require employers to provide EITC notices to all employees (regardless of income), only a subset of those employees are potentially eligible to claim the EITC. For this purpose, we limit the sample to employees whose incomes are below the maximum earned income or adjusted gross income a taxpayer could have and still qualify for the EITC ($52,427 in tax year 2014). This income limit applies to the case in which the taxpayer has three or more EITC qualifying children and will overstate potential eligibility for other taxpayers. We consider analogous specifications for which the sample is further limited, based on the income limit for taxpayers with 1 or 0 children. The results are reported in Columns 1–3 of Table 6. Another potential subgroup in which the notices might have a larger effect is among childless employees, who are known to under-claim the EITC at higher rates than other groups. Although we cannot observe the number of qualifying children living with non-filers, we are able to observe whether a taxpayer has ever claimed a child on his or her tax return in the past. Column 4 of Table 6 limits the sample population to employees who have never

Table 6
Alternative Sample Constructions

	(1) Max Income Eligible	(2) 1 QC Income Eligible	(3) 0 QC Income Eligible	(4) Childless Filers	(5) Paper Filers
Notification law	0.0006	0.0006	0.0024	0.0022	–0.0006
	(0.0022)	(0.0023)	(0.0034)	(0.0025)	(0.0029)
Control group mean	0.1995	0.2146	0.2354	0.0970	0.0941
Observations	780	780	780	780	780

Notes: The outcome is the fraction of employees who file a tax return claiming the EITC. Each column contains an alternative sample population. The table uses the specification in Column 4 of Table 4. Column 1 includes employees with gross wages below the maximum EITC income limit for married taxpayers with three or more qualifying children. Columns 2 and 3 restrict the sample to employees whose gross wages are below the maximum EITC income limit for married taxpayers with one and zero qualifying children, respectively. Column 4 restricts the sample to taxpayers who have never claimed a child on their tax returns in a prior year during our sample period. Column 5 restricts the sample to employees who self-prepare their tax returns without a paid tax preparer or tax preparation software. Standard errors clustered by state are in parentheses. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

claimed a child on their tax return and whose wage income does not exceed the EITC income limit for taxpayers with no children.

The results of the analyses in Columns 1 and 2 of Table 6 are similar to the results for the unrestricted sample reported above. However, the point estimate for employees whose income is below the threshold to qualify for the childless EITC (Column 3) (0.0024) is substantially larger than the point estimates for the unrestricted sample (0.0004) and the set of employees whose income falls within the higher EITC income thresholds (0.0006). Similarly, the point estimate for childless employees (Column 4) is 0.0022. The (relatively) larger magnitude of the effect for these groups may reflect a lack of awareness about the availability of the childless EITC among its potential beneficiaries, consistent with the childless EITC's lower participation rate (Jones, 2014). However, we caution that, even for childless employees and those below the childless EITC income threshold, these estimated effects remain modest in magnitude and statistically indistinguishable from zero.

Finally, EITC under-claiming is thought to be particularly high among taxpayers self-preparing their returns by paper (as opposed to using electronic software or employing a professional preparer). One might expect that a disproportionate number of individuals in this group is unaware of the EITC and would benefit from receiving the notice. However, as shown in Column 5 of Table 6, we estimate similar effects for this group as for other groups of employees.

E. Why Don't Notification Requirements Increase Take-Up?

In this section, we investigate several potential explanations for why the EITC notification laws do not appear to increase EITC take-up. The evidence we present in this section is mostly suggestive but makes the explanations we consider less likely.

1. Offsetting Reductions in EITC Over-Claims

Although our focus has been on eligible individuals who fail to claim the EITC, another population of policy interest is ineligible individuals who nonetheless claim the credit on their tax returns. It is possible that increased knowledge of the EITC associated with the notices could increase EITC claims but also reduce over-claims by an offsetting amount. If the magnitudes of these effects were similar, we might observe no net increase in the overall fraction of employees claiming the EITC, even if the notification laws increase the claim rate among those employees who are eligible for the credit.

We can shed light on this possibility by investigating the effect of the notices on the rate at which the IRS disallows EITC claims. If the notification laws reduce over-claims, we would expect to observe a reduction in EITC disallowances following a state's adoption of a notification law. Columns 1 and 2 of Table 7 investigate this possibility, using two measures of EITC disallowances: whether the IRS rejects all of the EITC claimed by the taxpayer and whether the IRS reduces the amount of EITC claimed by the taxpayer. As shown in Columns 1 and 2, we find no evidence that the law affects the rate of EITC disallowances, casting doubt on the hypothesis that our null result on EITC claiming can be explained by this mechanism.

2. Failure by Recipients to Read the Notices

One reason the notices might be ineffective is that recipients do not take the time to read them. For example, employees might simply throw out the letter or open the envelope but ignore the contents. We cannot directly observe the rate at which recipients read the notices, but an individual's age may serve as a rough proxy for his or her likelihood of reading a notice received by mail. Specifically, some research suggests that those age 45 and older are more likely to read or scan non-personalized content they receive in the mail (Mazzone and Rehman, 2013). Although age may be correlated with EITC claiming behavior in a myriad of ways, if failure to read the notices was the main explanation for the notices' ineffectiveness, and if employees over the age of 45 were likely to read the notices they receive, restricting the sample to this subgroup of employees should yield a positive effect of the notices on take-up. Column 3 of Table 7 presents this analysis. However, the estimated coefficient on the EITC claim rate for this group is comparable to the effect for the general population.

Table 7

Potential Explanations for Low Effect on EITC Claim Rate

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Main Sample		45+ Sample	100+ Employees	500+ Employees	Yearly Notices	No Wage Restrictions
	Disallowance Rate	EITC Reduction Rate	EITC Claim Rate	EITC Claim Rate	EITC Claim Rate	EITC Claim Rate	EITC Claim Rate
Notification law	0.0002	0.0002	0.0003	0.0008	0.0014	0.0009	0.0013
	(0.0001)	(0.0002)	(0.0011)	(0.0016)	(0.0017)	(0.0022)	(0.0033)
Control group mean	0.0023	0.0019	0.0899	0.1452	0.1390	0.1471	0.1471
Observations	572	572	780	780	780	750	705

Notes: The table uses the specification in Column 4 of Table 3. Column 1: the outcome is the fraction of employees who claim the EITC and whose claims are entirely denied by the IRS. Column 2: the outcome is the fraction of employees who claim the EITC and whose claims are at least partially reduced by the IRS. EITC disallowance and reduction data are only available for 2005–2014, which results in a smaller sample size for Columns 1 and 2. Columns 3–7 replicate the main analysis for alternative sub-samples of employees. Column 3: employees aged 45 and older. Column 4: employees at companies with at least 100 employees. Column 5: employees at companies with at least 500 employees. Column 6: jurisdictions with poster notification requirements excluded. Column 7: jurisdictions with notification laws that are required without restrictions to specific wage cutoffs. Standard errors clustered by state are in parentheses. Asterisks denote significance at the 1% (***), 5% (**), and 10% (*) levels.

3. Non-Compliance by Employers

The third explanation we consider for why the notification laws did not increase EITC claiming is that employers did not comply with the EITC notice requirements and did not provide the EITC notices to employees. Although employers are generally thought to comply with most tax requirements imposed by states and local governments, such as income and payroll tax withholding, in this context, non-compliance seems a plausible explanation given the lack of enforcement penalties in the laws. Indeed, several of the state laws expressly provided that non-compliant employers would not face any financial penalty and that employees whose employer did not provide the notice would not obtain a legal cause of action against the employer.

Although we cannot directly observe which employers complied with the notice requirements, we can investigate whether non-compliance is responsible for the laws' ineffectiveness based on the assumption that large employers in the state are likely to comply with the law, since most large employers would already have sophisticated payroll operations in place and, therefore, would likely be aware of the requirement and face low marginal costs to complying with it (Basefsky and Sweeney, 2006; Cardon and Stevens, 2004; Kitching, 2016). That is, if even employees of large employers do not respond to the notices, it seems likely that employer non-compliance is not the main explanation for the ineffectiveness of the notification law. Columns 4 and 5 of Table 7 investigate this possibility by restricting the analysis to employers with at least 100 and at least 500 employees, respectively. In neither case do we observe a statistically significant increase in EITC claiming, and in both cases, the estimated point estimate is similar to the one obtained from the full sample of employees.

4. Heterogeneity in Notification Law Effectiveness

Finally, it could be that the null effect of the laws is driven by one or more of the laws being designed in ineffective ways, and that ineffectiveness drags down our pooled estimate of the laws' effects. This heterogeneity could be driven by features of the adopted laws, such as the content of the required notification, or by characteristics of the states in which they are adopted, such as interactions between the laws and other state-level policies.

One possibility along these lines is that the effectiveness of some of the notices may have been undermined by the fact that they were not required to be provided annually to employees in certain states. In states that merely required the EITC information to be posted in the workplace, the content of the notices may have been less salient to employees than when it was mailed to employees individually each year. To investigate this possibility, we restrict the analysis to the five jurisdictions in which the employee notification requirement was annual. If inattention to posted notices is a major problem, it is in these five jurisdictions that one might expect the policy changes to have had the greatest effect. However, Column 6 of Table 7 shows the null result after imposing this restriction.

A different possibility is that the effectiveness of the notices is limited when high-earning employees are not required to receive them, since high-earning employees may still pass information about the notices on to others who do qualify. Column 7 of Table 7 restricts the analysis to the four jurisdictions that do not limit covered employees based on their income, with results that are largely unchanged.

One feature of state policy that could shape the effectiveness of the notification laws is the presence or absence of a state EITC. On the one hand, state EITCs could enhance the effectiveness of the notification laws by increasing the financial benefit of filing a return; on the other hand, they could reduce the effectiveness of the laws if the presence of the state EITC meant that most employees were more likely to be aware of the program (even absent the notices). However, Online Appendix Table 5 shows that the results appear similar in states with and without state EITCs in place.

Finally, Online Appendix Table 6 repeats our main analysis, excluding a different state from the analysis in each column. The table confirms that our results are not being driven by any one particular state.

VI. ROBUSTNESS CHECKS

This section considers two robustness checks. The first employs a synthetic control analysis to estimate the counter-factual EITC claim rate in the states that adopted a notification requirement. The second uses a randomization inference approach to assess the statistical precision of our results.

A. Synthetic Control Analysis

Our main analysis relies on the assumption that, but for adoption of the notification laws, EITC take-up in the treated and control states would evolve according to the same trend over the sample period, at least once state-specific trends and time-varying control variables are taken into account. In this section, we complement the main analysis with a synthetic control design (Abadie, Diamond, and Hainmueller, 2010), in which we compare EITC take-up in each treatment state to a linear combination of EITC take-up in various non-treated states that have been selected to be the state's control. This approach avoids the need to assume that the full set of non-adopting states provides an appropriate control group for the states that do adopt notification laws.

First, we determine the pre-treatment outcomes and covariates by which the states that form the synthetic control groups will be selected (we construct a different synthetic control for each treatment state). We allow each non-treated state to be a member of the donor pool that may potentially contribute to the synthetic control. To determine the characteristics by which the synthetic controls will be constructed, we follow Ferman, Pinto, and Possebom (2017) and Bifulco, Rubenstein, and Sohn (2017) and compute the mean squared prediction error (MSPE) using various combinations of pre-treatment year outcomes to select the donor states. We also consider different combinations of the covariates used in our main analysis, averaged over the pre-treatment period. Online

Appendix Table 7 computes the MSPE for each of the combinations of covariates and pre-treatment years we consider, averaged across treatment states. We exclude combinations with no controls or, equivalently, those with all pre-treatment outcomes included (Kaul et al., 2015). Of those that remain, the approach that minimizes the MSPE uses all controls and includes outcomes for the first, middle, and last year of the pre-treatment sample period, which is the approach we adopt. Online Appendix Table 8 displays the weights assigned to each treatment state's donor states. Online Appendix Table 9 confirms the balance between the treatment states and the synthetic controls on the pre-treatment variables used to select the donor states. The evolution of EITC claim rates in each treated state and its synthetic control is plotted in Online Appendix Figure 1.

Second, once the synthetic control for each treatment state has been constructed, we compute the difference-in-differences estimator for each treatment state, defined as $\beta_j = (y_{j1} - y_{j0}) - (y_{cj1} - y_{cj0})$, where y_{jt} denotes the mean EITC claim rate in state j in time period t, j denotes the treatment state, c_j denotes the synthetic control for treatment state j, and $t = 1$ indicates the post-treatment time period. For comparison with our main results, we focus on the unweighted mean of the β_j's across treatment states. Using this design, the estimated effect of the notification laws is –0.0011. This estimate is consistent with the lack of evidence for a positive effect implied by our earlier analysis. A randomization inference test yields a p-value of 0.75, far from statistical significance.[29]

B. Randomization Inference

The standard errors we report in the analyses in Section V are clustered by state. Because clustered standard errors are known to perform poorly when the number of clusters is low, and because our analysis is identified from only seven state policy changes, we consider the robustness of our conclusions to an alternative approach for statistical inference. In this section, we report results from a randomization inference analysis along the lines of Bertrand, Duflo, and Mullainathan (2001) and Conley and Taber (2011). Specifically, the procedure we follow is to (1) randomly select one state from the sample and assume that it imposed a notification law during the entire sample period (to match Illinois); (2) randomly select seven other states (without replacement) from the sample to be treatment states; (3) for each treatment state, randomly select one tax year other than 2000 from the sample period (with replacement) and assume that the state enacted a notification law in that year; (4) estimate the effect of the notification law on EITC claiming using the randomly generated data and record the estimated

[29] To compute this p-value, we adopted an approach similar to the one described in Donohue, Aneja, and Weber (forthcoming). Specifically, we replaced the treatment states with randomly selected states drawn (without replacement) from the control group. For each of these placebo treatment states, we constructed a synthetic control (using the approach described above), calculated the difference-in-differences estimator, and aggregated the state-specific effects into an overall average treatment effect. We repeated this procedure 500 times, generating a placebo distribution of treatment effects. The reported p-value denotes the fraction of generated treatment effects that are equal to or greater (in magnitude) than the treatment effect estimated from the actual data.

Table 8

Randomization Inference: Effect of Notification Law on EITC Take-Up Rate

	(1)	(2)	(3)	(4)
Point estimate of law's effect	–0.0089	–0.0051	–0.0051	0.0004
CSE p-value	0.047	0.002	0.002	0.824
RI-coefficient p-value	0.026	0.033	0.033	0.857
RI-t p-value	0.090	0.013	0.013	0.845
State and year fixed effects	Yes	Yes	Yes	Yes
Demographic controls	No	Yes	Yes	Yes
Transfer policy controls	No	No	Yes	Yes
State-specific time trends	No	No	No	Yes
Permutations	1000	1000	1000	1000

Notes: The outcome is the fraction of employees who file a tax return claiming the EITC. CSE p-value is the p-value resulting from clustering standard errors by state. RI-coefficient and RI-t p-values are p-values resulting from a randomization inference procedure with 1000 permutations of the coefficient and t-stat, respectively.

coefficient; and (5) repeat steps (1)–(4) for a total of 1,000 iterations. To construct the p-value associated with the null hypothesis that the notification laws have no effect, we compute the fraction of coefficient estimates from the randomly generated data that are at least as far from the null as the coefficient estimated from the true data. We also implement this approach comparing the estimated t-statistic to the distribution of t-statistics obtained from the randomly generated data, as discussed in MacKinnon and Webb (2016).

Table 8 presents the results of this approach for our main results in Table 3. The columns in Table 8 correspond to the columns in Table 3. The first row contains the point estimates from each of these specifications and is identical to Table 3. The second row contains the p-values associated with the cluster-robust standard errors presented in Table 3 for purposes of comparison. Rows 3 and 4 contain the p-values derived from the randomization inference approaches, using the distribution of estimated coefficients and t-statistics (respectively). The two p-values are quite similar to one another and are qualitatively similar to the p-values derived from the cluster-robust standard error formulas. In particular, under the randomization inference approach, the estimated effects in Columns 1–3 are statistically significant, whereas the estimated effect in Column 4 (once state trends are included) has a large p-value.

VII. DISCUSSION

Incomplete take-up of the EITC is a widely recognized policy problem. Efforts to raise awareness of the credit are the dominant approach to increasing take-up, as reflected by the growing number of jurisdictions enacting employer EITC notification laws. Our

findings provide no evidence that these laws are effective at raising EITC take-up, at least as they are currently being implemented. In addition, our results suggest that the magnitude of the notices' effect on take-up, to the extent the notices shape take-up at all, is quite modest; the upper bound of the estimated 95 percent CI corresponds to the notification laws raising the EITC participation rate by approximately 3 percent.

In interpreting our results, it is important to keep in mind that, even in the control states, the large majority (approximately 80 percent) of employees already claim the EITC if they are eligible to do so. In conjunction with the fact that not all employees qualify for the credit, this suggests that there is limited scope for the notification laws to increase EITC take-up among the notice recipients. Consequently, although our results permit us to rule out substantial changes in the EITC claim rate among the overall population of employees, our results are consistent with the notification laws reducing the share of eligible non-claiming employees by up to 10 percent. To the extent that fostering awareness of the EITC does raise take-up for such employees, policies targeted to this group, such as the tailored interventions studied in Guyton et al. (2016), are likely to yield larger increases in EITC take-up rate among their intended beneficiaries, as compared to the broad notification requirements under current law. Similarly, the larger estimates we observe for employees likely to qualify for the childless EITC suggest that outreach tailored toward this group or that emphasizes the availability of the childless credit may be more effective than the more generalized notices required under current law.

More generally, our results are consistent with the view that other approaches, not exclusively oriented around increasing awareness of the credit, would be more effective at raising take-up. For example, the larger effects of the IRS EITC notices documented by Bhargava and Manoli (2015) and Manoli and Turner (2017) involved information provision as well as a simplified process for claiming the credit. Thus, one explanation for the difference in results is that information provision on its own — absent a simplified claiming process — yields smaller effects on EITC take-up.[30] We note, however, that information provision on its own has been found to increase benefit take-up by substantial margins in other policy settings (e.g., Armour, 2018; Barr and Turner, 2018).[31]

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[30] For example, Manoli and Turner (2017) estimate that the EITC notices they study (which include a simplified process for claiming the credit) reduce the EITC-eligible but non-claiming portion of their sample by 73 percent for returns without children and 34 percent for returns with children in the year of the notice. The associated 95 percent CIs, based on the reported standard errors, are (0.71, 0.76) and (0.28, 0.40), neither of which overlaps with our estimated 95 percent CI for the effect of the notification laws on eligible non-claiming employees. Although the populations are not identical (ours is limited to employees and theirs is limited to individuals who have filed a return), the difference between the estimates is consistent with the hypothesis that the simplified EITC-claiming process plays an important role over and above information provision. In contrast, Guyton et al. (2016) study an information-only communication mailed to a (likely) EITC-eligible population. From the reported treatment and control means on filing and EITC claim rate among filers reported in that paper, we calculate their intervention reduced the share of EITC-eligible non-claimants in their sample by approximately 0.6 percent, well within our estimated 95 percent CI for the EITC notification laws.

[31] One potential explanation for why mandated information provision is less effective in the EITC context is that, even without the employer notification requirement, private tax preparers have strong incentives to spread awareness of the benefits of tax filing. As a result, the baseline level of EITC awareness may be higher than for other benefits.

Another possibility is that the notices would be more effective if they were implemented differently. For example, the design of the notices could be improved to reduce information overload and focus taxpayer attention on the benefits of claiming the credit. Similarly, jurisdictions might modify the laws to better ensure employer compliance. Our results provide no direct evidence that such measures would raise the effectiveness of the laws, but they are consistent with this possibility.

Finally, when evaluating policy interventions to raise EITC take-up, it is important to keep in mind that, in most cases, a taxpayer need not be aware of a tax benefit in order to claim it, at least when using an assisted tax preparation method such as software or an expert preparer. Because the vast majority (over 88 percent) of taxpayers in our sample use assisted preparation methods, there are relatively few people for whom awareness of the EITC is likely to be the determinative factor for whether they claim it. Under this view, policies that directly affect the rate at which EITC-eligible individuals file a tax return are more likely to expand EITC take-up, even if they do not directly relate to the EITC itself, such as increasing the incentive for low-income individuals to file a return (Ramnath and Tong, 2017) or raising the desirability of assisted tax preparation methods (Hayashi, 2016; Kopczuk and Pop-Eleches, 2007). Of course, raising awareness of the EITC could also induce an employee to file a tax return who would not have done so otherwise, but the complexity of the EITC rules (Holtzblatt and McCubbin, 2004) suggests that potential filers would have a hard time assessing their eligibility for the benefit.

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DISCLOSURE

The authors have no financial arrangements that might give rise to conflicts of interest with respect to the research reported in this paper.

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Appendix Figure 1 State Notices

(a) California Notice

Federal Earned Income Tax Credit (EITC) Notification

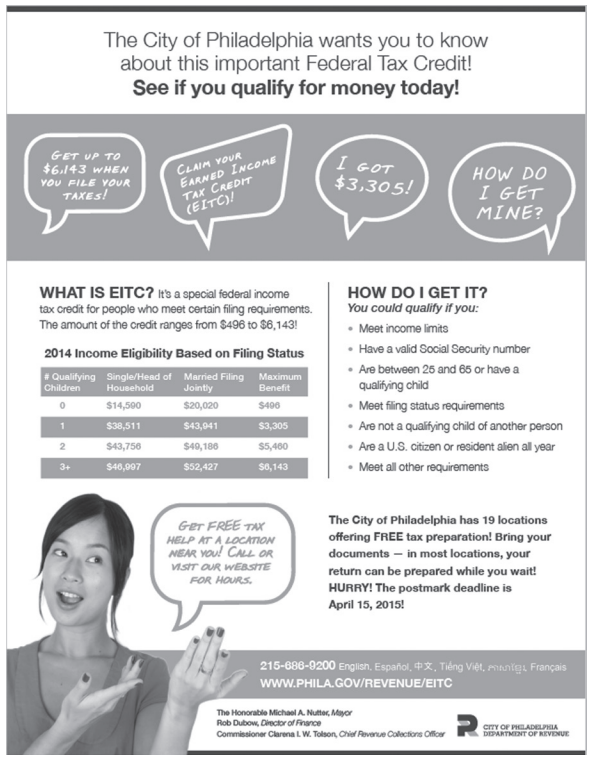
Effective January 1, 2008, all employers are required to notify all of their employees of the federal Earned Income Tax Credit (EITC).

Assembly Bill 650, Stats. 2007, Ch. 606, (Lieu and Jones) requires any employer, who is subject to, and is required to provide unemployment insurance to employees, to notify all employees that they may be eligible for the EITC. Employers shall give notification within one week before or after, or at the same time, they provide employees with an annual wage summary (IRS Form W-2, 1099).

NOTICE TO EMPLOYEES

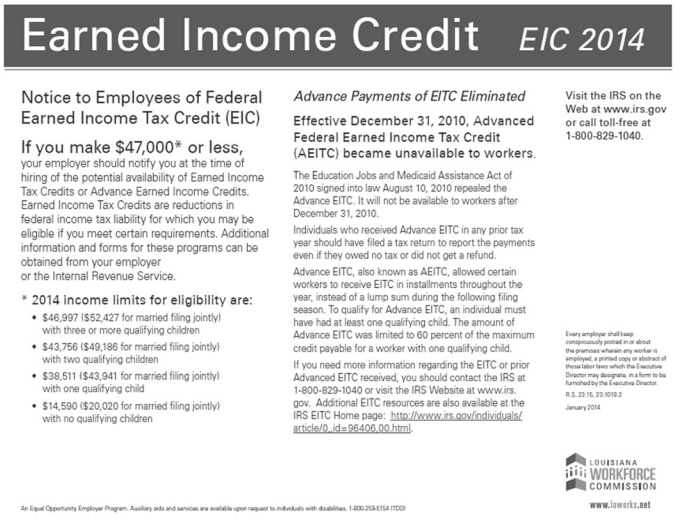
"Based on your annual earnings, you may be eligible to receive the earned income tax credit from the federal government. The earned income tax credit is a refundable federal income tax credit for low-income working individuals and families. The earned income tax credit has no effect on certain welfare benefits. In most cases, earned income tax credit payments will not be used to determine eligibility for Medicaid, supplemental security income, food stamps, low-income housing or most temporary assistance for needy families payments. Even if you do not owe federal taxes, you must file a tax return to receive the earned income tax credit. Be sure to fill out the earned income tax credit form in the federal income tax return booklet. For information regarding your eligibility to receive the earned income tax credit, including information on how to obtain the IRS Notice 797, or any other necessary forms and instructions, contact the Internal Revenue Service at 1-800-829-3676 or through its Web site at www.irs.gov."

(b) Philadelphia Notice



Appendix Figure 1 (Continued) State Notices

(c) Louisiana Poster



Earned Income Credit *EIC 2014*

Notice to Employees of Federal Earned Income Tax Credit (EIC)

If you make $47,000* or less, your employer should notify you at the time of hiring of the potential availability of Earned Income Tax Credits or Advance Earned Income Credits. Earned Income Tax Credits are reductions in federal income tax liability for which you may be eligible if you meet certain requirements. Additional information and forms for these programs can be obtained from your employer or the Internal Revenue Service.

* 2014 income limits for eligibility are:

- $46,997 ($52,427 for married filing jointly) with three or more qualifying children
- $43,756 ($49,186 for married filing jointly) with two qualifying children
- $38,511 ($43,941 for married filing jointly) with one qualifying child
- $14,590 ($20,020 for married filing jointly) with no qualifying children

Advance Payments of EITC Eliminated

Effective December 31, 2010, Advanced Federal Earned Income Tax Credit (AEITC) became unavailable to workers.

The Education Jobs and Medicaid Assistance Act of 2010 signed into law August 10, 2010 repealed the Advance EITC. It will not be available to workers after December 31, 2010.

Individuals who received Advance EITC in any prior tax year should have filed a tax return to report the payments even if they owed no tax or did not get a refund.

Advance EITC, also known as AEITC, allowed certain workers to receive EITC in installments throughout the year, instead of a lump sum during the following filing season. To qualify for Advance EITC, an individual must have had at least one qualifying child. The amount of Advance EITC was limited to 60 percent of the maximum credit payable for a worker with one qualifying child.

If you need more information regarding the EITC or prior Advanced EITC received, you should contact the IRS at 1-800-829-1040 or visit the IRS Website at www.irs.gov. Additional EITC resources are also available at the IRS EITC Home page: http://www.irs.gov/individuals/article/0,,id=96406,00.html.

Visit the IRS on the Web at www.irs.gov or call toll-free at 1-800-829-1040.

Every employer shall keep conspicuously posted in or about the premises wherein any worker is employed, a printed copy or abstract of those labor laws which the Executive Director may designate, in a form to be furnished by the Executive Director.

R.S. 23:15, 23:1018.2

January 2014

LOUISIANA WORKFORCE COMMISSION

www.laworks.net

An Equal Opportunity Employer Program. Auxiliary aids and services are available upon request to individuals with disabilities. 1-800-259-5154 (TDD)

(d) IRS Notice 797

Department of the Treasury
Internal Revenue Service

Notice 797

(Rev. December 2015)

Possible Federal Tax Refund Due to the Earned Income Credit (EIC)

What Is the EIC?

The EIC is a refundable tax credit for certain workers.

Who May Claim the EIC?

You may be able to claim the EIC for 2015 if you worked and all four of the following conditions apply.

1. You (and your spouse, if filing a joint return) have a valid social security number (SSN) issued by the Social Security Administration. For more information on valid SSNs, see Pub. 596, Earned Income Credit (EIC).

2. Your 2015 earned income and adjusted gross income are both under $39,131 ($44,651 if married filing jointly) if you have one qualifying child; under $44,454 ($49,974 if married filing jointly) if you have two qualifying children; under $47,747 ($53,267 if married filing jointly) if you have three or more qualifying children; or under $14,820 ($20,330 if married filing jointly) if you don't have a qualifying child. For a definition of earned income, see the 2015 instructions for Form 1040, 1040A, or 1040EZ.

3. Your filing status on your 2015 tax return is any status except married filing a separate return.

4. You were not a qualifying child of another taxpayer in 2015.

If you **do not** have a qualifying child, you must also meet these conditions.

a. You, or your spouse if filing a joint return, were at least age 25 but under age 65 at the end of 2015. (You meet this condition if you, or your spouse if filing a joint return, were born after December 31, 1950, and before January 2, 1991.) If your spouse died in 2015, see Pub. 596.

b. You can't be claimed as a dependent on someone else's 2015 tax return.

c. Your home, and your spouse's if filing a joint return, was in the United States for over half of 2015. If you are in the military on extended active duty outside the United States, your home is considered to be in the United States during that duty period and you may be able to claim the EIC.

You **cannot** claim the EIC if any of the following conditions apply.

1. Your 2015 investment income (such as interest and dividends) is over $3,400. See Pub. 596 for more information.

2. You file either Form 2555 or Form 2555-EZ (relating to foreign earned income).

3. You were a nonresident alien for any part of 2015 unless you were married to a U.S. citizen or resident and elected to be taxed as a resident alien for the entire year. See Pub. 519, U.S. Tax Guide for Aliens, for more information.

(Continued on back)

Appendix Figure 1 (Continued) State Notices

(e) Maryland Notice

IMPORTANT NOTICE TO MARYLAND EMPLOYEES

Did you know that federal and Maryland earned income tax credits are available to certain low-income individuals and families?

These credits can reduce the amount of income tax you owe or increase your income tax refund; and, you may qualify to receive some of these credits even if you did not earn enough income to be required to file a tax return.

2015 Maryland Earned Income Tax Credit (EITC)

Maryland's EITC is a credit for certain taxpayers who have income and have worked. The state EITC reduces the amount of Maryland tax you owe. The local EITC reduces the amount of county tax you owe. Some taxpayers may even qualify for a refundable Maryland EITC.

Most taxpayers who are eligible and file for a federal EITC can receive the Maryland state and local EITC. The allowable Maryland credit is up to one-half of the federal credit. To be eligible for the federal and Maryland EITC, your federal adjusted gross income and your earned income must be less than the following:

- $47,747 ($53,267 married filing jointly) with three or more qualifying children
- $44,454 ($49,974 married filing jointly) with two qualifying children
- $39,131 ($44,651 married filing jointly) with one qualifying child
- $14,820 ($20,330 married filing jointly) with no qualifying children

To receive the Maryland EITC, you must be eligible for the federal credit. If your income is less than the amounts shown in this notice, visit the Internal Revenue Service Web site at **www.irs.gov**, or contact your tax advisor, to learn if you meet the other requirements. You also may be entitled to a refundable Maryland EITC and to a local EITC.

If you are a part-year resident, you may be entitled to a prorated share of the credit, if you have Maryland income. As of 2015, nonresidents are no longer eligible for the Maryland credit.

For more information about the Maryland EITC, visit our Web site at **www.marylandtaxes.com** or call 1-800-MD-TAXES (1-800-638-2937) or from Central Maryland 410-260-7980. You must have a valid Social Security Number and file a tax return to claim this credit.

Reminder: Legally married same-sex couples must file as married filing jointly or married filing separately for tax year 2015. Employees wishing to adjust their withholding to reflect married status should complete a new Maryland Form MW507, as well as federal Form W-4.

Recordatorio: Parejas del mismo sexo legalmente casadas deberán presentar la declaración de impuestos como casado en conjunto o casado pero realizando la presentación separado para el año tributario 2015. Empleados que deseen ajustar la retención de impuestos con su empleador para reflejar el estado civil como casado, deberán completar una nueva forma de Maryland MW507 así como la forma federal W-4.

Para obtener información en español sobre el Crédito por Ingreso del Trabajo (EITC) de Maryland, visite **www.marylandtaxes.com**.

2015 Federal Earned Income Tax Credit (EITC)

For more information about the federal EITC,
visit: **www.irs.gov/individuals** or call the IRS at 1-800-829-1040.

(f) New Jersey Notice

Important Notice to New Jersey Residents

Did you know that federal and New Jersey Earned Income Tax Credits are available to certain low-income working individuals and families?

These credits can reduce the amount of income tax you owe or increase your income tax refund. And, you can receive the credits even if you didn't earn enough income to require you to file a tax return.

2016 New Jersey Earned Income Tax Credit (NJEITC)

The New Jersey Earned Income Tax Credit (NJEITC) is a credit for certain residents who work and have earned income. The credit reduces the amount of New Jersey tax you owe and may also give you a refund, even if you are not required to pay income tax to New Jersey.

Most residents who are eligible and file for a federal earned income tax credit can also receive the NJEITC. There are several criteria you must meet to qualify for the federal earned income tax credit. See the information below on how to contact the Internal Revenue Service to find out if you are eligible for the federal earned income tax credit. Note: You don't qualify for the NJEITC if you and your spouse/civil union partner file separate income tax returns.

The amount of your NJEITC is a percentage of your federal earned income tax credit. This year, the NJEITC amount is equal to 35 percent of the federal earned income tax credit. So, if your federal earned income tax credit is $4,000, the amount of your NJEITC will be $1,400. (2016 NJEITC = federal EITC x 35 percent) Note: If you lived in New Jersey for only part of 2016, your NJEITC will be prorated based on the number of months you were a New Jersey resident. (For this calculation, 15 days or more is a month.)

To receive the NJEITC, you must file a New Jersey resident income tax return. This is true even if you are not required to file a tax return because your income is below New Jersey's minimum filing threshold.

For more information about the NJEITC:

- Visit the Division of Taxation's website at: www.njtaxation.org
- Listen to recorded information or order forms by calling the Division's Automated Tax Information System from a Touch-tone phone: 1-800-323-4400 (within NJ, NY, PA, DE, MD) or 609-826-4400
- Call the New Jersey Division of Taxation at 609-292-6400.

2016 Federal Earned Income Tax Credit

For more information about the federal earned income tax credit,
visit: www.irs.gov/credits-deductions or call the IRS at 1-800-829-1040.

STATE OF NEW JERSEY
DEPARTMENT OF THE TREASURY
DIVISION OF TAXATION

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Appendix Figure 1 (Continued) State Notices

(g) Virginia Poster

