Paid Tax Preparers and Social Benefit Take-up: Evidence from a Field Experiment

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Abstract

Researchers and policymakers struggle to understand how to increase utilization, or "take-up," of social benefit programs among eligible recipients. We examine the role of tax preparers in tax credit take-up, shifting the focus from eligible recipients to the intermediaries who assist them. We partner with the Washington State Department of Revenue to conduct a randomized field experiment examining whether informational interventions sent to paid tax preparers increase the take-up of a recently implemented state tax credit for low- to moderate-income residents. On average, preparers assigned to a treatment group that receives a letter highlighting potential economic incentives file 2.25 more applications than preparers in a no-letter control group (an increase of 56%). However, preparers at large tax preparation firms and preparers with credentials (e.g., CPAs) respond positively to *any* informational nudge, suggesting their primary friction is a lack of salience rather than financial motivation. In a complementary analysis, we find that after the integration of the WFTC application into a major tax software provider, applications from self-prep software increased by over 400%, suggesting that "hassle costs" are a critical barrier for taxpayers. Our results provide evidence on the frictions faced by both intermediaries and recipients, showing that while targeted outreach to preparers can be an effective policy tool, program complexity may be a binding constraint preventing eligible recipients from applying for and receiving their benefits.

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1. Introduction

Academics and policymakers alike frequently express concern about the large number of individuals who meet the requirements for social benefit programs but fail to claim their benefits (see Currie (2004) and Ko and Moffitt (2022) for reviews of this literature). Research on this "take-up" puzzle generally finds that informational interventions aimed at eligible recipients produce marginal improvements in take-up across a variety of social benefit programs. Both Currie (2004) and Ko and Moffitt (2022) conclude that the problem of incomplete take-up persists and that there is no easy, single solution to increase take-up. Hence, governments continue to seek innovative ways to increase the take-up of social benefit programs that provide resources to eligible individuals (Eurofound, 2015; Goldin, 2018).

We partner with the Washington Department of Revenue (WADOR) to conduct a randomized field experiment that examines the effects of paid tax preparer outreach on the take-up of a tax-based social benefit program. Tax preparers are crucial intermediaries who can assist eligible individuals in claiming social benefits. The literature often refers to tax preparers as "experts" (Goldin, 2018), which reflects an implicit assumption that preparers have adequate knowledge, resources, and incentives to assist eligible recipients. We test this assumption by examining potential frictions that may prevent tax preparers from acting as perfectly informed agents for their clients. Specifically, we conduct a multi-version letter campaign to answer two questions: (1) To what extent can direct informational outreach from a tax authority to tax preparers increase credit take-up? (2) What factors influence tax preparers' effectiveness as an intermediary for tax credit take-up?

Our setting involves the recently implemented Washington State Working Families Tax Credit (WFTC). The WFTC is a refundable tax credit offered to low- to moderate-income individuals and families residing in Washington. The eligibility requirements are similar to those of the federal Earned Income Tax Credit (EITC). The tax credit was first available for tax year 2022, and the first set of applications and refunds occurred in the spring of 2023. Qualified taxpayers could receive between $50 and $1,200 in 2022 (the amounts depend on income and the number of qualifying children, and increase with inflation each year). Because Washington has no state income tax, most Washington residents and tax preparers lack prior experience interfacing with the WADOR and have no history of filing a state income tax return. The lack of a preexisting individual income tax infrastructure meant that the WADOR had to begin from scratch in setting up a tax filing system, informing the public, addressing taxpayer concerns, and issuing refunds. Thus, our setting offers a unique opportunity to study whether and how tax preparers internalize information about a new tax benefit and filing system. Unlike studies examining the federal EITC, which is contaminated by decades of prior information, outreach, and communication, our setting provides an ideal environment to test the marginal impact of an informational intervention.

Understanding take-up rates in *new* tax credits is particularly important given that take-up is incomplete for *existing* tax credits. In the U.S., the take-up rate of the federal EITC averaged 78.9% from 2014 to 2022 (IRS, 2025), while across the same period, only 74.9% of eligible Washington recipients claimed the federal EITC (see Figure 1). At the state level, Iselin et al. (2023) estimate that more than 400,000 California households that received SNAP benefits and appeared eligible for the state EITC did not claim it in 2017 (the take-up rate among eligible SNAP-enrolled households was 54%), leaving roughly $71 million in unclaimed state EITC funds.

These statistics suggest that there may be significant frictions to achieving high levels of take-up for the WFTC.

The literature provides mixed and inconclusive empirical evidence on the reasons explaining incomplete social-benefit take-up. Evidence from several field experiments suggests that low take-up of the federal EITC can be partially explained by low program awareness among eligible recipients (Manoli and Turner, 2014; Bhargava and Manoli, 2015; Guyton et al., 2017). Likewise, Finkelstein and Notowidigdo (2019) find evidence from a randomized field experiment that informational interventions increase take-up of SNAP benefits among elderly individuals. In contrast, Linos et al. (2022) find no evidence from six large-scale field experiments that nudges aimed at likely eligible individuals increased take-up of California's state-level EITC. Cranor et al. (2019) find no evidence that requirements for employers to provide EITC information to employees increase EITC take-up. Kopczuk and Pop-Eleches (2007) find an increase in EITC take-up after the availability of e-filing, and Linos et al. (2022) and Goldin et al. (2022) find zero or modest effects from outreach about free in-person assistance.

Whereas prior studies and field experiments focus on the behavior of eligible recipients, we focus on the behavior of tax preparers. Tax preparers can help alleviate the frictions faced by eligible recipients by increasing taxpayer awareness of the credit, reducing the complexity and hassle costs of applying, and providing taxpayers with a degree of psychological comfort and certainty regarding their refund (Goldin, 2018). Moreover, tax preparers play a meaningful role in tax compliance. Using IRS data for the 2015 tax year, Goldin (2018) reports that 56% of federal EITC claimants used a professional preparer, 40% prepared their own returns using tax software,

and 4% self-prepared their own return.[1] In total, paid preparers account for 53% of all individual federal income tax returns in the U.S. in 2018 (IRS, 2020). Despite the economic importance of tax preparers, little is known about the incentives and frictions that affect tax preparer behavior. Thus, we aim to better understand the role of paid preparers in the take-up of tax-based social benefit programs.

Our field experiment examines whether an informational letter campaign targeting paid tax preparers in Washington state affects tax credit take-up. Informational interventions targeting tax preparers could improve take-up for several reasons. First, tax preparers possess varying degrees of sophistication, expertise, and knowledge. Thus, they may not be fully aware of state-level tax credits, particularly new tax credits in a state that historically required no individual income tax filing. Preparers may also be prone to errors – for example, the GAO found that among 19 randomly selected tax preparers, only two calculated the correct refund amount of hypothetical taxpayers, and many gave incorrect advice on the federal EITC (GAO, 2014). Second, even if preparers are aware of the tax credit, they may suffer from inattention if the hectic tax filing season causes them to focus on other priorities. Third, preparers may be uninformed about the potential financial incentives or moral reasons for devoting more time and resources to assisting eligible taxpayers. On the other hand, informational interventions may not increase take-up if preparers are already fully aware of the credit and the potential incentives for assisting taxpayers. Moreover, preparers may expect that the costs of assisting taxpayers (e.g., the time and effort required to find and help eligible taxpayers) will exceed the benefits (e.g., preparation fees or psychological benefits derived from helping those in need).

[1] Although low-to-moderate income taxpayers can file their federal return for free using options such as the IRS' Free File program or Volunteer Income Tax Assistance (VITA) sites, the percentage of eligible taxpayers that use one of these options is approximately 5% (GAO, 2022).

We identify tax preparers as individuals who have an IRS Preparer Tax Identification Number (PTIN), which can be acquired after passing a suitability check and paying a small fee.[2] We obtain the comprehensive list of all PTIN holders in Washington state. The data includes each preparer's name, business name, business address, and professional credentials.[3] The dataset consists of approximately 13,700 PTIN holders. We randomly assign preparers to one of four treatment conditions, which receive an informational letter from WADOR, or a control condition that receives no letter. We randomize across conditions based on the business address rather than at the preparer level, because individuals at the same business address may become aware of information sent to other preparers at that same address. To increase the salience of the letters, we sent them twice – once at the end of January 2025 and again in early March 2025.

We sent a different version of the letter to each treatment condition to highlight specific information about the tax credit or make more salient potential incentives for preparers to assist eligible taxpayers. In Letter 1, we inform paid preparers of the WFTC and include basic information about the credit, who is eligible, the amount of the credit, and how preparers can assist taxpayers in applying. Letter 2 contains the same information as Letter 1, plus statistics on the amount of unclaimed refunds in the first two years of the program. Letter 3 contains the same information as Letter 2, plus a statement that preparers have an opportunity to expand their services by helping eligible recipients apply. Letter 4 contains the same information as Letter 2, plus a statement that preparers can help low- to moderate-income individuals and families in their local community. We block randomize based on whether the preparer belongs to one of the three largest

[2] According to Thomson Reuters, the suitability check may consist of a credit check, a tax compliance check, a criminal background check, and a check for prior non-compliance with IRS e-file requirements.
[3] This public information is provided by the IRS under the Freedom of Information Act and is updated bi-annually. See https://www.irs.gov/tax-professionals/ptin-information-and-the-freedom-of-information-act (accessed January 8, 2025).

individual tax preparation firms (H&R Block, Jackson Hewitt, and Liberty Tax), which we refer to as the "Big 3" preparation firms, and on the number of preparers at a given address. We also ensure that the conditions are balanced based on a variety of zip-code-level demographic characteristics.

Our letter design allows us to test which frictions and incentives are most relevant for tax preparers to assist eligible taxpayers. To the extent that preparers face frictions related to learning about the credit, we would not expect significant differences across letter conditions because they all inform the preparer of the credit. However, if preparers prioritize financial benefits, they may be more sensitive to information about potential market opportunities. Relatedly, to the extent that preparers view their role with respect to social benefits programs as helping provide a social good (e.g., assisting those in need), they may respond more to language that highlights the potential benefit in their local community.

We first provide descriptive evidence of the WFTC take-up rate in the first two years of the program. We measure the take-up rate as the ratio of WFTC applications (based on application data from WADOR) to federal EITC applications in Washington (based on 2022 IRS SOI data). We find that WFTC take-up rates were approximately 50% (185,000 WFTC applicants and 365,000 federal EITC filers) in 2022 and 2023 (the first two years of the program). Approximately 41-44% of the WFTC applications filed in 2022 and 2023 were completed by a paid preparer, less than the paid-preparer rate for the federal EITC. Thus, there appears to be a substantial opportunity to increase take-up through direct outreach to paid preparers.

We next examine the treatment effects from our letter campaign. We test whether preparers randomly assigned to receive our letters prepared more total WFTC applications for tax year 2024 than preparers who were randomly assigned to the control group. Although the point estimate is

positive for all treatment conditions, the letter highlighting economic incentives is the only one that is statistically significant. Each preparer in the economic incentives group filed approximately 2.25 additional WFTC applications, on average, relative to the control group (an increase of 56% or 6,400 applications). We find similar results when we examine *new* WFTC applications (i.e., applications from a first-time recipient). The findings from these pooled sample tests suggest that the average tax preparer may be largely influenced by financial opportunities to expand their services and generate revenue.

We also examine heterogeneous treatment effects based on whether the preparer works at one of the Big 3 tax preparation firms. For both total applications and new applications, we find that the point estimates for each letter condition are larger than the pooled effects and are all significantly positive. The differences across letter conditions are not statistically different, suggesting these preparers respond to *any* informational nudge by filing 6 to 7 additional WFTC applications. One interpretation is that these preparers may be attention-constrained during tax filing season and thus react to salience nudges from official sources. Once informed, these preparers may increase applications out of a sense of fiduciary duty or efforts to mitigate reputational risk from overlooking a credit.

Finally, we examine whether the effects differ by the preparer's credentials (CPAs versus Enrolled Agents (EAs), versus all other PTIN holders). CPAs and EAs generally have more tax-relevant training and expertise than non-credentialed PTIN holders. For CPAs, we find significantly positive effects for each letter on total applications and new applications (except the inform-only letter on new applications). EAs exhibit a similar response, with all letters other than the moral suasion letter having a significantly positive effect on total and new applications. For all

other preparers (generally those without credentials), we find that the economic incentives letter was the only significantly positive letter.

In additional analyses, we explore the effects of a change to eligible *taxpayers'* costs of claiming the credit. Specifically, in 2022 and 2023, one of the largest self-preparation tax software providers did not include the WFTC application in their software. Instead, the provider merely informed taxpayers that they may be eligible for the WA WFTC and directed them to WADOR's online website to complete the application themselves. However, in 2024, the provider integrated the application into its software and completed it on behalf of taxpayers for a nominal fee. We find that the number of applications filed through self-preparation software increased by 418% in 2024. This dramatic increase suggests that the primary barrier to take-up may not be lack of awareness, but rather the perceived "hassle costs" of the application process (e.g., the time and effort required to navigate the rules, gather documents, fill out and submit the application).

Our study provides practical insights for administrators seeking to improve social benefit delivery through the tax system. Our results suggest that a one-size-fits-all outreach strategy for tax preparers may be suboptimal, as different types of preparers respond to different information. We find that Big 3 and credentialed preparers seem primarily constrained by informational frictions; once informed about the credit, they assist their clients. In contrast, non-credentialed preparers are more responsive to messages highlighting the potential financial incentives of assisting taxpayers with the WFTC. Moreover, we provide evidence on the welfare transfer from eligible recipients to preparers and to self-prep software providers. Although preparers and software providers play an essential role in assisting eligible recipients, they also benefit from the complexities and hassles of these programs. Thus, program simplification and the efficient identification of eligible recipients could result in more resources reaching intended recipients.

Our study also contributes to a growing literature examining the take-up of social benefit programs (Manoli and Turner, 2014; Bhargava and Manoli, 2015; Guyton et al., 2017; Finkelstein and Notowidigdo, 2019; Linos et al., 2022; Cranor et al., 2019). Whereas prior studies and field experiments primarily focus on potentially eligible taxpayers, we introduce evidence on a pervasive and essential intermediary – tax preparers. Goldin (2018) discusses the value of "expert preparation" in federal EITC take-up and the importance of merely getting individuals to file a federal income tax return. We provide more nuanced evidence of the role of preparers in subnational credit take-up, and provide insight into the "black box" of the information set and utility function of preparers. Our results suggest there can be meaningful information frictions that prevent tax preparers from providing optimal levels of assistance to eligible taxpayers, particularly for state-level tax credit programs. We complement Zwick (2021) by showing paid preparer frictions persist even when the client's optimal action—claiming a tax credit—is unambiguous.

Our results are also timely and relevant given the continued use of tax credits to achieve policy objectives and redistribute wealth. Since 2021, 17 states and D.C. have enacted or boosted state-level EITCs, and in 2025 alone, nine states improved or created Child Tax Credits or state-level EITCs (Butkus 2025a, 2025b).[4] The expansion or introduction of wealth transfer programs administered through the tax code will likely continue due to the regressivity of many state tax systems (Fleck et al., 2025; Horwich, 2025) and recent reductions in federal transfers to states for assistance programs such as SNAP and Medicaid. These trends highlight the importance of understanding social benefit take-up and how to encourage intermediaries such as tax preparers to assist eligible recipients.

[4] 31 U.S. states, the District of Columbia, Guam, Puerto Rico, and some municipalities offer tax credits tied to federal EITC eligibility requirements (NCSL, 2024).

2. Background

Because the State of Washington does not impose an income tax, many argue that Washington has one of the most regressive state tax systems in the U.S.[5] The state receives 50% of its general fund tax revenues from sales and use taxes, with the remaining portion coming from business & occupation taxes (21%), property taxes (15%), and other taxes (14%) (Washington Senate Ways and Means Committee, 2023). In 2018, the bottom 20% of income earners in Washington paid 18% of their income in state & local taxes while the top 1% paid just 3% (ITEP, 2018).

To address inequities in the tax code and support families who were not earning enough to pay for basic needs such as healthcare, childcare, and work-related expenses, Washington enacted the WFTC in 2008 (formerly known as the Working Families Tax Exemption). However, the implementation of the WFTC was suspended multiple times due to budget shortfalls. The WFTC was officially made available to Washington residents for the first time for the 2022 tax year.

Although the WFTC is often called a "refund" of sales tax paid, any taxpayer who meets the eligibility requirements is entitled to receive the credit, regardless of how much sales tax an individual paid. The credit and eligibility requirements are modeled closely after the U.S. federal EITC program. Specifically, taxpayers are eligible for the WFTC if they meet all of the following requirements:

- Have a valid SSN or Individual Taxpayer Identification Number (ITIN).
- Lived in Washington a minimum of 183 days in the corresponding year (over half the year).
- Are at least 25 years and under 65 years of age, OR have a qualifying child.
- Filed a federal tax return in the corresponding year.

[5] Washington was ranked as having the most regressive state tax system in the U.S. in 2018 and the second most regressive in 2024 (ITEP, 2018 and 2024). Washington's move from last to second last was likely partly attributed to its implementation of the WFTC (ITEP, 2024).

- Are eligible to claim the federal EITC on their annual tax return (or would meet the requirements for EITC but are filing with an ITIN).[6] An ITIN is a tax processing number only available for certain nonresidents and resident aliens, their spouses, and dependents who cannot get a SSN.

The credit amount varies depending on the number of qualifying children and income level. For tax year 2022, the credit amount ranged from $50 (for taxpayers with no children) to $1,200 (for taxpayers with 3+ children). After 2022, the credit amounts are adjusted upward for inflation.

Taxpayers can apply for the credit in multiple ways. Taxpayers can apply for free through the WADOR's website, through traditional mail, or with tax preparation assistance (e.g., software, tax professional, IRS' VITA program), which may come with an additional cost depending on the service provider.[7] Taxpayers can receive their refund check via direct deposit, a paper check, or a prepaid debit card (for applications filed after December 2023).

The credit application officially became available on February 1, 2023. To increase awareness and assist taxpayers with applying, the WADOR conducted approximately 1,400 community outreach events throughout the state from January 1, 2022, through January 31, 2024. The WADOR chose the outreach efforts and locations based on where it believed there was an opportunity to reach the greatest number of eligible taxpayers or where awareness was expected to be low. The outreach efforts included various community events ranging from basic awareness and educational events to application assistance.

[6] The requirements to qualify for the federal EITC included the following for tax year 2022: the taxpayer must (i) have worked and earned income up to $16,480 (single with no children) or $59,187 (married filing jointly with three or more children); (ii) have investment income below $10,300; (iii) have a valid Social Security number by the due date of the return; (iv) be a U.S. citizen or a resident alien during the full year; (v) not file Form 2555 (Foreign Earned Income). The EITC has special rules for taxpayers who are separated from their spouse and not filing a joint tax return, military members, clergy members, and taxpayers and their relatives with disabilities.

[7] See https://workingfamiliescredit.wa.gov/apply for additional information on how to apply. The website is available in English and Spanish.

In addition to outreach efforts, the WADOR utilized a third-party marketing company to assist with additional media advertising. The goal of the third-party media campaign for tax year 2022 was to build statewide awareness of the WFTC among low-to-moderate-income individuals and to increase traffic to the WFTC website. These advertisements appeared on television (e.g., local news stations), billboards, public transportation, online sources (e.g., Google, YouTube), and social media (e.g., Facebook, Instagram). Collectively, the efforts by the WADOR and the marketing firm suggest that individuals and preparers had various ways to become aware of and learn about the WFTC.

3. Research Design

To examine our research questions, we partnered with WADOR to conduct a natural field experiment involving all registered tax preparers in Washington (i.e., PTIN holders).[8] In early January 2025, we retrieved the IRS PTIN database, which contained information about 13,729 tax preparers in Washington. Of these, 13,613 (99.2%) had valid Washington addresses and were included in our sample. We randomly assigned these tax preparers to one of five conditions (one control group and four treatment groups). We randomized assignment at the address level so that all tax preparers at the same location receive the same letter, thereby limiting contamination between conditions. Further, to ensure balance across different types of preparers and to increase the power of our tests (Athey and Imbens, 2017), we block randomized on two characteristics: (1) whether a preparer works for one of the "Big 3" tax preparation firms (H&R Block, Jackson Hewitt, and Liberty Tax) or not, and (2) the number of tax preparers at each address.

Among the Big 3 tax preparers, we categorize locations into three blocks: those with more than 50 tax preparers, those with between 15 and 50 tax preparers, and those with fewer than 15

[8] Although the letter campaign was administered by the WADOR, we requested and obtained IRB approval for this study.

tax preparers. Among non-Big 3 tax preparers, we also create three blocks: locations with more than six tax preparers, locations with two to six tax preparers, and locations with one tax preparer. Thus, in total, we create six blocks within which we randomly assign tax preparers to treatment and control groups.

The five treatment conditions are: *Control*, *Inform*, *Take-up Stats*, *Economic Incentives*, and *Moral Suasion*. The control group received no letter. Tax preparers in the other four conditions received different versions of a letter from WADOR that highlight distinct information about the WFTC and its take-up rate. In the first treatment group, *Inform*, we inform paid preparers of the WFTC and include information about the credit, who is eligible, the amount of the credit, and how preparers can assist taxpayers in applying. In Appendix B, we include the complete letter that WADOR sent to tax preparers.

The letters sent to the next three treatment groups are identical to the *Inform* letter except that they include additional language after the letter's first sentence. The *Take-up Stats* letter includes additional information on the amount of unclaimed refunds in the first two years of the program (i.e., "over 350,000 refunds have not been claimed in the past two years, leaving over $250,000,000 unclaimed!"). The *Economic Incentives* letter includes the language from the *Take-up Stats* letter but adds a statement that preparers have an opportunity to expand their services by helping eligible recipients apply (i.e., appealing to preparers' financial incentives in assisting taxpayers). The *Moral Suasion* letter includes the same information as the *Take-up Stats* letter, plus a statement that preparers can help low- to moderate-income individuals and families in their local community apply for and receive the refunds they deserve. Hence, our research design is meant to capture the incremental effects of simply informing preparers about the credit, providing

take-up statistics, emphasizing potential monetary gains, and appealing to tax preparers' moral obligations.

Our letter conditions allow us to test which frictions and incentives matter most for tax preparers. Consider a simplified model of a tax preparer's expected payoff from assisting a client with a tax credit application. The preparer incurs some cost associated with the time and effort to learn about the tax credit, identify and solicit business from eligible clients, and complete the necessary application. In return, the preparer may receive a direct financial benefit (e.g., preparation fees) as well as some intrinsic benefit (e.g., psychological or prosocial benefit) for helping eligible taxpayers apply.

The *Inform* letter is designed to reduce the information search and learning costs associated with a new credit. To the extent that preparers are unaware of the tax credit or the logistics of helping eligible taxpayers apply, we expect the *Inform* letter to have a positive effect on the number of applications made by the preparer. The *Take-up Stats* letter could increase take-up through two channels: (1) it could increase preparers' perceived size of the potential client market (increasing expected client fees) or (2) it could increase the perceived social impact (increasing the expected psychological benefit). A comparison of our final two letters helps us disentangle these two channels. To the extent perceptions of the potential client market (channel 1) matter more than perceptions of the social benefit, we expect the *Economic Incentives* condition to have an incremental effect over the *Moral Suasion* letter, and vice versa. This design allows us to test competing hypotheses: if preparer behavior with respect to social benefit programs is driven primarily by expected profit, the *Economic Incentives* letter should have the largest incremental effect. If it is driven by altruism or professional duty, the *Moral Suasion* letter should have the largest effect.

To confirm that the randomization worked as intended, in Appendix C, we show that each of our treatment groups is statistically similar to our control group across a variety of zip-code level characteristics, such as the WFTC take-up rate in 2022, income, education, ethnicity, and population. We also show that the treatment and control groups contain similar proportions of PTIN holders who are CPAs, EAs, attorneys, and hold no credentials.

WADOR sent the letters at the end of January 2025 and sent a second reminder letter in March 2025. After the tax filing season, we received data from WADOR.[9] Because the PTIN itself is considered private information, neither the IRS nor WADOR could provide this identifier to link the public PTIN list to WADOR's data on WFTC applications. Hence, we fuzzy matched on tax preparer names, tax preparer business names, and tax preparer phone numbers. In addition, after algorithmic fuzzy matching, we manually examined all matches for accuracy. This process resulted in 3,830 matches. That is, of the 13,613 tax preparers in the IRS PTIN database, 3,830 (28%) filed WFTC applications as paid preparers in 2024. Note that because our sample includes the universe of PTIN holders in Washington (including PTIN holders at Deloitte, EY, PwC, KPMG, etc.), we expect that many of these tax preparers would not be involved in filing individual tax returns for low-income taxpayers.

In our primary tests, we examine five outcome variables: (1) the number of total applications filed by each tax preparer (*Total Apps*), (2) the number of first-time WFTC claimants filed by each tax preparer (*New Apps*), (3) whether tax preparers file any applications (*Any Apps*), (4) whether tax preparers file any first-time WFTC claimants (*Any New Apps*), and (5) whether tax preparers begin filing WFTC for the first time in 2024 (*New Preparers*). We regress these outcomes on treatment indicators for the four treatment groups: *Inform*, *Take-up Stats*, *Economic*

[9] As of the date of this draft, we do not have finalized data on "approved" applications for 2024, which may affect some of our results and inferences.

Incentives, and *Moral Suasion*. Because *Total Apps* and *New Apps* are count variables that contain many observations with zero values, we use a Poisson model for these dependent variables (Cohn, Liu, and Wardlaw, 2022).[10] We use linear probability models (LPMs) to examine the extensive margin effects of the treatments—i.e., *Any Apps*, *New Apps*, and *New Preparers*. In each regression, we include indicators for each block, and we cluster standard errors by address, which was the level at which we randomized the treatment and control conditions. Because we predict that each treatment condition generates a larger effect than the control condition, we use one-tailed p-values for tests of significance. We also use one-tailed p-values in tests between treatment groups that compare incremental information (all between-group tests other than *Economic Incentives* vs. *Moral Suasion*), as we predict larger effects as we provide additional information about take-up statistics and/or messages about economic incentives and moral suasion.

4. Results

4.1 Main Results

We first provide descriptive evidence of the WFTC take-up rate in the years before our field experiment. Figure 2 illustrates take-up rates by zip code across the state in 2022. We show that zip-code level take-up rates range from 15% to 82%, with a total statewide take-up rate of approximately 50%, based on the number of WFTC filings divided by the number of federal EITC filings. In addition, we examined zip-code level determinants of take-up. Among a large set of variables capturing income, education, demographics, and tax filing behavior, the proportion of returns using paid preparers explains the most variation in take-up rates (see Figure 3). Together,

[10] Cohn et al. (2022) generally prescribe using a Poisson model when the dependent variable is a count variable. Other models that can handle count data with a large number of observations with zeroes, such as the negative binomial or zero-inflated models, do not allow for separable fixed effects and suffer from an "incidental parameters problem" if group dummy variables are added, which can bias all coefficients. Because our regression models include indicator variables for our strata, we use the Poisson model as our preferred specification.

these two descriptive statistics suggested that there may be a substantial opportunity to increase take-up through direct outreach to paid preparers.

We next present results from the field experiment. Table 1 presents descriptive statistics for the sample of tax preparers in our study. Panel B shows that 20% of the sample filed at least one WFTC application. The mean number of applications is 5.0, although the median is zero. 11% of the sample belongs to a Big 3 tax preparation firm, 33% are CPAs, 10% are EAs, and 54% have no credential.

In Table 2 we examine the average treatment effect of the letter campaign across the pooled sample of all tax preparers. To do so, we test whether preparers randomly assigned to each treatment group prepared more total WFTC applications for tax year 2024 than preparers who were randomly assigned not to receive any letters. That is, our results reflect "intent to treat" effects of being assigned to a treatment group; they do not reflect the effect of receiving a letter. Column 1 shows that although the point estimate is positive for all treatment conditions, the letter highlighting economic incentives is the only one that is statistically significant. In Figure 4, Panel A, we present the marginal effects from this Poisson regression to show magnitudes. Preparers assigned to the *Economic Incentives* group filed approximately 2.25 additional WFTC applications on average compared to the control group, resulting in about 6,400 additional applications. This treatment is also statistically larger than the effects of the *Inform* group (p-value = 0.068) and the *Take-up Stats* group (p-value = 0.094). The marginal effect suggests the *Economic Incentives* group filed about 56% more applications than the control group. The aggregate effect of all treatments is an additional 14,600 applications.[11]

[11] Marginal effect of 2.25 additional applications × 2,850 observations in the *Economic Incentives* group = 6,413 additional total applications than the control group. 2.25 additional applications / 4.0 average number of applications in the control group = 56% additional applications. The aggregate estimate of 14,600 across all letter conditions is

In Table 2 column 2, we examine whether preparers in treatment groups completed more *new* WFTC applications than control group preparers (i.e., assisted a taxpayer who is filing for the first time). As before, the point estimate is positive for all letter conditions but only statistically significant for the economic incentives condition—and again this treatment is statistically larger than the effects of the *Inform* group (p-value = 0.032) and the *Take-up Stats* group (p-value = 0.068). Figure 4, Panel B displays the magnitudes, with preparers in the *Economic Incentives* group each filing an additional 0.8 new applications on average, or approximately 2,400 in total. The aggregate effect of all treatments is an additional 4,800 applications, relative to the control group.

Table 2 columns 3 and 4 show that assignment into all groups except *Take-up Stats* has a significantly positive effect on the likelihood that the preparer files any application, as well as any application for first-time filers. The magnitudes of the coefficients suggest that preparers respond most to moral messages urging them to help their local communities. In column 3, *Moral Suasion* is statistically larger than *Take-up Stats* (p-value = 0.020); in column 4 it is statistically larger than *Inform* (p-value = 0.046) and *Take-up Stats* (p-value = 0.033). In addition, column 5 suggests that *Moral Suasion* may be most effective at increasing the likelihood that a preparer will start filing applications for the first time.

The findings from the pooled sample tests suggest that for the average tax preparer in our sample, informational frictions about the tax credit may not be the primary friction. Instead, preparers' decision to assist additional clients with the WFTC may be largely influenced by financial opportunities to expand their services and generate revenue, as well as moral obligations. In particular, economic incentives appear to have the strongest effect on the number of applications filed, whereas moral appeals have the greatest impact in nudging tax preparers into participation.

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the sum product of all the marginal effects in Figure 1, Panel A multiplied by the number of observations in each group from Table 1, Panel A.

4.2 Heterogeneous Effects – Big 3 Firms

We also examine heterogeneous treatment effects based on whether the preparer works at a Big 3 tax preparation firm. Because we block randomized on Big 3 vs. Non-Big 3, these results can be interpreted as causal effects of the treatment conditions as in the main results. For both total applications and new applications, the results are quite different from the pooled sample. As shown in Table 3 Panel A, for Big 3 preparers, all four letter conditions led to statistically significant increases in both total and new applications. Moreover, the magnitudes of the point estimates are larger than in the pooled sample, and the differences between the four letter types are not statistically significant. In terms of magnitudes, the marginal effects from the Poisson regressions indicate that preparers in the treatment groups completed an additional 6.10 to 7.02 total applications and 2.26 to 2.55 new applications—resulting in an aggregate increase of approximately 8,000 total applications and 2,900 new applications.

In Table 3 Panel A, columns 3 and 4, nearly all letters have a statistically positive effect on the likelihood that preparers file any applications and assist first-time filers, with *Moral Suasion* having the largest point estimate. *Moral Suasion* is statistically larger than *Inform* in column 3 (p-value = 0.009), and *Moral Suasion* and *Take-up Stats* are both statistically larger than *Inform* in column 4 (p-value = 0.004 and p-value = 0.092, respectively). None of the letters appears to be effective in attracting new preparers (column 5). In Table 3 Panel B, columns 1 and 2, *Economic Incentives* is most effective at increasing total and new applications for non-Big 3 preparers (and this condition is statistically larger than *Inform* and *Take-up Stats* in both columns), consistent with the results from the pooled sample. Columns 3 and 4 also present similar results as the Big 3 and pooled sample, with *Moral Suasion* having the largest point estimates. Unlike the results in Panel

A, in column 5 we find that the *Economic Incentives* and *Moral Suasion* conditions increase the number of new preparers.

In sum, these results suggest that for preparers operating within large, structured firms, the primary friction was likely not a lack of financial motive but rather a lack of awareness or salience regarding the WFTC. This finding could reflect large, national firms relying on standardized software, training, and processes that are efficient for federal tax returns and states with uniform rules. However, a new credit in a no-income-tax state may not be well-integrated into their standard practices. The finding could also reflect the fact that these preparers are most busy during tax filing season (January-April), and are thus overloaded with client information and updates regarding federal, state, and local tax laws. A direct, official letter from the WADOR may therefore serve as a powerful way to bring the WFTC to preparers' attention and spur action.

Once the credit was brought to Big 3 preparers' attention—regardless of the specific framing—they responded by filing more applications. The positive response could be due to preparers' sense of fiduciary duty or efforts to mitigate reputational risk from overlooking a credit. For this segment of preparers, a simple, low-cost informational nudge appears to be a sufficient and effective policy tool. In contrast, the results for non-Big 3 preparers mirror the pooled results, suggesting that these preparers respond more to information about economic incentives.

4.3 Heterogeneous Effects – Preparer Credentials

Finally, we examine whether the effects differ by the preparer's credentials. It is important to note that we did not block sample on credentials—hence, these results represent heterogeneous effects on different cross-sections and not causal estimates of treatment effects. We include the three most common groups: CPAs, EAs, and those with no credential. Anyone can obtain a PTIN to prepare tax returns after passing a suitability check and paying a small fee. A CPA is licensed

at the state level by a specific state's board of accountancy. Becoming a CPA is a rigorous process that typically requires 150 semester hours of college education (often a master's degree), passing the comprehensive four-part Uniform CPA Exam, and completing a certain amount of verified work experience. They have also met "good character" requirements established by their respective boards of accountancy. To maintain their license, they must meet their state's continuing education requirements. An EA is licensed at the federal level by the IRS. To become an EA, a candidate is subject to a suitability check and must pass a three-part Special Enrollment Examination, which is a comprehensive exam that requires them to demonstrate proficiency in federal tax planning, individual and business tax return preparation, and representation. Thus, EAs are tax specialists. They must complete 72 hours of continuing education every 3 years. There is no specific college degree requirement to become an EA. Both CPAs and EAs can represent any taxpayer regarding any tax matter before any IRS office.

In Table 4 Panel A, for CPAs, we find significantly positive coefficients for each letter condition on total applications and new applications. We also find that each letter condition other than *Inform* increases the likelihood that CPAs begin filing WFTC applications for the first time (column 5), and they are the only group among our credential subgroups to exhibit this response. In Panel B, EAs show a similar pattern in columns 1 and 2, with all letters except *Moral Suasion* having a significantly positive coefficient. In Panel C, for all other preparers, which constitutes the majority of PTIN holders, we find that the economic incentives letter was the only significantly positive letter for total and new applications. These results suggest that more highly credentialed preparers (e.g., CPAs and EAs) behave similarly to the Big 3 firms.

Collectively, these results provide a nuanced understanding of preparer motivations. More credentialed professionals (CPAs and EAs) appear to be primarily constrained by informational

frictions; once informed, their professional obligations or business models lead them to assist eligible clients. Conversely, the large population of non-credentialed preparers seems to operate based on a more direct cost-benefit analysis, and information about potential financial benefits encourages action. This suggests that a one-size-fits-all outreach strategy may not be optimal, and policymakers can achieve greater impact by tailoring their messaging to specific preparer segments.

5. Additional Analysis

5.1. Survey of Paid Preparers

To better understand the mechanisms through which the letters increased WFTC applications, we plan to administer a survey to all paid preparers who filed a WFTC application. The survey instrument is included in Appendix D and contains questions related to the preparer's background, their awareness of the WFTC, challenges in filing the application, what they recall (if anything) from the letters we sent, fee structure and client interaction, how information flows within their office and company, and the degree of automation in their tax software. We received feedback regarding the survey from the WFTC team as well as several tax professionals in Washington state, and we plan to administer the survey in December 2025.

5.2. Taxpayers' Hassle Costs

In additional analyses, we explore the effect of changes to eligible *taxpayers'* costs and benefits of claiming the credit. Specifically, in 2022 and 2023, one of the country's primary self-preparation tax software providers did not include the WFTC application in their software. Instead, the provider merely informed taxpayers that they may be eligible for the WA WFTC and directed them to WADOR's online website to complete the free application themselves. However, in 2024, the provider began offering filing assistance through its software for a nominal fee.

Figure 5 shows the number of applications filed through different methods over time. We find that the number of applications filed through self-preparation software increased from approximately 32,000 in 2023 to 168,000 in 2024, reflecting more than a 400% increase. We also find a more modest decline of about 33,000 applications from other self-preparation methods, suggesting some individuals converted from filing on their own to using self-prep software when that option became available in 2024.

The dramatic increase in applications from self-prep software in 2024 despite the software provider informing individuals of the credit in prior years suggests that the primary barrier to take-up may not be a lack of awareness, but rather the perceived "hassle costs" of the application process (e.g., the time and effort required to navigate the rules, gather documents, fill out and submit the application). These results suggest that while tax preparation firms play an essential role in delivering social benefits, they also benefit from the complexities and hassles in these programs. Thus, program simplification and the efficient identification of eligible recipients could deliver more resources to the intended recipients.

6. Conclusion

We examine the role of paid tax preparers as intermediaries in the take-up of tax-based social benefits, a topic of critical importance as policymakers seek innovative ways to address persistently low program participation. In collaboration with the WADOR, we conduct a field experiment focused on the state's newly implemented tax credit for low-to-moderate income residents. By randomly sending different informational letters to over 13,000 tax preparers, we test whether outreach to these intermediaries can increase take-up and which factors seem to motivate action. Our setting provides a unique opportunity to examine how preparers internalize information about a new credit without the confounding effects of pre-existing outreach efforts.

Our findings suggest that informational interventions targeting tax preparers can meaningfully increase tax credit claims, but the effectiveness of these interventions depends on the message and the recipient. On average, our letter highlighting economic incentives for preparers to expand their services led to the largest increase in WFTC applications. This result suggests that, for the typical preparer, financial motives are a key driver of behavior. However, we find heterogeneous effects based on features of the tax preparer's business and the preparer's credentials. Preparers at large national firms (i.e., H&R Block, Jackson Hewitt, and Liberty Tax) and CPAs responded to all types of informational letters. This result suggests that for these more sophisticated preparers, a lack of awareness or salience of the tax credit prevented them from assisting eligible taxpayers, and a simple informational nudge was sufficient to spur action.

Our additional analyses shed light on barriers faced by taxpayers themselves. When a major tax software provider integrated the WFTC application into its platform in 2024 after previously omitting it and only informing taxpayers of the credit, the number of applications filed via self-preparation software increased by over 400%. This dramatic shift suggests that "hassle costs"—the time and effort required to navigate the application process—may be a more significant barrier to take-up than a lack of awareness for many eligible individuals.

Collectively, our results offer important contributions to both academic literature and public policy. We provide some of the first causal evidence on the specific frictions and incentives that shape the behavior of paid tax preparers, opening the "black box" of their role in the social benefits landscape. For policymakers, our findings provide a practical roadmap: outreach to preparers can be a viable tool to increase take-up, particularly for new tax credits. Moreover, different messages can be tailored for different preparer types. Finally, although intermediaries play a critical role, the most profound gains in getting benefits to those in need may come from

program simplification and the reduction of complexity that creates hassle costs for recipients. Our results should offer timely and relevant evidence for both national and subnational governments that continue to introduce or modify tax-based social benefit programs.

References

Butkus. N. 2025a. State Earned Income Tax Credits Support Families and Workers in 2025. Institute on Taxation and Economic Policy. September 11, 2025. Available at: https://itep.org/state-earned-income-tax-credits-support-families-and-workers-in-2025.

Butkus. N. 2025b. Which States Expanded Refundable Credits in 2025? Institute on Taxation and Economic Policy. July 24, 2025. Available at: https://itep.org/state-child-tax-credits-earned-income-tax-credits-2025/.

Cohn, J., Liu, Z., and M. Wardlaw. 2022. Count (and count-like) data in finance. *Journal of Financial Economics* 146(2): 529-551.

Cranor, T., J. Goldin, and S. Kotb. 2019. Does informing employees about tax benefits increase take-up? Evidence from EITC notification laws. *National Tax Journal* 72(2): 397-434.

Currie, J. 2004. The take-up of social benefits. NBER working paper.

Eurofound. 2015. Access to social benefits: Reducing non-take-up. Publications Office of the European Union, Luxembourg.

Finkelstein, A., and M. Notowidigdo. 2019. Take-up and targeting: Experimental evidence from SNAP. *Quarterly Journal of Economics* 134(3): 1505–1556.

Fleck, J., J. Heathcote, K. Storesletten, and G. Violante. 2025. Fiscal Progressivity of the U.S. Federal and State Governments. Federal Reserve Bank of Minneapolis. Staff Report No. 663.

GAO, 2014. Paid tax return preparers: In a limited study, preparers made significant errors. GAO-14-467T. April 8, 2014. Testimony Before the Committee on Finance, U.S. Senate.

GAO. 2022. IRS Free File Program: IRS should develop additional options for taxpayers to file for free. GAO-22-105236. April 2022. United States Government Accountability Office, Report to Congressional Requesters.

Goldin, J. 2018. Tax benefit complexity and take-up: Lessons from the Earned Income Tax Credit. Tax Law Review 72: 59.

Goldin, J., T. Homonoff, R. Javid, and B. Schafer. 2022. Tax filing and take-up: Experimental evidence on tax preparation outreach and benefit claiming. *Journal of Public Economics* 206: 104550.

Guyton. J., P. Langetieg, D. Manoli, M. Payne, B. Schafer, and M. Sebastiani. 2017. Reminders and recidivism: Using administrative data to characterize filers and conduct EITC outreach. *American Economic Review: Papers & Proceedings* 107(5): 471-475.

Horwich, J. 2025. Measuring tax and transfer progressivity, state by state: A look at "Fiscal Progressivity of the U.S. Federal and State Governments." Available at: https://www.minneapolisfed.org/article/2025/measuring-tax-and-transfer-progressivity-state-by-state#:~:text=Roughly%20two%2Dthirds%20of%20states,especially%20likely%20to%20do%20so.

IRS. 2020. SOI Tax Stats — Tax Stats-at-a-Glance. Available at: https://www.irs.gov/statistics/soi-tax-stats-tax-stats-at-a-glance

IRS. 2025. EITC Participation Rate by States Tax Years 2014 through 2022. Available at: https://www.eitc.irs.gov/eitc-central/participation-rate-by-state/eitc-participation-rate-by-states

Iselin, J., T. Mackay, and M. Unrath. 2023. Measuring take-up of the California EITC with state administrative data. *Journal of Public Economics* 227(2023): 105002.

ITEP. 2018. Who Pays? A Distributional Analysis of the Tax Systems in All 50 States. Sixth Edition.

ITEP. 2024. Who Pays? A Distributional Analysis of the Tax Systems in All 50 States. Seventh Edition.

Ko, W., and R. Moffitt. 2022. Take-up of social benefits. *NBER working paper*.

Kopczuk, W. and C. Pop-Eleches. 2007. Electronic filing, tax preparers, and participation in the Earned Income Tax Credit. *Journal of Public Economics* 91(7-8): 1351-1367.

Linos, E., A. Prohofsky, A. Ramesh, J. Rothstein, and M. Unrath. 2022. Can nudges increase take-up of the EITC? Evidence from multiple field experiments. *American Economic Journal: Economic Policy* 14(4): 432-452.

Manoli, D. and N. Turner. 2014. Nudges and learning: Evidence from information interventions for low-income taxpayers. *National Bureau of Economic Research*.

NCSL. 2024. Earned Income Tax Credit Overview. Available at: https://www.ncsl.org/human-services/earned-income-tax-credit-overview#state.

Washington Senate Ways and Means Committee. 2023. A Legislative Guide to Washington's Tax Structure.

Appendix A – Variable Definitions

Panel A. Balance Variables and Take-up Determinants Variables

Variable Name	Definition	Source
Take-up Rate	Non-ITIN WFTC applications in a zip code divided by EITC returns in a zip code.	WADOR – 2022 Application Dataset, IRS SOI 2020
Hispanic	The proportion of the population in a zip code that is Hispanic.	U.S. Census ACS 2021
White	The proportion of the population in a zip code that is White alone.	U.S. Census ACS 2021
Black	The proportion of the population in a zip code that is Black or African American alone.	U.S. Census ACS 2021
Native American	The proportion of the population in a zip code that is Native American or Alaska Native alone.	U.S. Census ACS 2021
Asian	The proportion of the population in a zip code that is Asian alone.	U.S. Census ACS 2021
Pacific Islander	The proportion of the population in a zip code that is Native Hawaiian or Other Pacific Islander alone.	U.S. Census ACS 2021
Population Density	The population density (per square mile) of a zip code.	U.S. Census ACS 2021
Female	The proportion of the population in a zip code that is female.	U.S. Census ACS 2021
Under 18	The proportion of the population in a zip code that is under 18 years old.	U.S. Census ACS 2021
Single	The proportion of the population in a zip code that is unmarried (never married + widowed + divorced).	U.S. Census ACS 2021
Bachelor's Degree	The proportion of a population in a zip code that holds a Bachelor's Degree.	U.S. Census ACS 2021
Median Household Income	The median household income in a zip code. In regressions, this variable is logged.	U.S. Census ACS 2021
Inequality	The Gini Index in a zip code.	U.S. Census ACS 2021
Children Living with Single Parents	The proportion of a children (under 18) in a zip code living with single parents.	U.S. Census ACS 2021
Paid Preparers	In Appendix C: The proportion of tax returns with adjusted gross income below $50,000 in a zip code that use a paid preparer.	IRS SOI 2020
VITA	In Appendix C: The proportion of tax returns with the EITC in a zip code that use VITA.	IRS SOI 2020
Marketing Spend	The sum of Digital Marketing Spend, Broadcast Marketing Spend, and Outdoor Marketing Spend. In regressions, this value is logged.	WADOR – Marketing Dataset
CPA	In Appendix C: The proportion of PTIN holders at a given business address that are CPAs. In all other tables: An indicator variable equal to 1 if the PTIN holder is a CPA, and zero otherwise.	IRS PTIN Dataset for Washington State
Attorney	In Appendix C: The proportion of PTIN holders at a given business address that are attorneys.	IRS PTIN Dataset for Washington State
EA	In Appendix C: The proportion of PTIN holders at a given business address that are EAs. In all other tables: An indicator variable equal to 1 if the PTIN holder is an EA, and zero otherwise.	IRS PTIN Dataset for Washington State
No Credentials	In Appendix C: The proportion of PTIN holders at a given business address that do not have a professional credential.	IRS PTIN Dataset for Washington State

	In all other tables: An indicator variable equal to 1 if the PTIN holder does not have a professional credential, and zero otherwise.	

Panel B. Variables for Field Experiment

Variable Name	Definition	Source
Total Apps	The number of total applications filed by each PTIN holder.	WADOR – 2024 Application Dataset; IRS PTIN Dataset for Washington State
New Apps	The number of first-time WFTC claimants filed by each PTIN holder.	WADOR – 2024 Application Dataset; IRS PTIN Dataset for Washington State
Any Apps	An indicator variable equal to 1 if the PTIN holder filed any WFTC applications, and zero otherwise.	WADOR – 2024 Application Dataset; IRS PTIN Dataset for Washington State
Any New Apps	An indicator variable equal to 1 if the PTIN holder filed any WFTC applications for first-time claimants, and zero otherwise.	WADOR – 2024 Application Dataset; IRS PTIN Dataset for Washington State
New Preparers	An indicator variable equal to 1 if the PTIN holder filed at least one WFTC applications for the first time in 2024, and zero otherwise.	WADOR – 2024 Application Dataset; IRS PTIN Dataset for Washington State
Control	An indicator variable equal to 1 if the PTIN holder was assigned to the no-letter control condition, and zero otherwise.	Randomly assigned using IRS PTIN Dataset for Washington State
Inform	An indicator variable equal to 1 if the PTIN holder was assigned to the *Inform* treatment letter condition, and zero otherwise. See Appendix B for the letter sent to this group.	Randomly assigned using IRS PTIN Dataset for Washington State
Take-up Stats	An indicator variable equal to 1 if the PTIN holder was assigned to the *Take-up Stats* treatment letter condition, and zero otherwise. See Appendix B for the letter sent to this group.	Randomly assigned using IRS PTIN Dataset for Washington State
Economic Incentives	An indicator variable equal to 1 if the PTIN holder was assigned to the *Economic Incentives* treatment letter condition, and zero otherwise. See Appendix B for the letter sent to this group.	Randomly assigned using IRS PTIN Dataset for Washington State
Moral Suasion	An indicator variable equal to 1 if the PTIN holder was assigned to the *Moral Suasion* treatment letter condition, and zero otherwise. See Appendix B for the letter sent to this group.	Randomly assigned using IRS PTIN Dataset for Washington State
Big 3	An indicator variable equal to 1 if the PTIN holder works at a Big 3 tax preparation firm (H&R Block, Jackson Hewitt, or Liberty Tax), and zero otherwise.	IRS PTIN Dataset for Washington State
CPA	An indicator variable equal to 1 if the PTIN holder is an CPA, and zero otherwise.	IRS PTIN Dataset for Washington State
Enrolled Agent	An indicator variable equal to 1 if the PTIN holder is an Enrolled Agent, and zero otherwise.	IRS PTIN Dataset for Washington State
No Credential	An indicator variable equal to 1 if the PTIN holder does not have a professional credential, and zero otherwise.	IRS PTIN Dataset for Washington State

Appendix B – Letters

The figure below is a copy of the *Inform* letter condition. Other treatment condition letters are identical except that they include additional language after the first sentence, as follows (emphasis included in the letter):

- ***Take-up Stats***: "The Washington State Department of Revenue estimates that over **350,000 refunds have not been claimed** in the past two years, leaving over **$250,000,000 unclaimed**!"
- ***Economic Incentives***: "The Washington State Department of Revenue estimates that over **350,000 refunds have not been claimed** in the past two years, leaving over **$250,000,000 unclaimed**! As a tax preparer, you have an opportunity to **expand your services** by helping eligible recipients apply for the credit."
- ***Moral Suasion***: "The Washington State Department of Revenue estimates that over **350,000 refunds have not been claimed** in the past two years, leaving over **$250,000,000 unclaimed**! As a tax preparer, you can **help low-to-moderate income individuals and families** in your local community apply for and receive the refunds they deserve."

STATE OF WASHINGTON
DEPARTMENT OF REVENUE

Dear [redacted]:

As you prepare tax returns this year, please consider whether your current or prospective clients qualify for Washington State's Working Families Tax Credit (WFTC), with refunds up to $1,290.

What is the WFTC? The WFTC is an annual tax credit for low-to-moderate-income individuals and families in Washington administered by the Washington State Department of Revenue.

Who is eligible for the WFTC?
A Washington resident is eligible for the WFTC for 2024 if they meet all the following requirements:

- Have a valid Social Security Number or Individual Taxpayer Identification Number (ITIN).
- Lived in Washington state for a minimum of 183 days in 2024 (over half the year).
- Were at least 25 and under 65 years of age OR had a qualifying child in 2024.
- Filed a 2024 federal tax return.
- Eligible to claim the federal Earned Income Tax Credit (EITC) on their 2024 tax return (or would have met the requirements for EITC but filed with an ITIN).
- Met the income requirements in the chart below.

What are the income requirements?
The credit amount varies depending on the number of qualifying children and income level.

Number of qualifying children	Applicant must make less than the following in 2024:		Maximum credit amount
	Single	Married (filing jointly)	
0	$18,591	$25,511	$325
1	$49,084	$56,004	$640
2	$55,768	$62,688	$965
3 or more	$59,899	$66,819	$1,290

It's not too late to help taxpayers apply for prior years! If taxpayers met the requirements for tax year 2022 or 2023, they can still apply and receive even more money back!

How can you help taxpayers apply? To find more information about the application process, including what software is compatible, please visit (WFTC.wa.gov/taxprep). If your preparation software does not already include the application, you can help taxpayers apply for free online by visiting our website at WFTC.wa.gov.

If you have questions or need assistance, please call us at 360-763-7300.

Working Families Tax Credit Division
wftc.wa.gov
PO Box 47468 Olympia, WA 98504-7468
Phone 360-763-7300

Appendix C – Balance across Treatment and Control Groups

	(1) *Take-up Rate*	(2) *Income*	(3) *Education*	(4) *Hispanic*	(5) *White*	(6) *Black*	(7) *Asian*	(8) *Population*	(9) *Preparers per Address*	(10) *CPA*	(11) *Attorney*	(12) *EA*	(13) *No Credentials*
Inform	0.000	-0.004	-0.000	0.001	0.005	-0.001	-0.003	208.951	-0.101	0.007	-0.006	-0.001	-0.000
	(0.12)	(-0.30)	(-0.07)	(0.32)	(0.86)	(-0.68)	(-0.80)	(0.34)	(-0.49)	(0.43)	(-0.95)	(-0.09)	(-0.02)
Take-up Statistics	0.003	0.003	-0.001	0.010**	-0.005	-0.002	0.000	-624.051	0.135	0.027	-0.006	-0.017	-0.005
	(1.12)	(0.20)	(-0.35)	(2.23)	(-0.83)	(-1.18)	(0.04)	(-1.03)	(0.48)	(1.63)	(-1.08)	(-1.51)	(-0.30)
Economic Incentives	0.002	-0.024*	-0.002	0.005	-0.003	-0.000	0.000	-666.886	0.092	0.005	0.001	0.008	-0.007
	(0.80)	(-1.91)	(-0.55)	(1.17)	(-0.59)	(-0.17)	(0.09)	(-1.09)	(0.34)	(0.29)	(0.15)	(0.66)	(-0.38)
Moral Suasion	0.003	0.004	0.003	0.001	0.000	-0.002	0.001	230.792	-0.103	0.027	-0.007	-0.003	-0.014
	(1.01)	(0.30)	(0.82)	(0.17)	(0.02)	(-0.88)	(0.26)	(0.37)	(-0.49)	(1.62)	(-1.20)	(-0.26)	(-0.81)
Control	0.349***	11.359***	0.240***	0.120***	0.719***	0.038***	0.099***	1,696.076***	1.860***	0.302***	0.031***	0.130***	0.535***
	(175.57)	(1,263.67)	(96.53)	(41.32)	(182.41)	(29.53)	(36.44)	(71.52)	(10.43)	(26.38)	(7.01)	(15.70)	(43.49)
Observations	7,055	7,067	7,075	7,075	7,075	7,075	7,075	7,078	7,300	7,300	7,300	7,300	7,300
R-squared	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.001	0.000	0.001	0.000	0.001	0.000

Notes: This table displays the treatment balance by regressing outcomes and characteristics on treatment indicators. The unit of observation is the preparer address, which is the level at which we randomized treatment selection. Columns 2-8 are zip-code level characteristics and columns 9-13 are preparer characteristics obtained from the IRS PTIN dataset. T-stats based on robust standard errors are reported in parentheses, and *, **, and *** represent statistical significance at the 10, 5, and 1 percent level, respectively (two-tailed). We define all variables in Appendix A.

Appendix D – Paid Preparer Survey Instrument (Target Implementation: Dec. 2025)

Background

1. How many years of experience do you have preparing individual tax returns for clients?
    a. 0-2 years
    b. 3-5 years
    c. 6-10 years
    d. 11-20 years
    e. More than 20 years

2. Which of the following describes you (check all that apply)?
    a. CPA
    b. Enrolled Agent
    c. Attorney
    d. PTIN Holder
    e. Other tax preparer credential (please specify)
    f. None of these apply

3. About what percentage of your clients have an annual household income below $60,000? [Enter percentage]

WFTC Awareness

4. Washington State provides a tax credit for low-to-moderate income individuals and families (the "Working Families Tax Credit"). The tax credit was first available for the 2022 tax year. When, if at all, did you first become aware of the Washington WFTC?
    a. In 2022 or earlier
    b. In 2023 (when 2022 taxes are filed)
    c. In 2024 (when 2023 taxes are filed)
    d. In 2025 (when 2024 taxes are filed)
    e. This is my first time hearing about the WFTC.

5. [If yes to awareness question] How did you hear about the WFTC? (Check all that apply)
    a. Communication from the WA Department of Revenue (email, website, letter, etc.)
    b. My tax software
    c. A client asked me about it
    d. Colleague or another tax professional
    e. Professional organization
    f. News media or advertisement
    g. Communications from my company (email, letter, meeting, etc.)
    h. Other (please specify)

Challenges

6. For the clients you assisted with the WFTC application, what was the biggest challenge in filing the application?
    a. Determining client eligibility.
    b. Lack of integration in my tax software.
    c. Gathering the necessary client documentation.
    d. The time it takes to complete the application.
    e. Convincing eligible recipients to apply.
    f. No option to have the preparation fee withheld from the refund.
    g. The WADOR application website did not have an option to indicate"paid preparer."
    h. There were no significant challenges.
    i. Other (please specify)

Responses to the Letter

7. In January and March of 2025, the WA Department of Revenue sent letters to some tax preparers about the WFTC. Do you recall receiving such a letter? [Yes, No, No but I heard about the letter from someone else who received the letter]

8. [If "Yes" or "No but I heard about it" to recall receiving a letter] How, if at all, did that letter influence your awareness and actions during the tax season? (Check all that apply)
    a. It made me aware of the WFTC (I was not aware before the letter).
    b. It encouraged me to look for more information about the WFTC.
    c. It encouraged me to more proactively look for and identify existing clients who may be eligible for the WFTC for the 2024 tax year.
    d. It encouraged me to more proactively look for and identify existing clients who may be eligible for the WFTC in *prior* years (2022 or 2023 tax years).
    e. It encouraged me (or my office) to look for and identify *new* potential clients who were eligible for the WFTC.
    f. I shared the information with colleagues in my office.
    g. I shared the information with colleagues at other offices.
    h. It had no effect on my actions.
    i. Other (please specify)

9. [If they indicated they sought out new potential clients]: In a few words or phrases, how did you or your company seek out new clients (e.g., public advertisements, attending community events, direct emails or communications, etc.)? (open-ended)

10. [If they indicated they sought out new potential clients]: What motivated you to seek out new clients? (open-ended)

11. [If "Yes" or “No but I heard about it” to recall receiving a letter] Which of the following statements do you recall from the letter? (Select all that apply)
    a. It provided general information about the credit.
    b. It provided information on how to help people apply.
    c. It mentioned a large amount of unclaimed WFTC funds.
    d. It mentioned the opportunity for me to expand my services.
    e. It mentioned the ability for me to help low-to-moderate-income families in my local community.
    f. I do not recall specific information in the letter.
    g. Other (please specify)

12. There were approximately 700,000 total *potential* refunds available statewide for combined tax years 2022 and 2023. If you had to estimate, what number of those refunds went **unclaimed**? [Enter number]

13. If you had to estimate, what percentage of your office’s clients who are eligible for the WFTC actually claimed the WFTC in the first two years of the program? [Enter percentage]

14. [If they do not recall receiving a letter]: Assume, hypothetically, that the percentage of eligible WFTC recipients statewide who claimed the credit last year was [randomize: 25%, 50%, 75%, 95%]. To what extent would this information increase or decrease the likelihood that you do the following: [7-point scale from “significantly more likely” to “significantly less likely”)]
    a. Review or pay closer attention to the potential eligibility of my existing clients.
    b. Look for and identify *new* potential clients who were eligible for the WFTC.
    c. Share the information with colleagues in my office.
    d. Share the information with colleagues at other offices.

Attention-check

15. To ensure you are paying attention, please select “moderately disagree” for this question. (5-point Likert scale ranging from “strongly disagree” to “strongly agree”)

Fee Structure and Client Interaction

16. How, if at all, do you **typically** charge clients for preparing a WFTC application?
    a. There is no separate charge, but it is included in my standard tax preparation fee.
    b. I charge an additional flat fee for the WFTC application.
    c. I charge an hourly rate for the time it takes.
    d. I typically do not charge at all for the WFTC application.
    e. Other (please specify):

17. [If they charge something] What is your typical fee for completing the WFTC application?
    a. $1 - $25
    b. $26 - $50
    c. $51 - $75
    d. $76-$100
    e. $101-$125
    f. More than $125

18. [If they charge something] What percentage of your eligible WFTC clients choose not to apply for the WFTC because of the fee? [Enter percentage]

Information Sharing and Tax Software Processes

19. How important are the following resources in helping you learn about changing tax laws and updates? [5-point Likert scale ranging from "Not at all important" to "Very important"
    a. Government agency websites (e.g., IRS.gov; dor.wa.gov)
    b. Publications from my professional organization
    c. Paid tax research services (e.g., CCH, Thomson Reuters)
    d. Continuing Professional Education (CPE) courses
    e. News outlets or tax-related blogs
    f. Colleagues and professional networks
    g. Communications from my office or company
    h. Tax software
    i. Other (please specify)

20. Regarding your primary tax software's handling of the WFTC, which statement best describes how it identifies potentially eligible clients?
    a. It automatically flags clients who appear eligible based on federal return data.
    b. It provides a general diagnostic or reminder, but I have to confirm eligibility myself.
    c. It does not provide any notification; I have to identify eligible clients manually.
    d. My software does not support the WFTC application.

e. Other (please specify)
f. I'm not sure.

21. Once you've identified an eligible client, how automated is the WFTC application process within your software?

    a. Fully automated: The software transfers all necessary information from the federal return to the WFTC application.

    b. Mostly automated: The software nearly all necessary information from the federal return to the WFTC application.

    c. Partially automated: The software transfers some information, but some manual data entry is still required.

    d. Minimally automated: I have to manually enter most information, either within the software or on the WADOR website.

    e. Not automated at all: I have to complete the application largely from scratch, either within the software or on the WADOR website.

    f. I have not prepared a WFTC application using my software.

22. On average, about how many minutes does it take to you (or your software) to complete a WFTC application for an eligible client? [Enter number of minutes]

23. How can the Washington State Department of Revenue better assist and support tax preparers with the WFTC? [Select all that apply]

    a. Additional training opportunities for preparers (please specify content and mode of preferred training)

    b. Additional direct communications with preparers (please specify content and mode of preferred communication)

    c. Having a direct contact line to staff for questions (please specify preferred mode – e.g., phone line, email)

    d. Other (please specify)

    e. No additional support is needed from the WADOR.

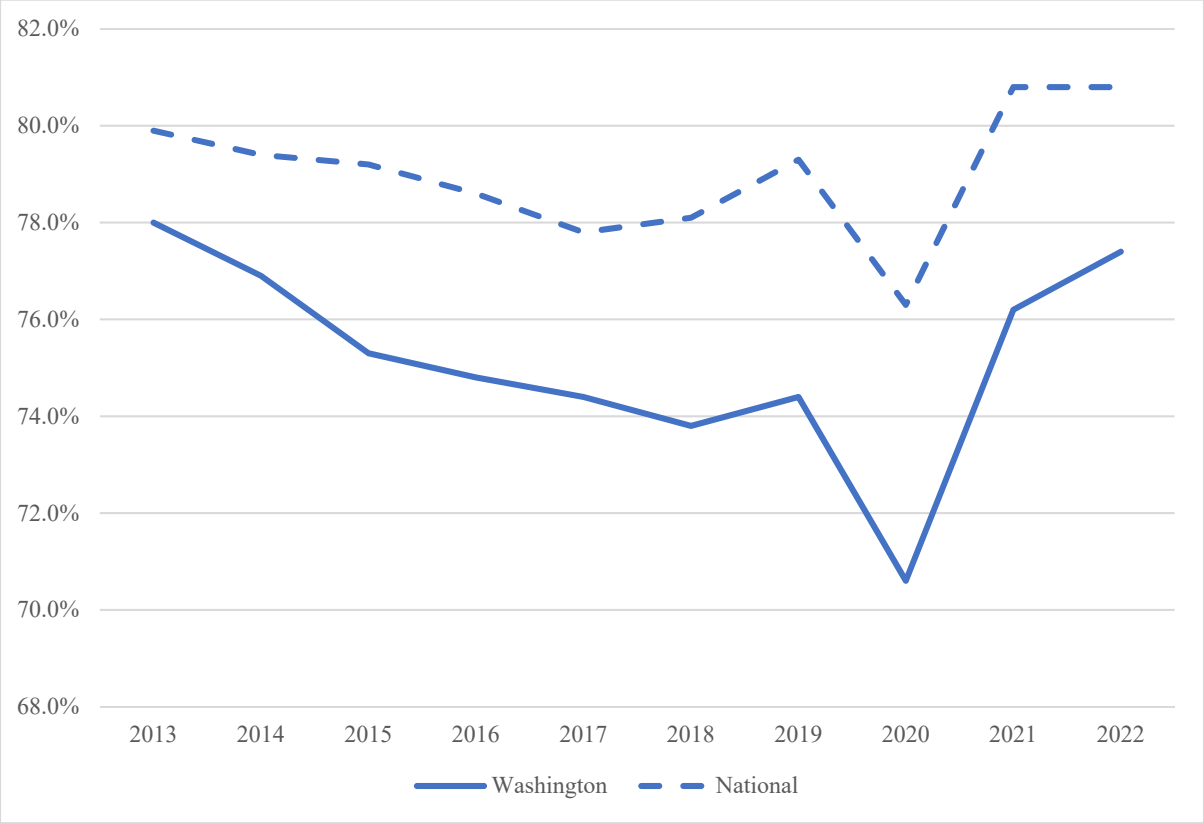
Final Questions

24. Please share anything else about your experience with the WFTC or your role in helping clients receive tax credits.

25. Please enter your preferred email address to receive your [prepaid digital card or charity donation], if desired.

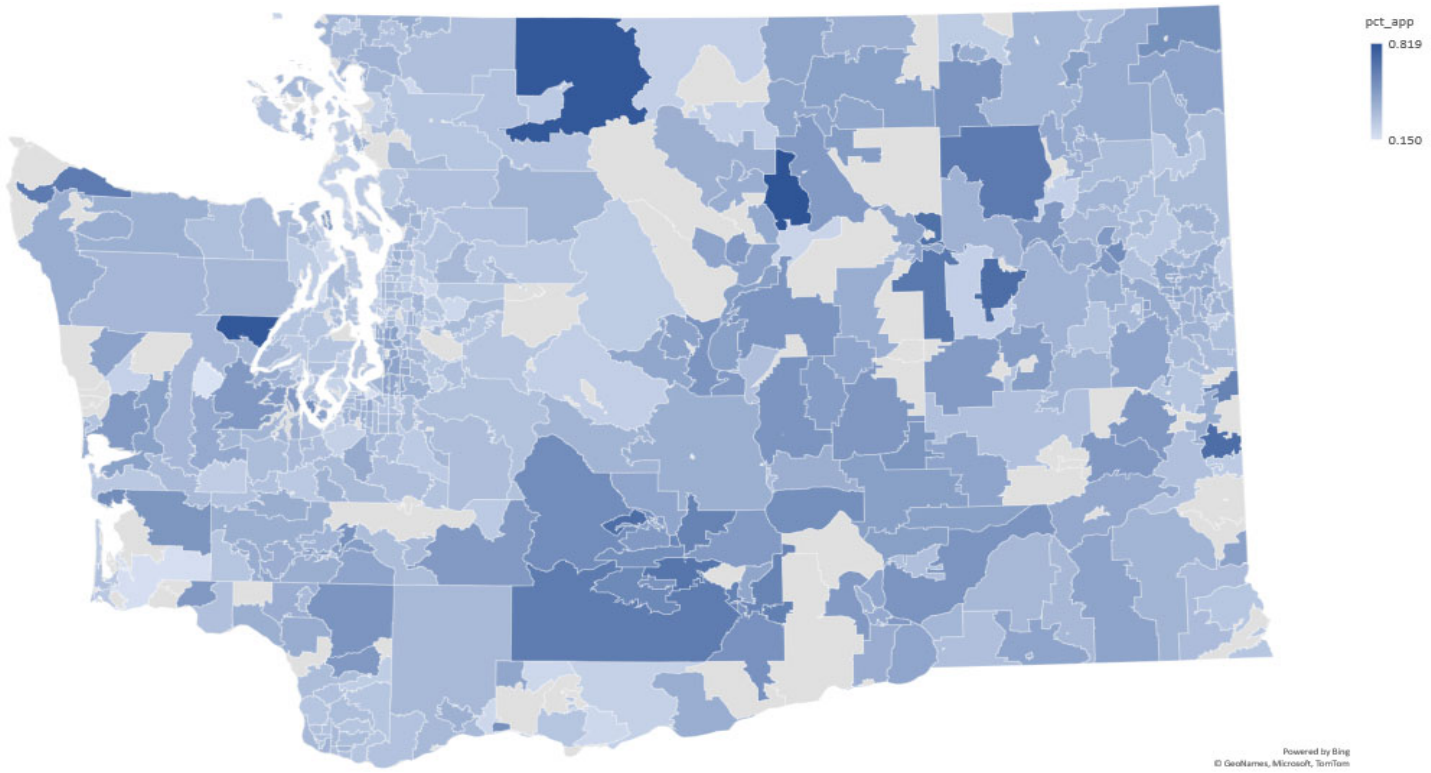
26. Would you be willing to take part in a 30-minute video-based interview with one of the members of the research team to discuss your experience with the WFTC? If so, please select “yes” and one of the members of the research team will reach out to you via email in the coming weeks. [Options: Yes or No]

Figure 1. Federal EITC Take-up over Time



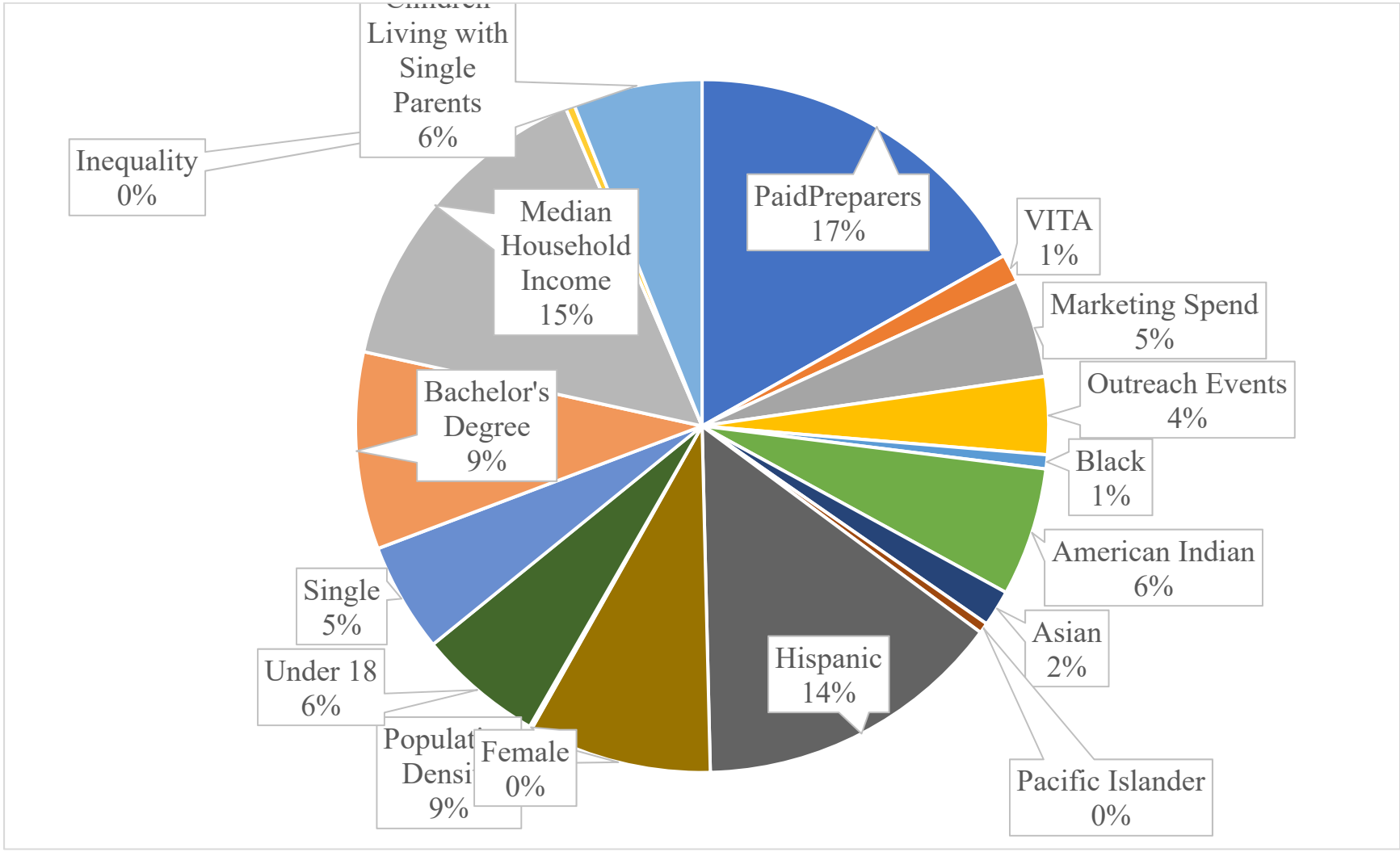
Notes: This figure plots the estimated percentage of qualified individuals who apply for the federal Earned Income Tax Credit (EITC). We compare the take-up rate of Washington taxpayers to the national average. The IRS estimates the take-up rates. See https://www.eitc.irs.gov/eitc-central/participation-rate-by-state/eitc-participation-rate-by-states for additional information.

Figure 2. Working Families Tax Credit Take-up Rate by Zip Code (2022)



Notes: This figure presents a heat map of the WFTC *Take-up Rate* by zip code for the 2022 tax year (the first year of the program). The 121 Missing zip codes either have no IRS SOI data for the zip code (107 zip codes) or have zero EITC returns (14 zip codes).

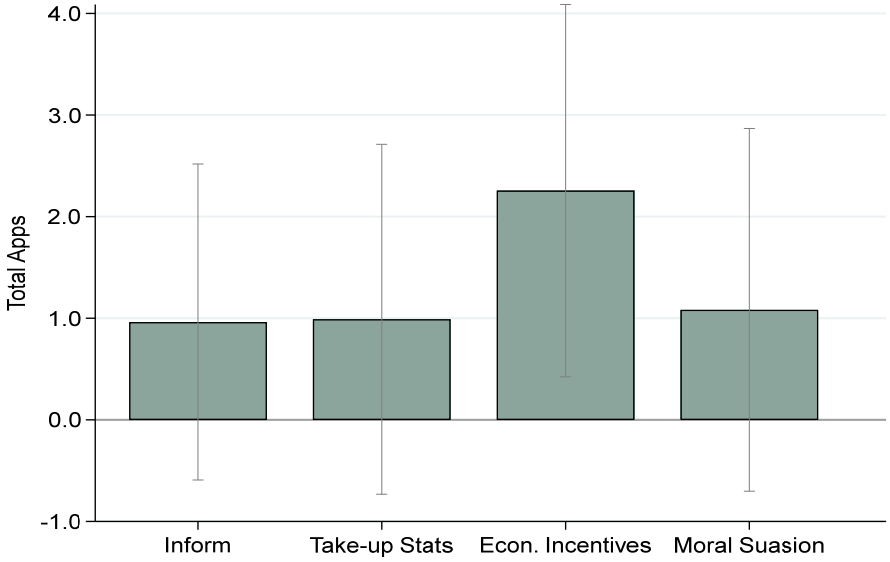
Figure 3. Take-up Determinants – Shapley Values



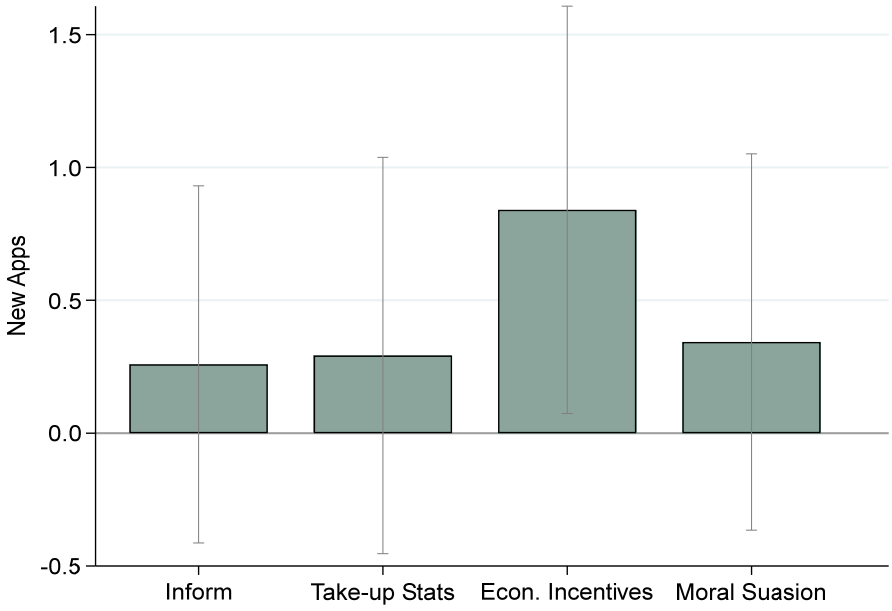
Notes: This figure plots the Shapley values for the various factors included in a determinants model of WFTC take-up in tax year 2022. The percentages represent the amount of explained variation in take-up rates that can be attributed to each determinant.

Figure 4. Applications by Treatment Group

Panel A. Total Apps by Treatment Group, Relative to Control Group



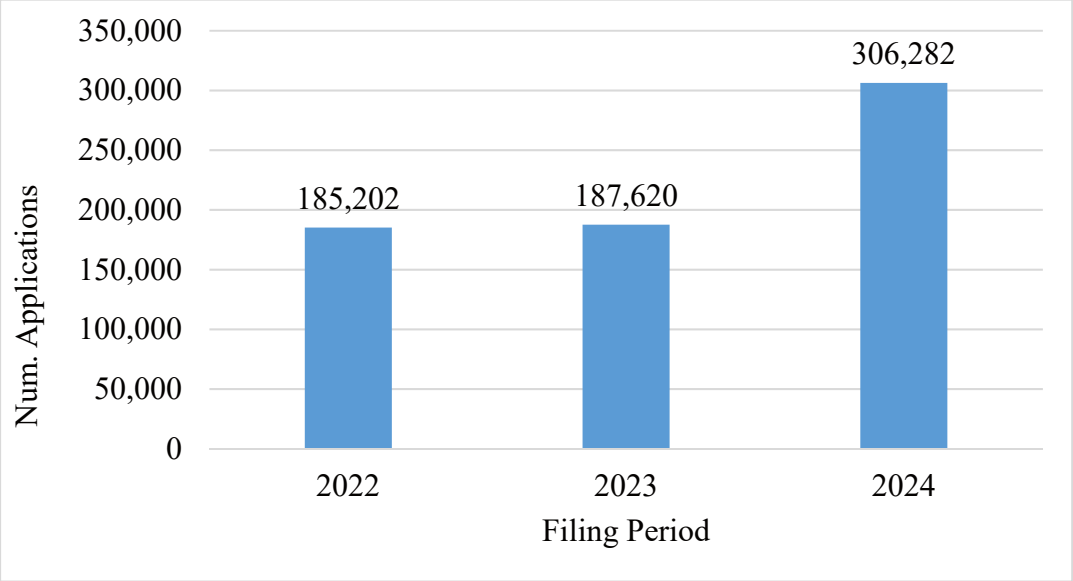
Panel B. New Apps by Treatment Group, Relative to Control Group



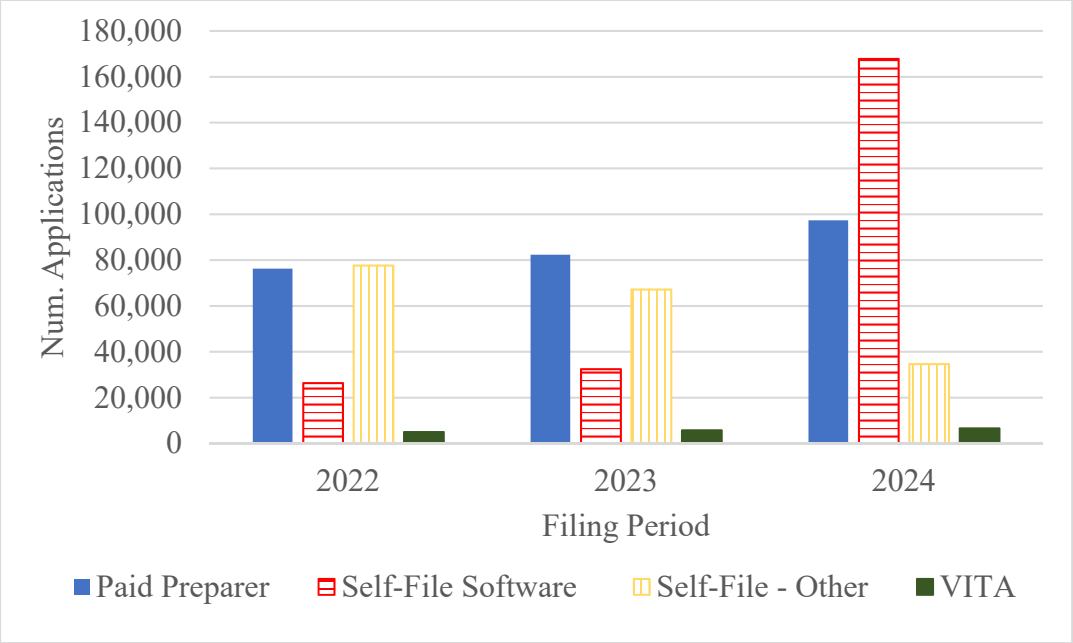
Notes: This figure plots the average marginal effects from our Poisson regression for each treatment condition. Panel A plots the additional number of total applications (Table 2, column 1) and Panel B plots the additional number of new applications (Table 2, column 2), relative to the control group.

Figure 5. Applications by Year and Filing Method

Panel A. Total Applications by Year



Panel B. Total Applications by Year and Filing Method



Notes: Panel A shows the number of WFTC applications filed over time. Panel B shows applications filed over time by filing method. "Paid Preparer" includes applications filed by a paid tax preparer. "Self-File Software" includes applications filed through commercial tax software available to individuals (e.g., TurboTax, TaxHawk). "Self-File" reflects all other forms of self-prepared applications – these primarily include individuals who filed through WADOR's self-file website, https://workingfamiliescredit.wa.gov/apply. "VITA" includes applications that were filed through a VITA site. Filing periods 2022 and 2023 reflect only "approved" applications, while 2024 reflects all applications (as of the date of the manuscript, not all 2024 applications have been reviewed by WADOR).

Table 1. Descriptive Statistics

Panel A: Observations in Each Group

Group	Count	Percentage
Control	2,716	20.0%
Inform	2,569	18.9%
Take-up Stats	2,913	21.4%
Economic Incentives	2,850	20.9%
Moral Suasion	2,565	18.8%
Total	13,613	100.0%

Panel B: Descriptive Statistics

Variable	*N*	*Mean*	*Std Dev*	*P5*	*P10*	*P25*	*Median*	*P75*	*P90*	*P95*
Total Apps	13,613	5.04	25.92	0.00	0.00	0.00	0.00	0.00	7.00	24.00
Any Apps	13,613	0.20	0.40	0.00	0.00	0.00	0.00	0.00	1.00	1.00
New Apps	13,613	1.99	10.76	0.00	0.00	0.00	0.00	0.00	3.00	10.00
Any New Apps	13,613	0.16	0.37	0.00	0.00	0.00	0.00	0.00	1.00	1.00
New Preparers	13,613	0.03	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Big3	13,613	0.11	0.31	0.00	0.00	0.00	0.00	0.00	1.00	1.00
CPA	13,613	0.33	0.47	0.00	0.00	0.00	0.00	1.00	1.00	1.00
Enrolled Agent	13,613	0.10	0.30	0.00	0.00	0.00	0.00	0.00	1.00	1.00
No Credential	13,613	0.54	0.50	0.00	0.00	0.00	1.00	1.00	1.00	1.00

Notes: This table presents descriptive statistics. Panel A indicates the number of observations in each group. Panel B presents descriptive statistics for the sample included in the randomized letter campaign (all PTIN holders in Washington state). We define all variables in Appendix A.

Table 2. Main Results – Treatment Effects

	(1) *Total Apps*	(2) *New Apps*	(3) *Any Apps*	(4) *Any New Apps*	(5) *New Preparers*
Inform	0.216	0.146	0.029**	0.021**	0.002
	(0.120)	(0.233)	(0.017)	(0.039)	(0.354)
Take-up Statistics	0.221	0.163	0.013	0.018*	0.005
	(0.132)	(0.226)	(0.157)	(0.070)	(0.167)
Economic Incentives	0.447***	0.412**	0.026**	0.029***	0.007*
	(0.009)	(0.022)	(0.031)	(0.009)	(0.089)
Moral Suasion	0.240	0.189	0.041***	0.041***	0.009**
	(0.118)	(0.180)	(0.002)	(0.001)	(0.047)
Intercept	2.370***	1.524***	0.182***	0.140***	0.030***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	13,613	13,613	13,613	13,613	13,613
Model	Poisson	Poisson	LPM	LPM	LPM
Strata Indicators	Yes	Yes	Yes	Yes	Yes
S.E. Clustered by:	Address	Address	Address	Address	Address
R-squared			0.124	0.127	0.005

Notes: This table shows the treatment effects from our randomized letter campaign. Standard errors are clustered by address. One-tailed p-values are reported in parentheses below and the coefficients, and *, **, and *** represent statistical significance at the 10, 5, and 1 percent levels, respectively. We define all variables in Appendix A.

Table 3. Heterogeneous Effects - Big 3 versus Non-Big 3

Panel A. Big 3 Tax Preparation Firm

	(1) *Total Apps*	(2) *New Apps*	(3) *Any Apps*	(4) *Any New Apps*	(5) *New Preparers*
Inform	0.516**	0.469**	0.048*	0.035	0.009
	(0.031)	(0.018)	(0.089)	(0.177)	(0.260)
Take-up Statistics	0.520**	0.462**	0.084**	0.097**	-0.006
	(0.030)	(0.021)	(0.031)	(0.032)	(0.672)
Economic Incentives	0.474**	0.490**	0.083**	0.079**	-0.014
	(0.044)	(0.015)	(0.018)	(0.030)	(0.891)
Moral Suasion	0.466**	0.445**	0.121***	0.119***	-0.013
	(0.042)	(0.023)	(0.001)	(0.001)	(0.877)
Intercept	2.213***	1.348***	0.494***	0.440***	0.038***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	1,509	1,509	1,509	1,509	1,509
Model	Poisson	Poisson	LPM	LPM	LPM
Strata Indicators	Yes	Yes	Yes	Yes	Yes
S.E. Clustered by:	Address	Address	Address	Address	Address
R-squared			0.008	0.008	0.003

Panel B. Non-Big 3

	(1) *Total Apps*	(2) *New Apps*	(3) *Any Apps*	(4) *Any New Apps*	(5) *New Preparers*
Inform	0.053	-0.020	0.025**	0.018*	0.001
	(0.409)	(0.530)	(0.033)	(0.051)	(0.411)
Take-up Statistics	0.073	0.022	0.004	0.008	0.006
	(0.384)	(0.470)	(0.373)	(0.218)	(0.114)
Economic Incentives	0.423**	0.368*	0.018	0.022**	0.010**
	(0.034)	(0.082)	(0.100)	(0.031)	(0.042)
Moral Suasion	0.122	0.063	0.029**	0.030***	0.012**
	(0.321)	(0.408)	(0.017)	(0.006)	(0.019)
Intercept	1.358***	0.514***	0.144***	0.103***	0.028***
	(0.000)	(0.010)	(0.000)	(0.000)	(0.000)
Observations	12,104	12,104	12,104	12,104	12,104
Model	Poisson	Poisson	LPM	LPM	LPM
Strata Indicators	Yes	Yes	Yes	Yes	Yes
S.E. Clustered by:	Address	Address	Address	Address	Address
R-squared			0.036	0.028	0.006

Notes: This table tests for heterogeneous treatment effects based on whether the preparer works for a Big 3 tax preparation firm. Standard errors are clustered by address. One-tailed p-values are reported in parentheses below and the coefficients, and *, **, and *** represent statistical significance at the 10, 5, and 1 percent levels, respectively. We define all variables in Appendix A.

Table 4. Heterogeneous Treatment Effects – Preparer Credentials

Panel A. CPAs

	(1) *Total Apps*	(2) *New Apps*	(3) *Any Apps*	(4) *Any New Apps*	(5) *New Preparers*
Inform	0.790**	0.622*	-0.001	0.001	0.002
	(0.026)	(0.055)	(0.521)	(0.487)	(0.368)
Take-up Statistics	0.585**	0.533**	0.023	0.021	0.018***
	(0.042)	(0.032)	(0.137)	(0.113)	(0.007)
Economic Incentives	0.804**	0.686**	0.022	0.016	0.024***
	(0.012)	(0.014)	(0.133)	(0.151)	(0.001)
Moral Suasion	1.171***	0.827***	0.006	0.007	0.018**
	(0.003)	(0.010)	(0.368)	(0.330)	(0.011)
Intercept	0.994**	0.328	0.118***	0.077***	0.014***
	(0.073)	(0.558)	(0.000)	(0.000)	(0.001)
Observations	4,524	4,524	4,524	4,524	4,524
Model	Poisson	Poisson	LPM	LPM	LPM
Strata Indicators	Yes	Yes	Yes	Yes	Yes
S.E. Clustered by:	Address	Address	Address	Address	Address
R-squared			0.037	0.021	0.011

Panel B. Enrolled Agents

	(1) *Total Apps*	(2) *New Apps*	(3) *Any Apps*	(4) *Any New Apps*	(5) *New Preparers*
Inform	0.821**	0.775***	0.114***	0.085**	-0.012
	(0.013)	(0.009)	(0.002)	(0.012)	(0.184)
Take-up Statistics	0.704**	0.885**	0.054*	0.054*	-0.002
	(0.039)	(0.020)	(0.075)	(0.052)	(0.439)
Economic Incentives	0.523**	0.600**	0.075**	0.072**	-0.002
	(0.035)	(0.011)	(0.017)	(0.012)	(0.441)
Moral Suasion	0.238	0.139	0.076**	0.063**	0.009
	(0.203)	(0.294)	(0.018)	(0.025)	(0.284)
Intercept	2.940***	1.906***	0.249***	0.191***	0.035***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.001)
Observations	1,383	1,383	1,383	1,383	1,383
Model	Poisson	Poisson	LPM	LPM	LPM
Strata Indicators	Yes	Yes	Yes	Yes	Yes
S.E. Clustered by:	Address	Address	Address	Address	Address
R-squared			0.164	0.197	0.003

Panel C. No Credential

	(1) *Total Apps*	(2) *New Apps*	(3) *Any Apps*	(4) *Any New Apps*	(5) *New Preparers*
Inform	0.077	0.005	0.034**	0.022*	0.007
	(0.349)	(0.492)	(0.033)	(0.087)	(0.215)
Take-up Statistics	0.156	0.044	0.005	0.013	-0.001
	(0.240)	(0.427)	(0.405)	(0.239)	(0.442)
Economic Incentives	0.418**	0.369*	0.022	0.031**	0.003
	(0.023)	(0.056)	(0.120)	(0.038)	(0.339)
Moral Suasion	0.160	0.140	0.057***	0.059***	0.005
	(0.225)	(0.273)	(0.002)	(0.001)	(0.241)
Intercept	2.272***	1.477***	0.213***	0.172***	0.037***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Observations	7,324	7,324	7,324	7,324	7,324
Model	Poisson	Poisson	LPM	LPM	LPM
Strata Indicators	Yes	Yes	Yes	Yes	Yes
S.E. Clustered by:	Address	Address	Address	Address	Address
R-squared			0.132	0.131	0.006

Notes: This table tests for heterogeneous effects based on the preparer's credentials. Standard errors are clustered by address. One-tailed p-values are reported in parentheses below and the coefficients, and *, **, and *** represent statistical significance at the 10, 5, and 1 percent levels, respectively. We define all variables in Appendix A.