

Can Nudges Increase Take-up of the EITC?: Evidence from Multiple Field Experiments

Appendix

Appendix Table 1 lists the assignment rates and stratification used in each study. Appendix Table 2 lists the minimum detectable effects stated in the pre-analysis plan for each study.

Appendix Tables 3-8 present full balance checks for each of the available baseline covariates and each treatment. There is one table for each study. In each, the first column shows the control group mean and standard deviation. The next series of columns, one for each treatment arm, shows the estimated difference between that treatment arm and the control group, along with standard errors. These are the β_j coefficients from equation (2), using the baseline covariates as dependent variables. The final column of each table shows a p-value for the hypothesis that the means are the same in each treatment group as in the control; that is, that all of the β_j s are jointly zero. Very few of the estimated β_j s are statistically significant, evaluated individually, and all of the estimated effects are substantively small. None of our tests indicate joint significance for any study or covariate.

The final columns of Appendix Tables 3-8 present estimated treatment effects on our primary outcomes, tax filing and EITC claiming. These are again based on equation (2), and correspond to the individual treatment arm effects plotted in Figure 3.

Appendix Figures 1 and 2 use the CalFresh data from Study 6 to simulate annual incomes and EITC credit eligibility for each family in our sample. We plot the histograms of those two measures, separately for the subsets of the control group who do and do not file tax returns. These figures indicate that filers have much higher incomes and higher credit eligibility than non-filers, on average. Twenty-five percent of non-filers are eligible for credits of \$300 or less, as compared with 9% of filers. Nevertheless, 75% of non-filers are eligible for credits in excess of \$300 – enough to outweigh the potential financial costs of paying a tax preparer to file returns (U.S. Government Accountability Office 2014, National Society of Accountants n.d.).

The various treatment letters and text messages are reproduced in Appendix Figures 3-18.

Appendix figures and tables

Appendix Table 1: Randomization details by study

Study	Treatment arms	N (households)	Assignment frequencies / proportions	Strata
1	1	639,244	200,000 control; remainder treatment*	Zip code, dummies for white/nonwhite and college/non-college
2	4	96,370	10,000 to each treatment arm; remainder control	County, zip code, missing DOB, Study 1 assignment
3	4	1,084,018	20% to each treatment arm; 20% control	County, zip code, missing DOB, Study 1 and Study 2 assignment
4	8	204,285	15,000 to each treatment group; remainder control	County, zip code, Study 1 assignment and Study 3 assignment
5	1	38,093	50% treatment; 50% control	County, race, single adult, four bins of income, presence of children
6	3	47,104	25% to each treatment arm; 25% control	County, presence of children, low or moderate income, primary language

Notes. Study 1 used the TargetSmart records updated through spring 2018, and excluded those older than 70. Studies 2 and 3 included older individuals and those added in the 2019 update. Study 2 limited to a subset of records in six counties (Alameda, Contra Costa, Marin, Riverside, San Francisco, San Mateo, and Santa Clara). For Studies 1-4, some zip codes contained too few observations to assign observations to treatment and control with nearly equal probabilities. We grouped observations in these less populous zip codes to a simulated county-level "zip code", and used this simulated zip code for stratification. For Study 5, we stratified on four income bins: \$0 to \$5000, \$5000 to \$11,500, \$11,500 to \$20,000 and \$20,000 to \$50,000. The *race* variable used for stratification had four values: White, Latinx, Black/Asian/PI/American Indian/Alaskan Native. The indicator for *single adult* reflected whether we identified the case as having one working-age adult or more than one working-age adult. For Study 6, we stratified on two broader income bins: \$0 to \$12,500 and \$12,500 to \$55,000; primary languages were the four languages in which we distributed the messages, English, Chinese, Spanish, and Vietnamese.

Appendix Table 2: Pre-registration minimum detectable effect estimates

Study	OSF ID	MDE Any treatment vs. control	MDE Individual treatment arm vs. control
1	https://osf.io/ct58w	0.3 percentage point	n/a
2	https://osf.io/z8ebc	0.8 pp	1.4 pp
3	https://osf.io/z8ebc	0.3 pp	0.4 pp
4	https://osf.io/z8ebc	0.6 pp	1.1 pp
5	https://osf.io/msh7t	1.6 pp	n/a
6	https://osf.io/p2q4y	1.4 pp	1.7 pp

Notes. The pre-analysis plan for study 5 was posted before the eventual sample size was known, and does not contain a power calculation. We estimate this MDE in the same way that we estimated the MDE for Study 6, as described in that study's posted pre-analysis plan. Studies 2-4 are all described in the same pre-analysis plan. We used different numbers to identify those experiments than we do here. Study 3 corresponds to what we called in the pre-analysis plan Experiment 1, Study 4 corresponds to Experiment 2, and Study 2 corresponds to Experiment 3.

Appendix Table 3: Differences in subjects' characteristics, filing rate and EITC claiming rate by treatment assignment in Study 1

	Control Group		
	Average (mean/sd)	Basic Text	P-value from F-test: $\beta=0$
Baseline Characteristics			
Age	47.219 [13.651]	0.037 (0.045)	0.407
Male	0.425 [0.494]	-0.000 (0.002)	0.896
White	0.444 [0.497]	-0.000 (0.000)	0.732
Married	0.187 [0.390]	-0.001 (0.001)	0.505
Have Children	0.582 [0.493]	0.001 (0.002)	0.691
College Grad	0.386 [0.487]	-0.002 (0.001)	0.063
Filed Early	0.219 [0.414]	-0.001 (0.001)	0.393
Treatment Effects			
Filed Return	0.405 [0.491]	-0.000 (0.001)	0.770
Claimed EITC	0.085 [0.279]	0.000 (0.001)	0.908
N	195,200	444,044	

Notes. Standard errors in parentheses; standard deviations in square brackets. Asterisks indicate statistical significance of individual coefficients; * $=10\%$, ** $=5\%$, *** $=1\%$. The p-values in the final column are for tests of the hypothesis that the treatment effect on the indicated characteristic or outcome is zero.

Appendix Table 4: Differences in subjects' characteristics, filing rate and EITC claiming rate by treatment assignment in Study 2

	Control Group Average (mean/sd)	FTB formal	FTB informal	GSO formal	GSO informal	P-value from F-test: $\beta=0$
Baseline Characteristics						
Age	43.499 [11.484]	-0.175 (0.140)	0.107 (0.140)	-0.116 (0.140)	0.227 (0.140)	0.169
Male	0.628 [0.683]	-0.003 (0.006)	0.004 (0.006)	-0.001 (0.006)	-0.001 (0.006)	0.922
White	0.443 [0.497]	0.001 (0.005)	0.001 (0.005)	0.005 (0.005)	0.002 (0.005)	0.901
Married	0.241 [0.520]	0.007 (0.004)	-0.003 (0.004)	0.002 (0.004)	0.006 (0.004)	0.188
Have Children	1.159 [0.762]	0.008 (0.006)	-0.000 (0.006)	-0.001 (0.006)	-0.002 (0.006)	0.724
College Grad	0.213 [0.409]	0.004 (0.006)	0.003 (0.006)	-0.002 (0.006)	0.010 (0.006)	0.484
Filed Early	0.115 [0.319]	0.002 (0.003)	0.003 (0.003)	-0.001 (0.003)	-0.007* (0.003)	0.245
Filed in 2017	0.377 [0.485]	0.001 (0.005)	0.004 (0.005)	-0.000 (0.005)	-0.001 (0.005)	0.934
Treatment Effects						
Filed Return	0.377 [0.485]	0.001 (0.005)	-0.001 (0.005)	-0.000 (0.005)	-0.007 (0.005)	0.644
Claimed EITC	0.077 [0.266]	-0.003 (0.003)	0.004 (0.003)	-0.000 (0.003)	0.000 (0.003)	0.513
N	56,370	10,000	10,000	10,000	10,000	10,000

Notes. Standard errors in parentheses; standard deviations in square brackets. Asterisks indicate statistical significance of individual coefficients; * = 10%, ** = 5%, *** = 1%. The p-values in the final column are for tests of the hypothesis that all of the treatment coefficients (the β s in equation (2)) are jointly zero.

Appendix Table 5: Differences in subjects' characteristics, filing rate and EITC claiming rate by treatment assignment in Study 3

	Control Group		P-value from F-test: $\beta=0$			
	Average (mean / sd)	Basic Info	211 Info	Text Assistance	Credit Amt	
Baseline Characteristics						
Age	59.930 [21.096]	-0.042 (0.050)	0.017 (0.050)	-0.038 (0.050)	0.033 (0.050)	0.476
Male	0.550 [0.640]	-0.005** (0.002)	-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)	0.055
White	0.548 [0.498]	-0.001 (0.001)	-0.001 (0.001)	-0.002 (0.001)	-0.001 (0.001)	0.700
Married	0.269 [0.512]	-0.001 (0.001)	0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	0.702
Have Children	0.946 [0.821]	-0.001 (0.002)	-0.002 (0.002)	-0.002 (0.002)	-0.002 (0.002)	0.666
College Grad	0.223 [0.416]	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.001 (0.002)	0.923
Filed Early	0.111 [0.314]	-0.001 (0.001)	-0.000 (0.001)	-0.000 (0.001)	-0.000 (0.001)	0.659
Filed in 2017	0.411 [0.492]	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	0.000 (0.001)	0.875
Treatment Effects						
Filed Return	0.390 [0.488]	-0.001 (0.001)	-0.002 (0.001)	-0.002 (0.001)	-0.001 (0.001)	0.583
Claimed EITC	0.063 [0.244]	-0.000 (0.001)	-0.002* (0.001)	-0.001 (0.001)	0.000 (0.001)	0.017
N	216,804	216,804	216,804	216,803	216,803	216,803

Notes. Standard errors in parentheses; standard deviations in square brackets. Asterisks indicate statistical significance of individual coefficients; * = 10%, ** = 5%, *** = 1%. The p-values in the final column are for tests of the hypothesis that all of the treatment coefficients (the β s in equation (2)) are jointly zero.

Appendix Table 6: Differences in subjects' characteristics, filing rate and EITC claiming rate by treatment assignment in Study 4

	Control Group Average (mean / sd)	Formal/ Baseline	Formal/ Amount	Formal/ VITA	Formal/ Amount+VITA	Informal/ Baseline	Informal/ Amount	Informal/ VITA	Informal/ Amount+VITA	P-value from F-test: $\beta=0$
Baseline Characteristics										
Age	44.106 [11.789]	0.081 (0.138)	0.129 (0.138)	-0.027 (0.139)	0.057 (0.138)	-0.216 (0.139)	-0.016 (0.139)	0.293* (0.138)	-0.059 (0.139)	0.288
Male	0.708 [0.735]	-0.003 (0.005)	-0.001 (0.005)	-0.005 (0.005)	0.014** (0.005)	-0.001 (0.005)	-0.004 (0.005)	-0.005 (0.005)	-0.002 (0.005)	0.116
White	0.474 [0.499]	-0.006 (0.004)	0.009* (0.004)	-0.001 (0.004)	-0.010* (0.004)	-0.004 (0.004)	-0.001 (0.004)	0.005 (0.004)	-0.001 (0.004)	0.023
Married	0.152 [0.460]	0.002 (0.002)	0.002 (0.002)	-0.000 (0.002)	0.003 (0.002)	-0.001 (0.002)	0.003 (0.002)	-0.002 (0.002)	-0.000 (0.002)	0.709
Have Children	1.390 [0.759]	-0.000 (0.006)	-0.007 (0.006)	-0.008 (0.007)	0.002 (0.006)	-0.008 (0.006)	-0.002 (0.007)	-0.002 (0.007)	-0.010 (0.006)	0.501
College Grad	0.157 [0.364]	0.010 (0.005)	0.004 (0.005)	0.001 (0.005)	0.003 (0.005)	-0.002 (0.005)	0.012* (0.005)	-0.003 (0.005)	0.001 (0.005)	0.345
Filed Early	0.015 [0.120]	-0.002 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	0.000 (0.001)	0.000 (0.001)	0.489
Filed in 2017	0.036 [0.186]	-0.003 (0.002)	0.000 (0.002)	-0.001 (0.002)	-0.001 (0.002)	-0.003 (0.002)	-0.002 (0.002)	-0.001 (0.002)	-0.002 (0.002)	0.407
Treatment Effects										
Filed Return	0.090 [0.286]	-0.001 (0.002)	-0.000 (0.002)	-0.003 (0.002)	-0.001 (0.002)	-0.002 (0.002)	0.000 (0.002)	-0.004 (0.002)	-0.002 (0.002)	0.874
Claimed EITC	0.024 [0.154]	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	-0.001 (0.001)	-0.001 (0.001)	-0.000 (0.001)	0.999
N	85,355	14,863	14,892	14,880	14,836	14,867	14,862	14,880	14,850	

Notes. Standard errors in parentheses; standard deviations in square brackets. Asterisks indicate statistical significance of individual coefficients; * = 10%, ** = 5%.
**=1%. The p-values in the final column are for tests of the hypothesis that all of the treatment coefficients (the β s in equation (2)) are jointly zero.

Appendix Table 7: Differences in subjects' baseline characteristics, filing rate and EITC claiming rate by treatment assignment in Study 5, tax year 2017

	Control Group Average (mean/sd)	Basic Text	P-value from F-test: $\beta = 0$
Baseline Characteristics			
Age	36.95 [11.07]	0.01 (0.10)	0.94
Male	0.36 [0.48]	0.00 (0.00)	0.96
White	0.27 [0.45]	-0.00 (0.00)	0.94
English	0.86 [0.35]	0.00 (0.00)	0.65
Presence of other adults	0.34 [0.47]	-0.00 (0.00)	0.48
Presence of children	0.73 [0.44]	0.00 (0.00)	0.98
Filed previous year	0.70 [0.46]	0.01 (0.00)	0.19
Filed before treatment started	0.67 [0.47]	0.00 (0.00)	0.75
Predicted total EITC amount	2915.16 [2155.56]	-2.89 (11.24)	0.80
Treatment Effects			
Filed return	0.79 [0.41]	0.01 (0.00)	0.17
Claimed EITC	0.70 [0.46]	0.00 (0.00)	0.91
N	19,009	19,084	

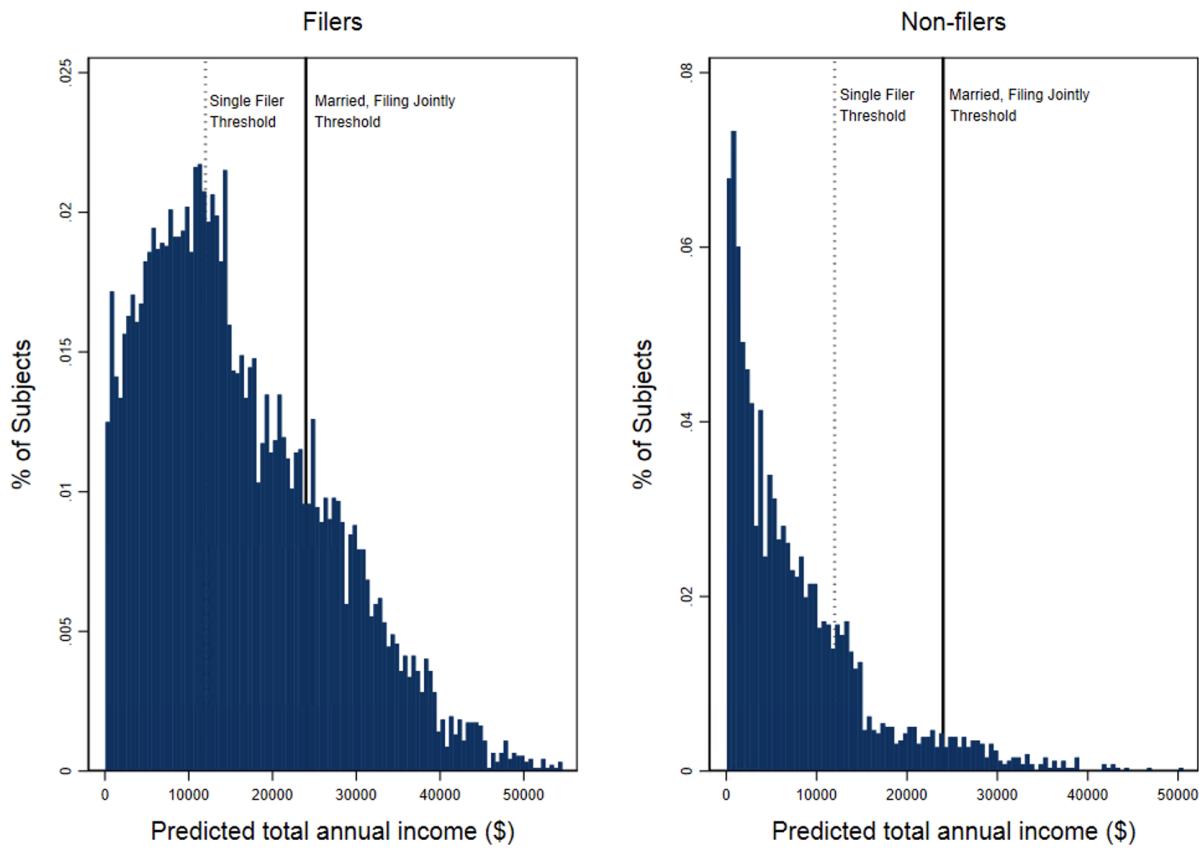
Notes. Standard errors in parentheses; standard deviations in square brackets. Asterisks indicate statistical significance of individual coefficients; * $=10\%$, ** $=5\%$, *** $=1\%$. The p-values in the final column are for tests of the hypothesis that the treatment effect on the indicated characteristic or outcome is zero.

Appendix Table 8: Differences in subjects' baseline characteristics, filing rate and EITC claiming rate by treatment assignment in Study 6, tax year 2018

	Control Group (mean/sd)	Average Basic Info	Average Credit Amount	Personalized Credit Amt	P-value from F-test; $\beta = 0$
Baseline Characteristics					
Age	36.98 [12.38]	-0.31* (0.15)	-0.01 (0.15)	-0.02 (0.15)	0.10
Male	0.37 [0.48]	-0.01 (0.01)	-0.01 (0.01)	-0.00 (0.01)	0.75
White	0.24* [0.43]	-0.01 (0.01)	-0.00 (0.01)	-0.01 (0.01)	0.23
English	0.75 [0.43]	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.58
Presence of other adults	0.31 [0.46]	-0.01 (0.01)	-0.00 (0.01)	-0.01 (0.01)	0.30
Number of children	1.24 [1.06]	-0.01 (0.01)	0.00 (0.01)	0.00 (0.01)	0.45
Filed previous year	0.74 [0.44]	-0.00 (0.01)	-0.01 (0.01)	-0.00 (0.01)	0.69
Filed before treatment started	0.43 [0.50]	-0.00 (0.01)	-0.01 (0.01)	-0.01 (0.01)	0.29
Predicted annual income	14199.41 [10642.15]	-71.98 (78.06)	-22.01 (78.06)	10.90 (78.05)	0.72
Predicted total EITC amount	2702.35 [2162.97]	11.96 (18.86)	24.68 (18.86)	16.68 (18.86)	0.62
Treatment Effects					
Filed return	0.78 [0.41]	-0.00 (0.00)	-0.00 (0.00)	0.00 (0.00)	0.73
Claimed EITC	0.70 [0.46]	-0.00 (0.01)	0.00 (0.01)	-0.00 (0.01)	0.74
N	11,770	11,777	11,775	11,782	

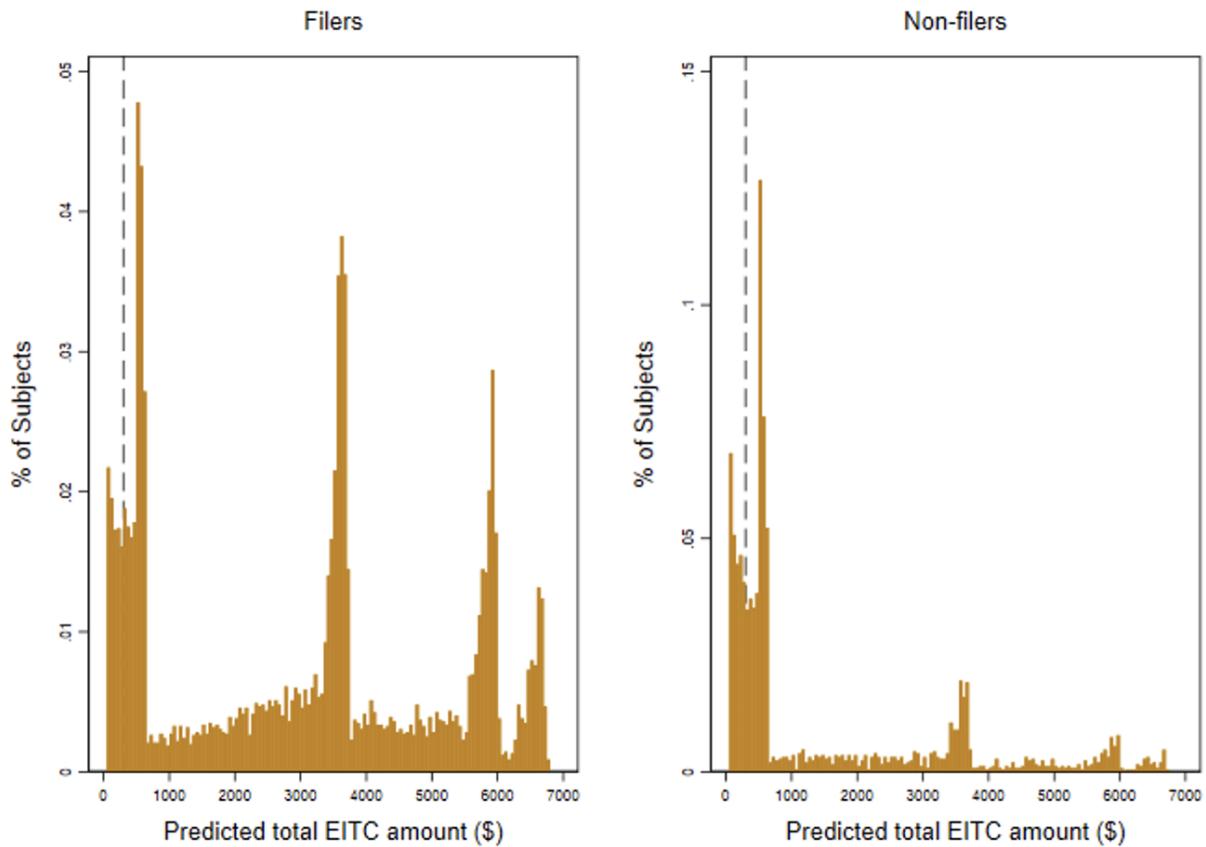
Notes. Standard errors in parentheses; standard deviations in square brackets. Asterisks indicate statistical significance of individual coefficients; * = 10%, ** = 5%, *** = 1%. The p-values in the final column are for tests of the hypothesis that all of the treatment coefficients (the β s in equation (2)) are jointly zero. We show balance on the variable for number of children in the household, as opposed to presence of children which we showed in Appendix Table 7, because we stratified on a dummy for presence of children during randomization for Study 6, ensuring perfect balance on that variable.

Appendix Figure 1: Estimated income for filers and non-filers in Study 6 control group



Note: The figure plots the distribution of predicted annual income among subjects in the Study 6 control group separated by those who did and did not file a return. We group households into bins of \$500. We also mark, using the dotted and solid vertical lines, the income levels in TY 2018 at which the IRS requires single and married taxpayers must file a return, which are \$12,000 and \$24,000, respectively.

Appendix Figure 2: Estimated EITC amount for filers and non-filers in Study 6 control group



Notes. The figure plots the distribution of estimated EITC eligibility amounts among subjects in the Study 6 control group, separated by those who did and did not file a tax return. We group households into bins of \$50. The heaps at around \$500, \$3,500, \$6,000 and \$6,500 correspond to the maximum EITCs for families with zero, one, two, or three or more children in TY2018, respectively. The dotted line marks predicted EITC amount of \$300, representing the approximate cost that families are charged by some for-profit preparers to file their return.

Appendix Figure 3: Study 1, Golden State Opportunity text messages

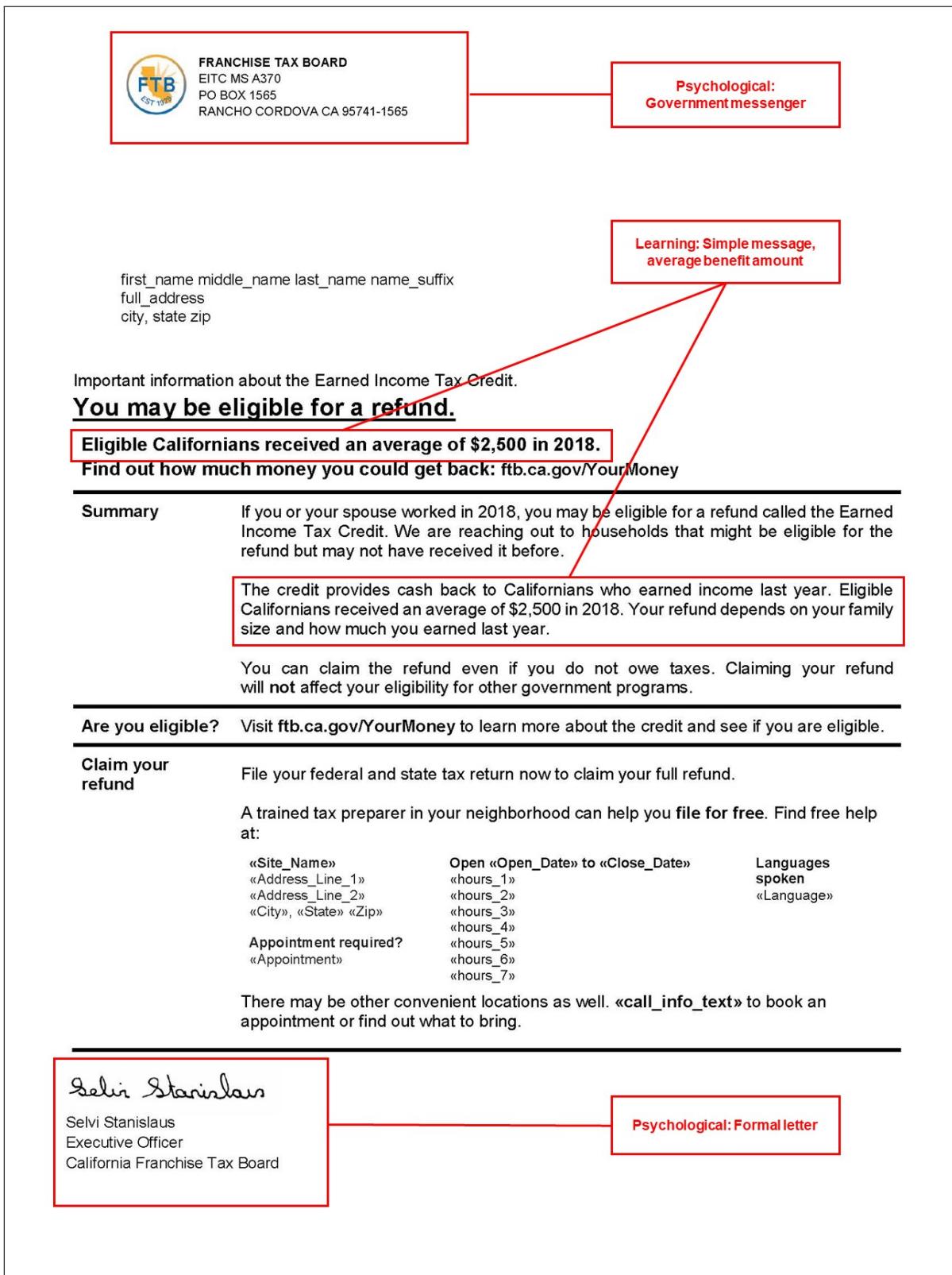
Messages sent in March read:

Hello, this is a volunteer from CalEITC4Me, we're texting to let people know they may be leaving up to \$6,000 in tax money on the table, visit our website to see if you are eligible for the EITC and free tax preparation! Have you filed your taxes yet? goo.gl/42PR24

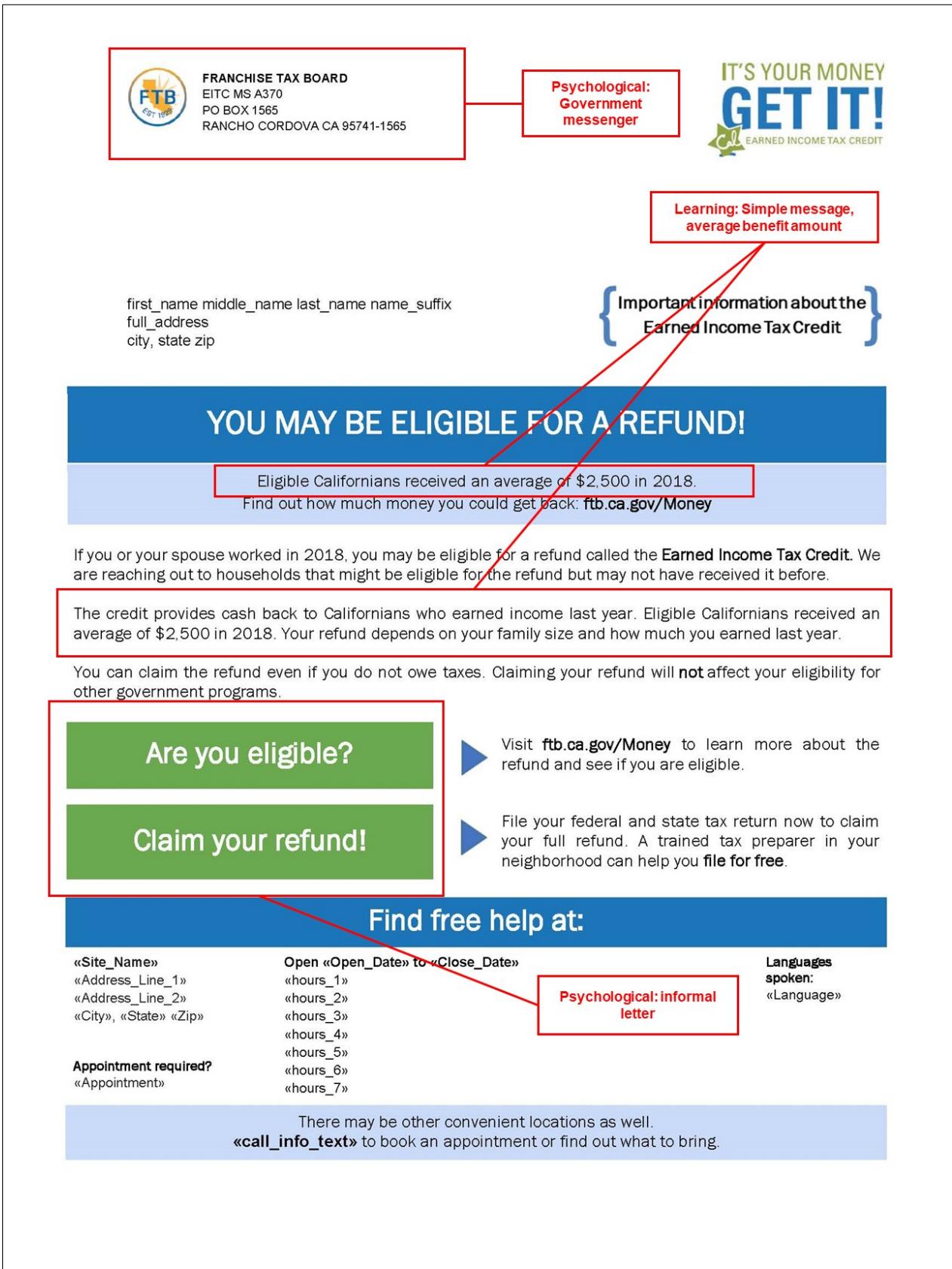
Messages sent in April read:

Hello! My name is <name> with CalEITC4me. Have you filed your taxes yet? You may want to file this year because of the recently expanded California Earned Income Tax Credit! Thousands of Californians are claiming this cash-back credit. You don't want to miss out! If you want to know how to claim it, text me back! We are here to help! Click here! Para Espanol responda con la palabra: Espanol bit.ly/CalEITC4Me

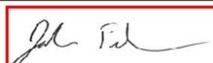
Appendix Figure 4: Study 2, treatment arm 1 (FTB messenger, formal letter)



Appendix Figure 5: Study 2, treatment arm 2 (FTB messenger, informal letter)



Appendix Figure 6: Study 2, treatment arm 3 (GSO messenger, formal letter)

 <p>Golden State Opportunity Foundation 553 S. Clarence Street Los Angeles, CA 90033</p> <p>endorse first last sfx address city, st zip</p>	 <p>Psychological: Nonprofit messenger</p>																								
<p>Important information about the Earned Income Tax Credit.</p> <p>You may be eligible for a refund.</p> <p>Eligible Californians received an average of \$2,500 in 2018.</p> <p>Find out how much money you could get back: CalEITC4Me.org/Credit</p> <hr/> <p>Summary If you or your spouse worked in 2018, you may be eligible for a refund called the Earned Income Tax Credit. We are reaching out to households that might be eligible for the refund but may not have received it before.</p> <p>The credit provides cash back to Californians who earned income last year. Eligible Californians received an average of \$2,500 in 2018. Your refund depends on your family size and how much you earned last year.</p> <p>You can claim the refund even if you do not owe taxes. Claiming your refund will not affect your eligibility for other government programs.</p> <hr/> <p>Are you eligible? Visit CalEITC4Me.org/Credit to learn more about the credit and see if you are eligible.</p> <hr/> <p>Claim your refund File your federal and state tax return now to claim your full refund.</p> <p>A trained tax preparer in your neighborhood can help you file for free. Find free help at:</p> <table border="0"> <tr> <td>site_name</td> <td>Open open_date to close_date</td> <td>Languages</td> </tr> <tr> <td>site_address</td> <td>hours_1</td> <td>spoken</td> </tr> <tr> <td>site_city, site_state site_zip</td> <td>hours_2</td> <td>language</td> </tr> <tr> <td></td> <td>hours_3</td> <td></td> </tr> <tr> <td></td> <td>hours_4</td> <td></td> </tr> <tr> <td>Takes appointments?</td> <td>hours_5</td> <td></td> </tr> <tr> <td>appointmen</td> <td>hours_6</td> <td></td> </tr> <tr> <td></td> <td>hours_7</td> <td></td> </tr> </table> <p>There may be other convenient locations as well. call_info_ to book an appointment or find out what to bring</p> <hr/> <p> Josh Fryday President, CalEITC4Me Golden State Opportunity Foundation</p> <p>Psychological: Formal letter</p>		site_name	Open open_date to close_date	Languages	site_address	hours_1	spoken	site_city, site_state site_zip	hours_2	language		hours_3			hours_4		Takes appointments?	hours_5		appointmen	hours_6			hours_7	
site_name	Open open_date to close_date	Languages																							
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site_city, site_state site_zip	hours_2	language																							
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Golden State Opportunity Foundation is a non-profit dedicated to a future where all Californians can achieve financial security.

Appendix Figure 7: Study 2, treatment arm 4 (GSO messenger, informal letter)

The diagram illustrates the layout of a study communication. It starts with the Golden State Opportunity Foundation letterhead, followed by a red box labeled "Psychological: Nonprofit messenger". To the right is the "IT'S YOUR MONEY GET IT!" logo with the tagline "EARNED INCOME TAX CREDIT". Below the logo is a red box labeled "Learning: Simple message, average benefit amount". A bracket groups the text "Important information about the Earned Income Tax Credit" with the "Learning" box. The main message is "YOU MAY BE ELIGIBLE FOR A REFUND!". A red box highlights "Eligible Californians received an average of \$2,500 in 2018." Another red box highlights "Find out how much money you could get back CalEITC4Me.org/Refund". A red line connects the "Learning" box to the "Important information" bracket. A red line also connects the "Important information" bracket to the "Find out how much money you could get back" box. A red line connects the "Find out how much money you could get back" box to the "CalEITC4Me.org/Refund" link. A red line connects the "CalEITC4Me.org/Refund" link to the "Are you eligible?" button. A red line connects the "Are you eligible?" button to the "Claim your refund!" button. A red line connects the "Claim your refund!" button to the "Find free help at:" section. A red box labeled "Psychological: informal letter" points to the "Find free help at:" section. The "Find free help at:" section includes a table with columns for site_name, open_date, close_date, appointment required, and languages spoken. A blue box at the bottom states: "There may be other convenient locations as well. call_info_to book an appointment or find out what to bring." A small note at the bottom says: "Golden State Opportunity Foundation is a non-profit dedicated to a future where all Californians can achieve financial security."

Psychological: Nonprofit messenger

**IT'S YOUR MONEY
GET IT!**
EARNED INCOME TAX CREDIT

endorse
first last sfx
address
city, st zip

**Learning: Simple message,
average benefit amount**

**Important information about the
Earned Income Tax Credit**

YOU MAY BE ELIGIBLE FOR A REFUND!

Eligible Californians received an average of \$2,500 in 2018.
Find out how much money you could get back CalEITC4Me.org/Refund

If you or your spouse worked in 2018, you may be eligible for a refund called the **Earned Income Tax Credit**. We are reaching out to households that might be eligible for the refund but may not have received it before.

The credit provides cash back to Californians who earned income last year. Eligible Californians received an average of \$2,500 in 2018. Your refund depends on your family size and how much you earned last year.

You can claim the refund even if you do not owe taxes. Claiming your refund will **not** affect your eligibility for other government programs.

Are you eligible?

Claim your refund!

Visit CalEITC4Me.org/Refund to learn more about the refund and see if you are eligible.

File your federal and state tax return now to claim your full refund. A trained tax preparer in your neighborhood can help you **file for free**.

Find free help at:

site_name	Open open_date to close_date	Languages spoken: language
site_address	hours_1	
site_city, site_state site_zip	hours_2	
	hours_3	
	hours_4	
	hours_5	
Appointment required? appointmen	hours_6	
	hours_7	

Psychological: informal letter

There may be other convenient locations as well.
call_info_to book an appointment or find out what to bring.

Golden State Opportunity Foundation is a non-profit dedicated to a future where all Californians can achieve financial security.

Appendix Figure 8: Study 3, Golden State Opportunity text messages

- **Treatment 1: Basic Informational Message + Link**

- Hi-this is <volunteer name>, a volunteer with CalEITC4Me. I'm contacting households who might qualify for a tax refund. Even if you don't owe taxes, you could get cash back by filing a tax return. **Visit caleitc4me.org/CashBack to learn more about your eligibility and to claim your EITC refund.**

- **Treatment 2: Phone number/call option**

- Hi-this is <volunteer name>, a volunteer with CalEITC4Me. I'm contacting households who might qualify for a tax refund. Even if you don't owe taxes, you could get cash back by filing a tax return. **Call <local hotline phone number> to get free help with filing your return and to claim your EITC refund.**

- **Treatment 3: Offer Text-based Assistance**

- Hi-this is <volunteer name>, a volunteer with CalEITC4Me. I'm contacting households who might qualify for a tax refund. Even if you don't owe taxes, you could get cash back by filing a tax return. **Text "yes" and I can help you claim your EITC refund.**

- **Treatment 4: Benefit Value**

- Hi-this is <volunteer name>, a volunteer with CalEITC4Me. I'm contacting households who might qualify for a tax refund. Even if you don't owe taxes, you could get cash back by filing a tax return. **Eligible families got back an average of \$2,000 last year. Text "yes" and I can help you claim your EITC refund.**

Appendix Figure 9: Study 4, treatment arm 1 (formal, simple)

 <p>FRANCHISE TAX BOARD EITC MS A370 PO BOX 1565 RANCHO CORDOVA CA 95741-1565</p>	FORMAL –SIMPLE
<div style="border: 1px solid red; padding: 2px;">English (front)</div>	
<p>first_name middle_name last_name name_suffix full_address city, state zip</p>	
<div style="border: 1px solid red; padding: 5px;"> <p>Important information about the Earned Income Tax Credit. You may be eligible for a refund.</p> </div>	
<p>Summary</p>	<div style="border: 1px solid red; padding: 5px;"> <p>If you or your spouse worked in 2018, you may be eligible for a refund called the Earned Income Tax Credit. We are reaching out to households that might be eligible for the refund but may not have received it before.</p> <p>The credit provides cash back to Californians who earned income last year. Your refund depends on your family size and how much you earned last year.</p> <p>You can claim the refund even if you do not owe taxes. Claiming your refund will not affect your eligibility for other government programs.</p> </div>
<p>Are you eligible?</p>	<p>Visit ftb.ca.gov/Credit to learn more about the credit and see if you are eligible.</p>
<p>Claim your refund</p>	<p>File your federal and state tax return to claim your full refund. You can file for free.</p> <p>For free tax preparation help, visit: ftb.ca.gov/Credit</p>
<div style="border: 1px solid red; padding: 2px;"><i>Selvi Stanislaus</i></div>	
<div style="border: 1px solid red; padding: 2px;">URL unique to each treatment arm</div>	
<div style="border: 1px solid red; padding: 2px;">Learning: Simple message</div>	
<div style="border: 1px solid red; padding: 2px;">Link to language translations (Spanish translation on back)</div>	
<div style="border: 1px solid red; padding: 2px;">中文 한국어 Русский Tiếng Việt → ftb.ca.gov/Lang1</div>	

Appendix Figure 10: Study 4, treatment arm 2 (formal, credit amount)

 FRANCHISE TAX BOARD
EITC MS A370
PO BOX 1565
RANCHO CORDOVA CA 95741-1565

FORMAL –BENEFIT

first_name middle_name last_name name_suffix
full_address
city, state zip

Important information about the Earned Income Tax Credit.
You may be eligible for a refund.

**Eligible Californians received an average of \$2,500 in 2018.
Find out how much money you could get back: ftb.ca.gov/Earn**

Summary If you or your spouse worked in 2018, you may be eligible for a refund called the Earned Income Tax Credit. We are reaching out to households that might be eligible for the refund but may not have received it before.

The credit provides cash back to Californians who earned income last year. Eligible Californians received an average of \$2,500 in 2018. Your refund depends on your family size and how much you earned last year.

You can claim the refund even if you do not owe taxes. Claiming your refund will not affect your eligibility for other government programs.

Are you eligible? Visit ftb.ca.gov/Earn to learn more about the credit and see if you are eligible.

Claim your refund File your federal and state tax return to claim your full refund. You can file for free.

For free tax preparation help, visit: ftb.ca.gov/Earn

Selvi Stanislaus

Selvi Stanislaus
Executive Officer
California Franchise Tax Board

中文 | 한국어 | Русский | Tiếng Việt → ftb.ca.gov/Lang2

Appendix Figure 11: Study 4, treatment arm 3 (formal, VITA info)

 <p>FRANCHISE TAX BOARD EITC MS A370 PO BOX 1565 RANCHO CORDOVA CA 95741-1565</p>	<p>FORMAL – VITA</p>			
<p>first_name middle_name last_name name_suffix full_address city, state zip</p>				
<p>Important information about the Earned Income Tax Credit. You may be eligible for a refund.</p>				
<p>Summary If you or your spouse worked in 2018, you may be eligible for a refund called the Earned Income Tax Credit. We are reaching out to households that might be eligible for the refund but may not have received it before.</p> <p>The credit provides cash back to Californians who earned income last year. Your refund depends on your family size and how much you earned last year.</p> <p>You can claim the refund even if you do not owe taxes. Claiming your refund will not affect your eligibility for other government programs.</p>				
Are you eligible?	Visit ftb.ca.gov/Refund to learn more about the credit and see if you are eligible.			
Claim your refund	File your federal and state tax return now to claim your full refund.			
<p>A trained tax preparer in your neighborhood can help you file for free. Find free help at:</p> <table><tr><td>«Site_Name» «Address_Line_1» «Address_Line_2» «City», «State» «Zip»</td><td>Open «Open_Date» to «Close_Date» «hours_1» «hours_2» «hours_3» «hours_4» «hours_5» «hours_6» «hours_7»</td><td>Languages spoken «Language »</td></tr></table> <p>There may be other convenient locations as well. «call_info_text» to book an appointment or find out what to bring.</p>		«Site_Name» «Address_Line_1» «Address_Line_2» «City», «State» «Zip»	Open «Open_Date» to «Close_Date» «hours_1» «hours_2» «hours_3» «hours_4» «hours_5» «hours_6» «hours_7»	Languages spoken «Language »
«Site_Name» «Address_Line_1» «Address_Line_2» «City», «State» «Zip»	Open «Open_Date» to «Close_Date» «hours_1» «hours_2» «hours_3» «hours_4» «hours_5» «hours_6» «hours_7»	Languages spoken «Language »		
<p><i>Selvi Stanislaus</i> Selvi Stanislaus Executive Officer California Franchise Tax Board</p>				
<p>中文 한국어 Русский Tiếng Việt → ftb.ca.gov/Lang3</p>				

Appendix Figure 12: Study 4, treatment arm 4 (formal, credit amount + VITA info)

 FRANCHISE TAX BOARD
EITC MS A370
PO BOX 1565
RANCHO CORDOVA CA 95741-1565

FORMAL – VITA BENEFIT

first_name middle_name last_name name_suffix
full_address
city, state zip

Important information about the Earned Income Tax Credit.
You may be eligible for a refund.

Eligible Californians received an average of \$2,500 in 2018.
Find out how much money you could get back: ftb.ca.gov/EITC

Summary If you or your spouse worked in 2018, you may be eligible for a refund called the Earned Income Tax Credit. We are reaching out to households that might be eligible for the refund but may not have received it before.

The credit provides cash back to Californians who earned income last year. Eligible Californians received an average of \$2,500 in 2018. Your refund depends on your family size and how much you earned last year.

You can claim the refund even if you do not owe taxes. Claiming your refund will not affect your eligibility for other government programs.

Are you eligible? Visit ftb.ca.gov/EITC to learn more about the credit and see if you are eligible.

Claim your refund File your federal and state tax return now to claim your full refund.

A trained tax preparer in your neighborhood can help you file for free. Find free help at:

«Site_Name» «Address_Line_1» «Address_Line_2» «City», «State» «Zip»	Open «Open_Date» to «Close_Date» «hours_1» «hours_2» «hours_3» «hours_4» «hours_5» «hours_6» «hours_7»	Languages spoken «Language»
Appointment required? «Appointment»		

There may be other convenient locations as well. «call_info_text» to book an appointment or find out what to bring.

Selvi Stanislaus

Selvi Stanislaus
Executive Officer
California Franchise Tax Board

Compliance: local in-person free tax preparation information

中文 | 한국어 | Русский | Tiếng Việt → ftb.ca.gov/Lang4

Appendix Figure 13: Study 4, treatment arm 5 (informal, simple)

 FRANCHISE TAX BOARD
EITC MS A370
PO BOX 1565
RANCHO CORDOVA CA 95741-1565

 IT'S YOUR MONEY
GET IT!
Cal EARNED INCOME TAX CREDIT
INFORMAL-SIMPLE

first_name middle_name last_name name_suffix
full_address
city, state zip

YOU MAY BE ELIGIBLE FOR A REFUND!

If you or your spouse worked in 2018, you may be eligible for a refund called the **Earned Income Tax Credit**. We are reaching out to households that might be eligible for the refund but may not have received it before.

The credit provides cash back to Californians who earned income last year. Your refund depends on your family size and how much you earned last year.

You can claim the refund even if you do not owe taxes. Claiming your refund will **not** affect your eligibility for other government programs.

Are you eligible? → Visit ftb.ca.gov/CaIEITC to learn more about the refund and see if you are eligible.

Claim your refund! → File your federal and state tax return to claim your full refund. **You can file for free.**

For free tax preparation help, visit:
ftb.ca.gov/CaIEITC

中文 | 한국어 | Русский | Tiếng Việt → ftb.ca.gov/Lang5

Appendix Figure 14: Study 4, treatment arm 6 (informal, credit amount)



FRANCHISE TAX BOARD
EITC MS A370
PO BOX 1565
RANCHO CORDOVA CA 95741-1565

IT'S YOUR MONEY
GET IT!
EARNED INCOME TAX CREDIT

INFORMAL – BENEFIT

first_name middle_name last_name name_suffix
full_address
city, state zip

Learning: average benefit amount

Important information about the
Earned Income Tax Credit

YOU MAY BE ELIGIBLE FOR A REFUND!

Eligible Californians received an average of \$2,500 in 2018.
Find out how much money you could get back: ftb.ca.gov/EarnIt

If you or your spouse worked in 2018, you may be eligible for a refund called the **Earned Income Tax Credit**. We are reaching out to households that might be eligible for the refund but may not have received it before.

The credit provides cash back to Californians who earned income last year. Eligible Californians received an average of \$2,500 in 2018. Your refund depends on your family size and how much you earned last year.

You can claim the refund even if you do not owe taxes. Claiming your refund will **not** affect your eligibility for other government programs.

Are you eligible?

Visit ftb.ca.gov/EarnIt to learn more about the credit and see if you are eligible.

Claim your refund!

File your federal and state tax return to claim your full refund. You can file for free.

For free tax preparation help, visit:

ftb.ca.gov/EarnIt

中文 | 한국어 | Русский | Tiếng Việt → ftb.ca.gov/Lang6

Appendix Figure 15: Study 4, treatment arm 7 (informal, VITA info)



FRANCHISE TAX BOARD
EITC MS A370
PO BOX 1565
RANCHO CORDOVA CA 95741-1565



IT'S YOUR MONEY
GET IT!
EARNED INCOME TAX CREDIT
INFORMAL – VITA

first_name middle_name last_name name_suffix
full_address
city, state zip

{ Important information about the }
Earned Income Tax Credit }

YOU MAY BE ELIGIBLE FOR A REFUND!

If you or your spouse worked in 2018, you may be eligible for a refund called the **Earned Income Tax Credit**. We are reaching out to households that might be eligible for the refund but may not have received it before.

The credit provides cash back to Californians who earned income last year. Your refund depends on your family size and how much you earned last year.

You can claim the refund even if you do not owe taxes. Claiming your refund will **not** affect your eligibility for other government programs.

Are you eligible?

Compliance: Local in-person free tax preparation information

Visit ftb.ca.gov/GetIt to learn more about the refund and see if you are eligible.

Claim your refund!

File your federal and state tax return now to claim your **full refund**. A trained tax preparer in your neighborhood can help you **file for free**.

Find free help at:

<p>«Site_Name» «Address_Line_1» «Address_Line_2» «City», «State» «Zip»</p> <p>Appointment required? «Appointment»</p>	<p>Open «Open_Date» to «Close_Date»: «hours_1» «hours_2» «hours_3» «hours_4» «hours_5» «hours_6» «hours_7»</p>	<p>Languages spoken: «Language»</p>
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There may be other convenient locations as well.
[«call_info_text»](#) to book an appointment or find out what to bring.

中文 | 한국어 | **Русский** | **Tiếng Việt** → ftb.ca.gov/Lang7

Appendix Figure 16: Study 4, treatment arm 8 (informal, credit amount + VITA info)



FRANCHISE TAX BOARD
EITC MS A370
PO BOX 1565
RANCHO CORDOVA CA 95741-1565

**IT'S YOUR MONEY
GET IT!**
EARNED INCOME TAX CREDIT

INFORMAL – VITA BENEFIT

first_name middle_name last_name name_suffix
full_address
city, state zip

Learning: Average benefit amount

{ Important information about the
Earned Income Tax Credit }

YOU MAY BE ELIGIBLE FOR A REFUND!

Eligible Californians received an average of \$2,500 in 2018.
Find out how much money you could get back: ftb.ca.gov/CashBack

If you or your spouse worked in 2018, you may be eligible for a refund called the **Earned Income Tax Credit**. We are reaching out to households that might be eligible for the refund but may not have received it before.

The credit provides cash back to Californians who earned income last year. Eligible Californians received an average of \$2,500 in 2018. Your refund depends on your family size and how much you earned last year.

You can claim the refund even if you do not owe taxes. Claiming your refund will **not** affect your eligibility for other government programs.

Are you eligible?

► Visit ftb.ca.gov/CashBack to learn more about the refund and see if you are eligible.

Claim your refund!

► File your federal and state tax return now to claim your **full refund**. A trained tax preparer in your neighborhood can help you **file for free**.

Find free help at:

<p>«Site_Name» «Address_Line_1» «Address_Line_2» «City», «State» «Zip»</p> <p>Appointment required? «Appointment»</p>	<p>Open «Open_Date» to «Close_Date» «hours_1» «hours_2» «hours_3» «hours_4» «hours_5» «hours_6» «hours_7»</p>	<p>Languages spoken: «Language»</p>
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There may be other convenient locations as well.
«call_info_text» to book an appointment or find out what to bring.

中文 | 한국어 | Русский | Tiếng Việt → ftb.ca.gov/Lang8

Appendix Figure 17: Study 5, CA Department of Social Services/CalFresh text messages, tax year 2017

Text 1:

Hi, this is <county>. Have you claimed your tax refund? We estimate you're owed about \$x,xxx from state and federal earned income tax credits. File your taxes to get the refund you earned! Reply "1" to learn how to get your taxes done for free or "2" to stop these texts. Standard messaging rates apply.

Text 2:

You can use free online software to prepare your taxes at www.myfreetaxes.org (sponsored by the United Way). For in-person assistance, find the closest volunteer site at irs.treasury.gov/freetaxprep. Would you like information for a nearby site? If yes, reply "1".

Note: Those who responded with a "1" to the first message were sent the second message. Those who responded with a "1" to the second message were sent the address and hours of the closest VITA site to the client's 9 digit zip code. When that site required appointments, the text also included a link for registration. Texts were sent in English or Spanish, depending on the language indicated in the CalFresh record, and were delivered over two days in a single blast in March 2018.

Appendix Figure 18: Study 6, CA Department of Social Services/CalFresh text messages, tax year 2018

- **Treatment 1: Control Text**

- *Text 1:* Hi <name>. This is <county name> County. You may qualify for cash back thanks to tax credits.
- *Text 2:* Claim your refund by filing a tax return. See if you're eligible at caleitc4me.org/Cash. Call 211 to file your taxes for free.

- **Treatment 2: Average Benefit**

- *Text 1:* Hi <name>. This is <county name> County. You may qualify for cash back thanks to tax credits. **Eligible families got back \$2,500 on average last year.**
- *Text 2:* Claim your refund by filing a tax return. See if you're eligible at caleitc4me.org/YourMoney. Call 211 to file your taxes for free.

- **Treatment 3: Personalized Benefit**

- *Text 1:* Hi <name>. This is <county name> County. You may qualify for cash back thanks to tax credits. **Based on our records, you could get back <\$ credit amount>.**
- *Text 2:* Claim your refund by filing a tax return. See if you're eligible at caleitc4me.org/Money. Call 211 to file your taxes for free.

References

- National Society of Accountants. (n.d.). 2016-2017 Income & Fees of Accountants and Tax Preparers in Public Practice Survey Report.
- US Government Accountability Office. (2014). Paid Tax Return Preparers: In a Limited Study, Preparers Made Significant Errors, testimony presented to the US Senate Committee on Finance (GAO-14-467T).