Web Appendix of

Teaching the Tax Code: Earnings Responses to an Experiment with EITC Recipients

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A.1 Derivation of Compliers vs. Non-Compliers Estimator

This appendix proves that we would detect zero treatment effects within the group of clients served by "complying" (or "non-complying") tax professionals if all tax professionals have zero treatment effects. To begin, index tax professionals by $p = 1, .., P$ and clients by $i = 1, .., I$. Each tax professional p serves a set I_p of clients. For a client i served by tax professional p, denote by $I_{p,-i}$ the set of other clients (excluding i) served by tax professional p. Let $T_i = 0, 1$ denote the intent-to-treat status of client i. The set $I_{p,-i}$ is partitioned into two sets of clients: those who were treated ($T_j = 1$) and those not treated ($T_j = 0$). Denote these two sets by $I^1_{p,-i}$ and by $I^0_{p,-i}$. Formally, for $t = 0, 1$, $I^t_{p,-i} = \{j \in I_{p,-i} | T_j = t\}$. Denote by $y_{i,p}$ an outcome such as earnings reported in year 2. Let $m_{i,p}$ denote an indicator for whether client i of tax professional p has "middle income" (earnings between \$7,000 and \$15,400) in year 2.

For a given outcome y, there are two potential outcomes: $y^0_{i,p}$ if the client is in the control group $T_i = 0$ and $y^1_{i,p}$ if the client is in the treatment group $T_i = 1$. We only observe $y^{T_i}_{i,p}$. For a given client i served by tax professional p, we define complying status $C_{i,p}$ as follows: $C_{i,p} = 1$ if $\sum_{j \in I^1_{p,-i}} m_{j,p}/|I^1_{p,-i}| > \sum_{j \in I^0_{p,-i}} m_{j,p}/|I^0_{p,-i}|$ and $C_{i,p} = 0$ otherwise.

Definition 1 *There are no treatment effects along outcome y iff $y^1_{i,p} = y^0_{i,p}$ for all (i, p).*

Theorem 1 *Suppose there are no treatment effects on outcomes y and m. Then*

(1) C and y are independent variables.

(2) $E[y_{ip}|C = 1, T = 1] = E[y_{ip}|C = 1, T = 0]$ and $E[y_{ip}|C = 0, T = 1] = E[y_{ip}|C = 0, T = 0]$, i.e., the average outcome y is the same in expectation across treatment and control clients within the sample of compliers and within the sample of non-compliers.

(3) $E[y_{ip}|C = 1, T = 1] = E[y_{ip}|C = 0, T = 1]$ and $E[y_{ip}|C = 1, T = 0] = E[y_{ip}|C = 0, T = 0]$, i.e., the average outcome y is the same in expectation across complying and non-complying cases within the sample of treated clients and within the sample of non-treated clients.

Proof:

(1) Suppose there are no treatment effects on outcome m. Then $m^1_{i,p} = m^0_{i,p}$ for all (i, p). By definition, $C_{i,p} = 1$ if $\sum_{j \in I^1_{p,-i}} m^1_{j,p}/|I^1_{p,-i}| > \sum_{j \in I^0_{p,-i}} m^0_{j,p}/|I^0_{p,-i}|$. Therefore, $C_{i,p} = 1$ if $\sum_{j \in I^1_{p,-i}} m^0_{j,p}/|I^1_{p,-i}| - \sum_{j \in I^0_{p,-i}} m^0_{j,p}/|I^0_{p,-i}| > 0$.

The partition $I^1_{p,-i}, I^0_{p,-i}$ depends solely on T_j for $j \in I^0_{p,-i} \cup I^1_{p,-i}$. Because treatment T is randomly assigned, any outcome of individual i such as $m_{i,p}$ or $y_{i,p}$ must be independent of T_j for $j \neq i$. Hence, outcomes $m_{i,p}$ or $y_{i,p}$ are also independent of $I^1_{p,-i}$ and $I^0_{p,-i}$. Therefore outcomes $m_{i,p}$ or $y_{i,p}$ are independent of $C_{i,p}$.

(2) Recognizing that y_{ip}^1 is independent of $C_{i,p}$, we have

$$E[y_{ip}|C=1,T=1] = E[y_{ip}^1|C=1,T=1] = E[y_{ip}^1|T=1]$$

We then have $E[y_{ip}^1|T=1] = E[y_{ip}^1|T=0]$ because T is randomly assigned and $E[y_{ip}^1|T=0] = E[y_{ip}^0|T=0]$ because there are no treatment effects. Finally, because C is independent of y_{ip}^0,

$$E[y_{ip}^0|T=0] = E[y_{ip}^0|C=1,T=0] = E[y_{ip}|C=1,T=0].$$

The proof for the case of $C=0$ is identical.

(3) This follows from the following set of equalities:

$$\begin{aligned} E[y_{ip}|C=1,T=1] &= E[y_{ip}^1|C=1,T=1] = E[y_{ip}^1|T=1] \\ &= E[y_{ip}^1|C=0,T=1] = E[y_{ip}|C=0,T=1] \end{aligned}$$

where we use the fact that C and y_{ip} are independent in the second and fourth equality. QED

A.2 Sensitivity Analysis: Definition of Compliance

In this section, we assess the robustness of the results in Section IV to the definition of "compliance." We focus on two key dependent variables: changes in EITC amounts and changes in wage-based EITC amounts.

In Appendix Table A4, we use EITC amounts instead of the middle income indicator to define tax professional compliance. For each tax filer i, we define his tax professional as a complier if the average year 2 EITC amount of her other treated clients (excluding client i) is higher than the average year 2 EITC amount of her other control clients. From the perspective of client i, his tax professional is a complier under this definition if she uses the information treatment to increase EITC amounts among her other clients. Columns 1 and 2 of Table A4 report mean treatment effects for the change in the EITC amount (from year 1 to year 2). Columns 3 and 4 report mean treatment effects for the change in the wage-based EITC amount. Columns 1 and 3 do not include any controls, while columns 2 and 4 include the standard vector of base year controls used above.

Row (1) of Table A4 replicates the results for the full sample. Row (2) considers individuals served by tax professionals who are "compliers" based on the EITC amount definition. Clients given the information treatment by these tax professionals increase their total EITC amounts by about \$64 more than control group clients of the same tax professionals. Approximately \$55 of this increase in the EITC amount comes from changes in wage earnings. These estimates are statistically significant with $p < 0.05$.

Row (3) shows that clients given the information treatment by non-complying tax professionals experience *reductions* in their EITC amounts relative to their peers in the control group. The treatment is estimated to reduce the wage-based EITC by \$58 in the specification with

controls (column 4). These reductions in EITC amounts – driven largely by the wage-based component – are consistent with our earlier findings that non-compliers induce their treated clients to increase their wage earnings. Finally, rows (4) and (5) confirm that there are significant differences in year 2 outcomes between clients treated by compliers and non-compliers, even after controlling for observed client heterogeneity. Overall, the results in Table A4 show that the "middle income" and EITC-based definitions of compliance – two different ways of quantifying changes in the concentration of the income distribution – generate treatment effects with similar magnitudes.[34]

Thus far, we have divided tax professionals into two distinct categories – compliers and non-compliers. We now explore the robustness of the results to the use of continuous measures of tax professional compliance. For client i, define the continuous compliance measure tpcompliance_i as the tax professional's treatment effect on a year 2 outcome excluding client i himself. For instance, with the middle income outcome, tpcompliance_i is the fraction of treated clients who have middle income minus the fraction of control clients who have middle income, excluding client i. Since each tax professional has only 15 treated and 15 control clients on average, there are outliers in the tpcompliance_i variable. For example, some tax professionals who have a small number of clients happen to have 100% of their treated clients with middle income and 0% of their control clients with middle income, generating an extreme compliance measure of 100%. To reduce the influence of these outliers, we drop observations that have tpcompliance_i below the 1st or above the 99th percentile of the tpcompliance_i distribution.

Using the continuous tpcompliance_i measure, we estimate variants of the interaction specifications in row 4 of Table 3:

$$y_i = \alpha + \beta_1 \text{treat}_i + \beta_2 \text{tpcompliance}_i + \beta_3 \text{treat}_i \times \text{tpcompliance}_i + \varepsilon_i. \tag{A3}$$

The coefficient of interest is β_3, which measures how treatment effects vary with the degree of the tax professional's compliance. Table A5 reports estimates of β_3 for changes in EITC amounts (row 1) and changes in wage-based EITC amounts (row 2). In column 1, tpcompliance_i is defined using the year 2 middle income indicator. In column 2, tpcompliance_i is defined using the year 2 EITC amount, providing a continuous analogue to the binary compliance measure used in Table A4. The estimates in columns 1 and 2 show that more compliant tax professionals generate larger increases in their treated clients' total and wage-based EITC amounts. In interpreting the magnitudes of these coefficients, it is useful to note that the standard deviation of the continuous middle income compliance variable is 18% (after trimming outliers). The corresponding standard deviation for the EITC amount compliance variable is \$600. Hence, a one standard deviation increase in the degree of compliance is estimated to increase the treatment effect on the EITC amount by \$31 for the middle income measure and

[34] We chose to use the middle income indicator in our baseline analysis because the estimates with the EITC amount definitions of compliance are less precise, for two reasons. First, the substantial variance in EITC amounts across clients creates noise in the compliance variable. Second, the "middle income" indicator more directly identifies increased bunching around the first kink.

by \$26 for the EITC amount measure of compliance. The considerable loss of precision in the continuous specification relative to the binary specifications appears to be driven by outliers. Further trimming – e.g. removing or winsorizing the observations with values of tpcompliance_i below the 5th or above the 95th percentile – increases the precision of the estimates.

In columns 3 and 4 of Table A5, we control for base year characteristics of clients when defining the tpcompliance_i measure. In these specifications, tpcompliance_i is effectively defined based on the tax professional's effects on *changes* in behavior rather than levels of year 2 outcomes. We define tpcompliance_i by estimating a regression analogous to (2) using all clients of client i's tax professional except client i himself. The regression includes the standard set of base year controls: income, income squared, wage earnings, marital status, and dependents. The tpcompliance_i measure is the estimated treatment effect from this regression.

Column 3 reports estimates using the continuous version of the middle income outcome with base year controls, and column 4 reports the same for the EITC outcome. These specifications include the base year controls and their interactions with the tpcompliance_i variable. As above, we trim outliers by dropping observations with the 1% largest and smallest values of tpcompliance_i. The estimates imply that a one standard deviation increase in tpcompliance_i increases the treatment effect on the EITC amount by \$21 for the middle income measure and by \$60 for the EITC amount measure of compliance. Although there is some variation in the magnitude of the estimates with the continuous measures of compliance, the qualitative pattern is robust: more compliant tax professionals induce larger treatment effects on total and wage-based EITC amounts.

A.3 Calibration of Magnitudes

In this section, we benchmark the magnitudes of the information treatment effects relative to the effects of conventional policy instruments such as an expansion of the EITC program or changes in tax rates. We calibrate the changes in the behavior that would be caused by changes in marginal incentives using estimates of the intensive margin labor supply elasticity from the existing literature. As discussed in section I, most studies find insignificant effects of EITC expansions on hours of work for those already in the work force. Our reading of the literature suggests that an elasticity of $e = 0.25$ is an upper bound for the short-run intensive margin elasticity of earnings (Chetty 2012). Since complying and non-complying tax professionals generate qualitatively different behavioral responses, we present separate calibrations for each case.

Complying tax professionals. Clients treated by complying tax professionals respond in a manner consistent with what would be expected to occur when the EITC program is expanded. We therefore calculate the percentage expansion in the EITC that would be required to produce the same change in earnings behavior as the information treatment.

Let t^i denote the EITC phase-in rate ($t^i = .4$ for filers with two or more dependents and $t^i = .34$ for those with one dependent). Let t^d denote the phase-out rate ($t^d = 0.21$ for two or more dependents, $t^d = 0.16$ for one dependent). Expanding the EITC program by Δ percent

would increase the net-of-tax rate from $1+t^i$ to $1+t^i(1+\Delta)$ in the phase-in range and decrease the net-of-tax rate from $1-t^d$ to $1-t^d(1+\Delta)$ in the phase-out range. To calibrate how these changes would affect earnings behavior, we use a specification of utility as a function of consumption (c) and labor (l) that produces a constant net-of-tax elasticity:

$$u(c,l) = c - \frac{l^{1+1/e}}{1+1/e},$$

where $e = \frac{d\log l}{d\log 1-t}$ denotes the elasticity of labor supply with respect to the net-of-tax rate. Note that there are no income effects with this quasi-linear utility specification, so labor supply is a function purely of the marginal tax rate.

In the phase-in range, if the earnings level under the existing EITC program is z_0, earnings after the Δ percent EITC expansion would be

$$z^i_\Delta = z_0 \cdot [(1+t^i(1+\Delta))/(1+t^i)]^e \simeq z_0 \cdot \left(1 + e \cdot \Delta \cdot \frac{t^i}{1+t^i}\right)$$

Symmetrically, in the phase-out range, if earnings under the existing EITC are equal to z_0, earnings after the Δ percent EITC expansion would be

$$z^d_\Delta = z_0 \cdot [(1-t^d(1+\Delta))/(1-t^d)]^e \simeq z_0 \cdot \left(1 - e \cdot \Delta \cdot \frac{t^d}{1-t^d}\right)$$

To find the Δ that generates responses comparable to those estimated in the data, we focus on our estimate of the change in the EITC amount induced by the information treatment. For complying tax professionals, we estimate that the information treatment increased the average EITC amount by $\Delta EITC = \$58$ (Table 3, column 1, row 2). To derive a comparable measure for the effect of a Δ percent EITC expansion, we calculate the increase in the EITC amount under the *initial* (pre-expansion) schedule, which is the relevant measure for comparisons of behavioral responses. The change in earnings behavior in the phase-in range ($z^i_\Delta - z_0$) increases the pre-expansion EITC amount by

$$\Delta EITC^i = t^i \cdot (z^i_\Delta - z_0) \simeq z_0 \cdot e \cdot \Delta \cdot \frac{(t^i)^2}{1+t^i}$$

Likewise, in the phase-out range, the change in earnings ($z^d_\Delta - z_0$) increases the pre-expansion EITC amount by:

$$\Delta EITC^d = -t^d \cdot (z^d_\Delta - z_0) \simeq z_0 \cdot e \cdot \Delta \cdot \frac{(t^d)^2}{1-t^d}$$

Let λ^i and λ^d denote the fraction of the EITC claimants in the phase-in and phase-out regions respectively. Let $\bar{z}^i$ and $\bar{z}^d$ denote the average earnings in the phase-in and phase-out regions.

The mean effect of the EITC expansion on EITC amounts under the initial schedule is:

$$\Delta EITC \simeq \Delta \cdot e \cdot \left[\lambda^i \cdot \bar{z}_i \cdot \frac{(t^i)^2}{1+t^i} + \lambda^d \cdot \bar{z}_d \cdot \frac{(t^d)^2}{1-t^d}) \right] \tag{A4}$$

In our sample, $\lambda^i = .28$, $\lambda^d = .53$, $\bar{z}^i = \$6,600$, $\bar{z}^d = \$23,300$, $t^i = 0.37$ (the average of 40% and 34%), and $t^d = 18.5\%$ (the average of 21% and 16%). With $\Delta EITC = \$58$ and $e = .25$, solving equation (A4) yields $\Delta = 33\%$. That is, a 33% expansion in the federal EITC would be required to generate the same labor supply responses along the intensive margin as the information treatment implemented by complying tax professionals.

Non-complying tax professionals. The information treatment as implemented by non-complying tax professionals led to a pure increase in earnings, which is consistent with a reduction in perceived tax rates rather than changes in perceptions of the EITC schedule. We therefore calculate the percentage reduction in tax rates that would produce an increase in earnings equal to the treatment effect estimate of \$247 (Table 3, column 2, row 3).

The EITC claimants in our sample face an average marginal tax rate of approximately $t = 10\%$ and have average earnings of $z = \$16,500$. A reduction in t by Δt would generate a change in earnings Δz of

$$\frac{\Delta z}{z} = e \cdot \frac{\Delta t}{1-t}. \tag{A5}$$

With $\Delta z = \$247$ and $e = .25$, solving equation (A5) yields $\Delta t = 5.4\%$. That is, a 5.4 percentage point reduction in marginal tax rates would be required to generate the same labor supply responses along the intensive margin as the information treatment implemented by non-complying tax professionals.

Table A1

Kolmogorov-Smirnov Tests of Treatment Effects on Distributions

Distribution:	Δ EITC Amount	Δ Wage-Based EITC Amount
	(1)	(2)
(1) Full Sample [N = 30,303]	0.074	0.273
(2) Complying Tax Professionals [N = 15,395]	0.005	0.005
(3) Non-Complying Tax Professionals [N=14,534]	0.045	0.010

Notes: This table reports p values from Two-sample Kolmogorov-Smirnov (KS) tests for equality of various distributions across treated and control group clients. In column 1, the variable considered is the change in EITC amount from year 1 to year 2; column 2: the change in EITC amount computed based solely on wage earnings. The first row is for the full sample. The second row considers clients served by "complying" tax professionals, while the third row considers those served by "non-complying" tax professionals. A given tax filer i's tax professional is defined as a "complier" if she has a higher fraction of other clients (excluding client i) with middle income (between $7,000 and $15,400) in the treatment group than the control group.

The p values are computed using a permutation algorithm as follows. We generate a placebo treatment randomly (50% probability) and recompute the KS test statistic based on this placebo treatment. This exercise is repeated 2000 times to generate a distribution of KS statistics. The p-values reported in the table are the percentile where the original KS statistics (for the true treatment) fall within the empirical distribution of the 2000 placebo KS statistics.

Table A2
Means of Base-Year Variables by Treatment Eligibility and Complying Tax Professional Status

Base year variables:	A. Complying Tax Pros			B. Non-Complying Tax Pros		
	Control [N=21,193]	Treatment [N=20,809]	Difference (2) - (1)	Control [N=15,380]	Treatment [N=14,925]	Difference (5) - (4)
	(1)	(2)	(3)	(4)	(5)	(6)
Income ($)	16,599	16,509	-89.86	16,541	16,731	189.80
	(107.30)	(114.12)	(124.15)	(111.62)	(118.45)	(129.83)
Wage Earnings ($)	15,868	15,808	-59.61	15,837	16,002	164.77
	(136.53)	(143.15)	(141.82)	(136.04)	(135.41)	(150.59)
EITC amount ($)	2,490	2,486	-3.23	2,470	2,446	-24.23
	(16.12)	(18.23)	(18.45)	(15.18)	(16.59)	(17.85)
Percent Self Employed	11.65%	11.34%	-0.31%	11.26%	11.07%	-0.20%
	(0.71)	(0.72)	(0.46)	(0.63)	(0.52)	(0.50)
Percent Low Income	14.07%	14.56%	0.49%	14.66%	14.88%	0.22%
	(0.41)	(0.44)	(0.47)	(0.42)	(0.43)	(0.53)
Percent Middle Income	34.68%	34.80%	0.13%	33.99%	33.14%	-0.85%
	(0.66)	(0.73)	(0.70)	(0.62)	(0.61)	(0.69)
Percent Upper Income	51.26%	50.64%	-0.62%	51.35%	51.98%	0.63%
	(0.63)	(0.69)	(0.75)	(0.63)	(0.67)	(0.76)
Percent Married	9.94%	8.97%	-0.97%	9.08%	9.87%	0.80%
	(0.46)	(0.44)	(0.40)	(0.44)	(0.45)	(0.40)
Percent with 2 or more	59.24%	59.42%	0.18%	59.37%	59.39%	0.02%
dependents in Year 1	(0.54)	(0.52)	(0.67)	(0.51)	(0.59)	(0.69)
Percent Return in Year 2	72.33%	72.04%	-0.29%	72.87%	71.55%	-1.32%
Percent with 2 or more	(0.52)	(0.54)	(0.62)	(0.52)	(0.58)	(0.68)

Notes: All variables are base year (year 1) values except last row. Standard errors clustered by tax professional reported in parentheses. Income is defined as the sum of wage income and self-employment income. Self employed is a binary variable defined as having positive self-employment income (irrespective of other wage earnings). Low income is defined as income below $7,000; middle income is defined as income between $7,000 and $15,400; and upper income is defined as income above $15,400. Treatment group includes all tax filers we intended to treat. Columns (1) to (3) include the sample of clients served by complying tax professional while columns (4) to (6) include the sample of clients served by a non-complying tax professional. A given tax filer i's tax professional is defined as a "complier" if she has a higher fraction of other clients (excluding client i) with middle income (between $7,000 and $15,400) in the treatment group than the control group.

Table A3

Treatment Effects by Tax Professional Complying Status and EITC Range

Dep. Var.:	Δ EITC amount	Δ EITC amount	Δ EITC amount	Δ Earnings	Δ Earnings	Δ Earnings
Sample	Phase-in in year 1	Plateau in year 1	Phase-out in year 1	Phase-in in year 1	Plateau in year 1	Phase-out in year 1
	(1)	(2)	(3)	(4)	(5)	(6)
(1) Full Sample	9.47	10.23	22.72	-263.60	167.11	111.34
	(28.15)	(31.33)	(17.34)	(148.46)	(181.29)	(118.51)
	7,442	5,687	17,174	7,442	5,687	17,174
(2) Complying Tax	42.45	48.31	66.53	-204.21	3.70	-221.10
Professionals	(40.78)	(43.90)	(24.30)	(215.60)	(257.54)	(170.87)
	3,773	2,962	8,660	3,773	2,962	8,660
(3) Non-Complying	-30.13	-35.91	-31.39	-325.65	336.32	474.11
Tax Professionals	(42.63)	(46.47)	(25.14)	(205.25)	(267.55)	(170.26)
	3,596	2,656	8,282	3,596	2,656	8,282
(4) Compliers vs Non-	72.58	84.22	97.92	121.44	-332.62	-695.21
Compliers: (2) - (3)	(61.58)	(65.12)	(35.56)	(298.90)	(377.74)	(248.92)
	7,369	5,618	16,942	7,369	5,618	16,942
(5) Compliers vs Non-	68.86	86.71	97.22	121.76	-322.61	-690.70
Compliers w/ Cntrls	(61.47)	(65.22)	(35.56)	(299.62)	(378.00)	(248.65)
for Heterogeneity	7,369	5,618	16,942	7,369	5,618	16,942

Notes: Standard errors clustered by tax professional reported in parentheses; number of observations is reported below the standard error. Each coefficient is from a separate regression. Columns show treatment effects on various outcomes -- cols. 1, 2, 3: change in EITC amount from year 1 to year 2; cols. 4, 5, 6: change in earnings from year 1 to year 2. All regressions include the following base year controls: earnings, earnings squared, wage earnings, married filing jointly dummy, and number of qualifying children (1 vs. 2 or more). Cols. 1 and 4 limit the sample to those with earnings in the EITC phase-in in year 1. Cols. 2 and 5 limit the sample to those with earnings in the EITC plateau in year 1. Cols. 3 and 6 limit the sample to those with earnings in the EITC phase-out in year 1.

Row (1) reports coefficients on the treatment indicator from OLS regressions of the form shown in equation (2) in the text for the full sample of tax filers who returned in year 2. Row (2) limits the sample to complying tax professionals, and row (3) limits the sample to non-complying tax professionals. See notes to Table A1 for definition of complying tax professionals. Row (4) reports the difference in treatment effects between complying and non-complying tax professionals, which equals the difference in coefficients between rows (2) and (3). In row (4), we regress each outcome variable on the treatment indicator, an indicator for having a complying tax professional, and the interaction of the two indicators.

The coefficient on the interaction is reported. We also include interactions of the base year control variables with the complying tax professional indicator. Row (5) reports the difference in treatment effects between complying and non-complying tax professionals controlling for heterogeneity in treatment effects by client observables. This specification adds interactions of the base year controls with the treatment indicator to the specifications in row (4). The coefficient on the treatment x complying tax professional interaction is reported.

Table A4

Compliance Defined By Treatment Effects on EITC Amount

Dependent Variable:	Δ EITC Amt.	Δ EITC Amt. with controls	Δ Wage Based EITC Amount	Δ Wage Based EITC Amount with controls
	($)	($)	($)	($)
	(1)	(2)	(3)	(4)
(1) Full Sample	24.02	17.17	8.393	1.75
[N=30,303]	(14.77)	(14.06)	(15.57)	(14.96)
	[1.63]	[1.22]	[0.54]	[0.12]
(2) Complying Tax Professionals	64.98	63.24	54.77	54.91
[N=14,973]	(24.91)	(25.42)	(24.86)	(24.95)
	[2.61]	[2.49]	[2.20]	[2.20]
(3) Non-Complying Tax Professionals	-22.97	-34.80	-44.81	-58.00
[N=14,956]	(24.89)	(24.67)	(25.27)	(25.46)
	[-0.92]	[-1.41]	[-1.77]	[-2.28]
(4) Compliers vs. Non-Compliers: (2) - (3)	87.94	97.53	99.58	113.07
[N=29,929]	(40.93)	(42.60)	(40.32)	(41.89)
	[2.15]	[2.29]	[2.47]	[2.70]
(5) Compliers vs. Non-Compliers	96.50	96.70	111.01	111.98
Controlling for Heterogeneity in	(42.64)	(42.67)	(41.89)	(41.90)
Treatment Effects by Client Observables	[2.26]	[2.27]	[2.65]	[2.67]
[N=29,929]				

Notes: Standard errors clustered by tax professional reported in parentheses; t-statistics in square brackets. Each coefficient is from a separate regression. A given tax filer *i*'s tax professional is defined as a "complier" if her other treated clients have higher average EITC amounts in year 2 than her other control clients (excluding client *i*). The dependent variable in columns 1 and 2 is the change in EITC amount from year 1 to year 2; in columns 3 and 4, it is the change in the wage-based EITC amount (EITC computed based solely on wage earnings). Columns 2 and 4 include the following base year controls: earnings, earnings squared, wage earnings, marital status, and number of children.

Row (1) reports the treatment effects in the full sample, row (2) restricts the sample to clients of complying tax professionals, and row (3) to non-complying tax professionals. Row (4) reports the difference in treatment effects between complying and non-complying tax professionals. Row (5) reports the difference in treatment effects between complying and non-complying tax professionals, controlling for heterogeneity in treatment effects by base year characteristics of clients. See notes to Table 3 for details of regression specifications.

Table A5

Continuous Measures of Compliance

Year 2 variable for compliance def.	Middle Income	EITC Amount	Middle Income	EITC Amount
Base year controls in compliance def.	No	No	Yes	Yes
	(1)	(2)	(3)	(4)
(1) Δ EITC Amount ($)	173.92	0.044	127.94	0.101
	(87.68)	(0.029)	(92.61)	(0.038)
	[1.98]	[1.52]	[1.38]	[2.64]
	[N=29,351]	[N=29,362]	[N=29,346]	[N=29,353]
(2) Δ Wage-Based EITC Amount ($)	227.58	0.050	182.88	0.091
	(88.04)	(0.029)	(91.47)	(0.038)
	[2.58]	[1.72]	[2.00]	[2.42]
	[N=29,351]	[N=29,362]	[N=29,346]	[N= 29,353]

Notes: Standard errors clustered by tax professional reported in parentheses; t-statistics in square brackets. This table uses continuous measures of compliance instead of binary definitions. Each coefficient listed is from a separate regression of the form shown in equation (3) in the text, which includes the treatment indicator, a continuous measure of tax professional compliance, and the interaction of these two variables. Each column of the table reports the coefficient on the interaction between different tax professional compliance variables and the treatment indicator. The dependent variable is the change in EITC amount from year 1 to year 2 in row (1), and the change in the wage-based EITC amount in row (2). In all columns, the complying tax professional variable is defined for each client by excluding that client himself. In column 1, the complying tax professional variable is defined as a continuous variable equal to the fraction of other clients treated in year 1 who have middle income in year 2 (between $7,000 and $15,400) minus the fraction of other control clients in year 1 who have middle income in year 2.

In column 2, the complying tax professional variable is defined as a continuous variable equal to the average EITC amount in year 2 of other clients treated in year 1 minus the average EITC amount in year 2 of other clients in the control group in year 1. Columns 3 and 4 replicate the definitions in 1 and 2, but define the continuous measure of treatment effects on other clients using a regression that controls for the following base year observables: earnings, earnings squared, wage earnings, marital status, and number of children. We also control for the same base year variables and their interaction with the compliance variable when estimating the regressions in columns 3 and 4.

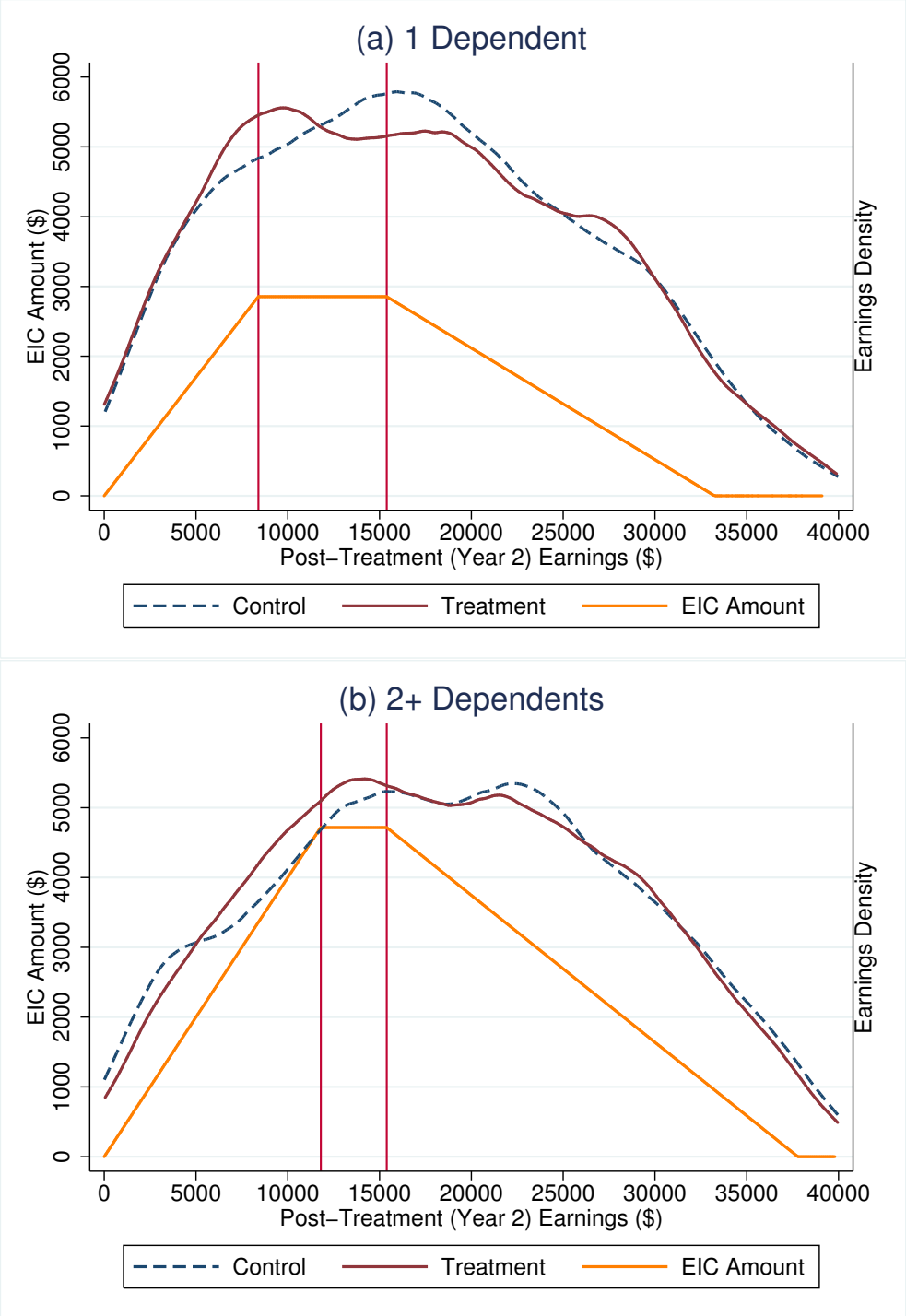


Figure A1: Year 2 Wage Earnings Distributions: Complying Tax Professionals

Notes: These figures plot kernel densities of year 2 (post-treatment) of wage earnings for tax filers who filed with a complying tax professional. See notes to Figure 5 for the definition of complying tax professionals. The solid curve shows the income distribution for the treatment group; the dashed curve shows the income distribution for the control group. Panel A is for the sample of individuals with one dependent, while panel B is for the sample of individuals with two or more dependents. Each panel also shows the relevant EITC schedule for singles (on the left y-axis). The vertical lines mark the boundaries between the phase-in, peak, and phase-out ranges of the EITC.

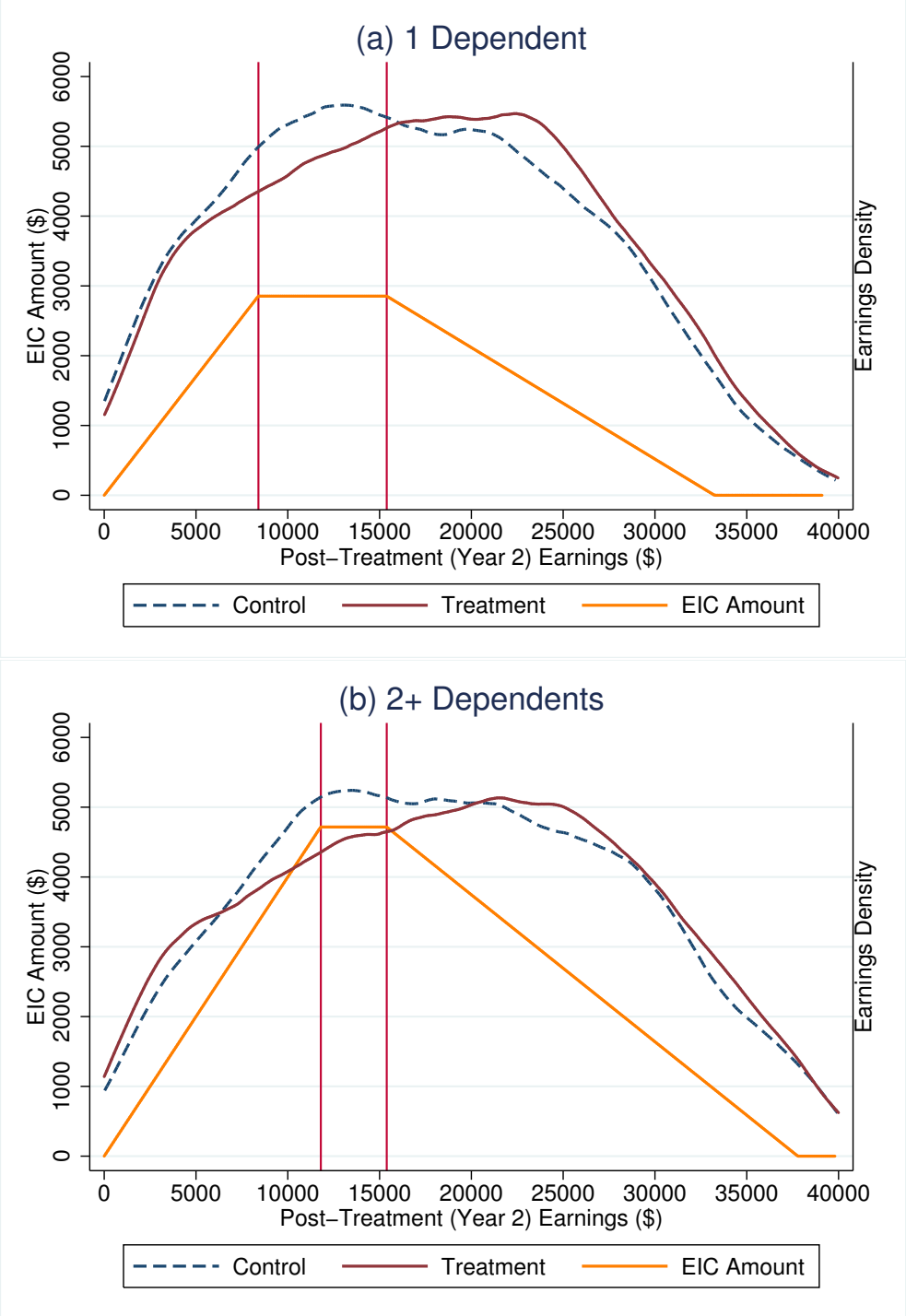


Figure A2: Year 2 Wage Earnings Distributions: Non-Complying Tax Professionals

Notes: These figures plot kernel densities of year 2 (post-treatment) wage earnings for tax filers who filed with a non-complying tax professional. See notes to Figure 6 for the definition of non-complying tax professionals. The solid curve shows the income distribution for the treatment group; the dashed curve shows the income distribution for the control group. Panel A is for the sample of individuals with one dependent, while panel B is for the sample of individuals with two or more dependents. Each panel also shows the relevant EITC schedule for singles (on the left y-axis). The vertical lines mark the boundaries between the phase-in, peak, and phase-out ranges of the EITC.

APPENDIX EXHIBIT I(a)
Information Treatment Screen #1 in H&R Block Software

H&R Block Client Assistant - EIC

The EIC is the largest component of the tax refund of American working families. This year, you are getting an EIC of $4000 as part of your tax refund. As part of a special effort to promote the EIC, H&R Block will offer you some useful and simple information about the EIC to help you take the best advantage of this credit. We want to explain how the EIC works to help you decide how much to work and earn this year.

Let me tell you some more details about the study. We are trying to better understand and increase awareness of EIC among our EIC-eligible clients.

Use Handout SINGLE WITH 2+ CHILDREN

F10 to continue | Avg. # of Questions: 3

APPENDIX EXHIBIT I(b)
Information Treatment Screen #2 in H&R Block Software

H&R Block Client Assistant - EIC

In 2006, you made ** $10000 ** and you are getting an EIC of ** $4000 ** in your tax refund. Your earnings this year (in 2007) determine the size of your EIC refund next year. The EIC has 3 ranges: 1) Increasing, 2) Peak, 3) Decreasing.

You are in the ** increasing ** range of the EIC. Think about it like this: Suppose you earn $10 an hour. Because of the EIC you are really making $14 an hour. It pays to work more!

EIC Range	If you earn between	Your EIC refund is	Earn $10 more, the EIC...
1) Inc	$0-$11,790	$0 up to $4,716	Increases by $4.00
2) Peak	$11,790-$15,390	$4,716	Stays the same
3) Decr	$15,390-$37,780	$4,716 down to $0	Decreases by $2.10

F10 to continue

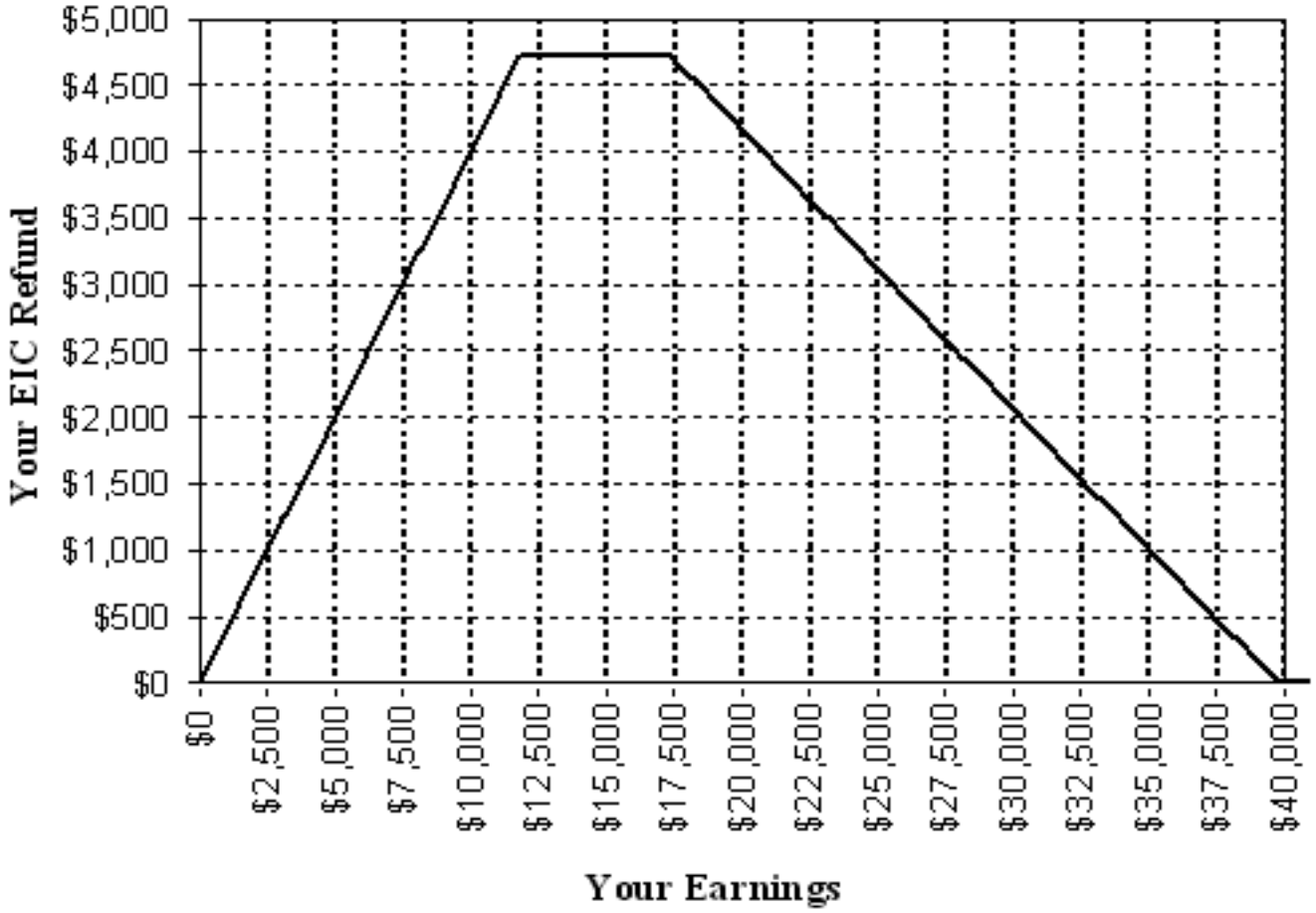
Avg. # of Questions: 3

APPENDIX EXHIBIT II
Printout Given to Tax Filer

Dear WARD CLEAVER,

The **EIC** (Earned Income Credit) gives tax refunds to working families. We want to explain how the EIC works to help you decide how much to work and earn this year. In 2006, you made $10000 and you are getting an **EIC** of $ 1984 in your tax refund.

Your earnings this year (in 2007) determine the size of your **EIC** refund next year. The EIC has 3 ranges: 1) Increasing, 2) Peak, 3) Decreasing.



EIC Range	In 2007 if you earn between:	Your EIC refund in 2008 will be:	If you earn $10 more, the EIC:
Increasing	$0-$11,790	$0 up to $4,716	Increases by $4
Stays the Same	$11,790-$17,390	$4,716	Stays the same
Decreasing	$17,390-$39,780	$4,716 down to $0	Decreases by $2.10

You are in the ** increasing ** range of the EIC. Think about it like this: Suppose you earn $10 an hour. Because of the EIC you are really making $14 an hour. It pays to work more!

Note: The EIC does not affect any other credits or refunds you can get. This table applies to married joint filers with two or more qualifying children. If your family situation changes in 2007, your EIC may also change (see IRS Publication 596). Changes in earnings may also affect other credits you are entitled to or taxes you may owe. Though the printed earnings and EIC amounts are based directly on your current tax return, the indication of your position on the graph is for illustrative purposes only.

APPENDIX EXHIBIT III
Follow Up Letter Mailed to Tax Filer

[Date]

[1st Name] and [1st Name] [Last Name]
[Address Line 1]
[Address Line 2]
[City] [State] [Zip]

Dear [1st Name],

Thank you for preparing your taxes with H&R Block this year. Even though it's early, we want to provide important information that you may want to consider as you plan financially for next year. The EIC (Earned Income Credit) gives tax credits to working families. This year, you qualified for the EIC. This letter is a follow up to the EIC information your H&R Block tax professional shared with you when you had your taxes prepared. We want to remind you how the EIC works as you consider how much to work and earn this year.

As pictured on the graph below, the EIC has 3 ranges: 1) Increasing, 2) Peak, 3) Decreasing.

Last year, you were in the **increasing** range of the EIC. Look at the table below. Will you be in the increasing range again this year? If yes, think about it like this: Suppose you earn $10 an hour. Because of the EIC, for each $10 you earn you could be eligible to receive an additional $4 in EIC – so it's like you're making $14 an hour. **It pays to work more!**

EIC Range	In 2007, if you earn between	Your EIC refund in 2008 could be	If you earn $10 more, the EIC could
Increasing	$0 - $11,790	$0 up to $4,716	Increase by $4.00
Peak	$11,790 - $15,390	$4,716	Stay the same
Decreasing	$15,390 - $37,780	$4,716 down to $0	Decrease by $2.10

This table applies to single filers with two or more qualifying children. If your family situation changes in 2007, your EIC may also change (see IRS Publication 596). Many things can affect EIC, including changes in your family situation, other financial changes, or changes in tax laws. These changes may also affect your eligibility for other credits or deductions or taxes you may owe.

We hope you find the EIC information helpful. We look forward to continuing to provide tax and financial planning assistance to you in the future.

Sincerely,

Bernard M. Wilson
Vice President
Outreach & Business Development

APPENDIX EXHIBIT IV

Tax Professional Survey about the EIC Outreach Initiative
March 2007

Office

Dear Tax Professional,

As you know and thanks to your help, H&R Block has implemented an EIC outreach effort in Chicago where you have explained the Earned Income Tax Credit to our clients. In order to evaluate this initiative, we would like to ask you a few short questions about your experience. Please circle your response to each question below.

1) What proportion of your clients was interested in the EIC information?

a. Few (less than 25% of your clients)

b. Many (25% to 75% of your clients)

c. Most (over 75% of your clients)

2) Do you think Block should provide this EIC information to clients again in the future?

a. Yes

b. No

3) Is there anything else you would want to tell us about this EIC outreach or about how to make it work better?

a. No

b. Yes: Please explain below and/or on the back of this survey.

4) Did the explanation of EIC help your understanding of how the credit worked?

a. Yes

b. No

Please return this survey to your office leader who will forward it to Block headquarters in the envelope provided to each office. Thank you for your participation in the EIC Outreach and in this survey.
If you have questions, please contact Eileen McCarthy, at 816.854.4866.