Technical Appendix

Greater Hispanic Outreach Can Improve Take-Up of Earned Income Tax Credit

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Despite its broad coverage for low income households, the Earned Income Tax Credit (EITC) faces challenges with both underclaim and overclaim. Overclaim is attributable to an over-reported number of qualifying children and dependents. For example, if parents are divorced, they may both claim the child as qualifying under EITC, while only one primary parent should be filing the claim. However, the story behind the underclaim is more multifaceted.

This Technical Appendix explains the details behind the state- and county-level underclaim analysis. These analyses are correlations in nature.

The state-level EITC take-up rates are provided by the IRS. However, the county-level EITC take-up rates used in the regressions in Table 1 are estimated by the authors. To calculate county-level take-up rates, one needs two data sources 1) the number of claims of EITC by county 2) the number of people eligible for EITC in each county. The data on county-level EITC claims are provided by the IRS, but the total count of eligible families is estimated with ACS IPUMS data using a method that builds on the TAXSIM and the Analysis of Transfers Taxes and Income Security (ATTIS) models.

The authors' EITC simulation process approximates their undocumented status and taxable income and determines who belongs in a family tax unit (household primary family and dependents). The counties involved and a measure of accuracy against ATTIS estimates are shown in Charts 1 and 2. The authors are aware of the concerns of using this method outlined in the census report and NAS report. The main concerns are noncompliance, income misreporting and uncaptured dependent dynamics. The authors mitigate these concerns by 1) estimating the number of dependents based on tax year; 2) only counting the eligibility of EITC, not the total credits received—therefore, the marginal dependent matters less for the calculation; 3) taking off county fixed effects and year fixed effects—therefore, unless the measurement errors are somehow correlated with state-year variations of racial composition, they should not matter for the analysis; 4) performing a robustness test using an alternative measure free of the aforementioned measurement errors.

After the EITC simulation, one entry of data is kept for each family, and their information is weighted and collapsed to a county-by-year cell, then merged with IRS tax filling information for each county. Demographic controls include county average household demographic information such as age and gender of the household head (singles would be their own household head), family size, percent married, employment-to-population ratio and average family income. Other variables of interest are reported in Table 1. These covariates are chosen based on IRS analysis of what might influence EITC awareness.

In addition to these estimates, I also provide the county EITC eligibility- to-population ratio (EITC/pop) as a robustness check to the primary analysis. This alternative measure does not suffer from the measurement errors of eligible household counts but demonstrates an almost identical mechanism to the baseline analysis.

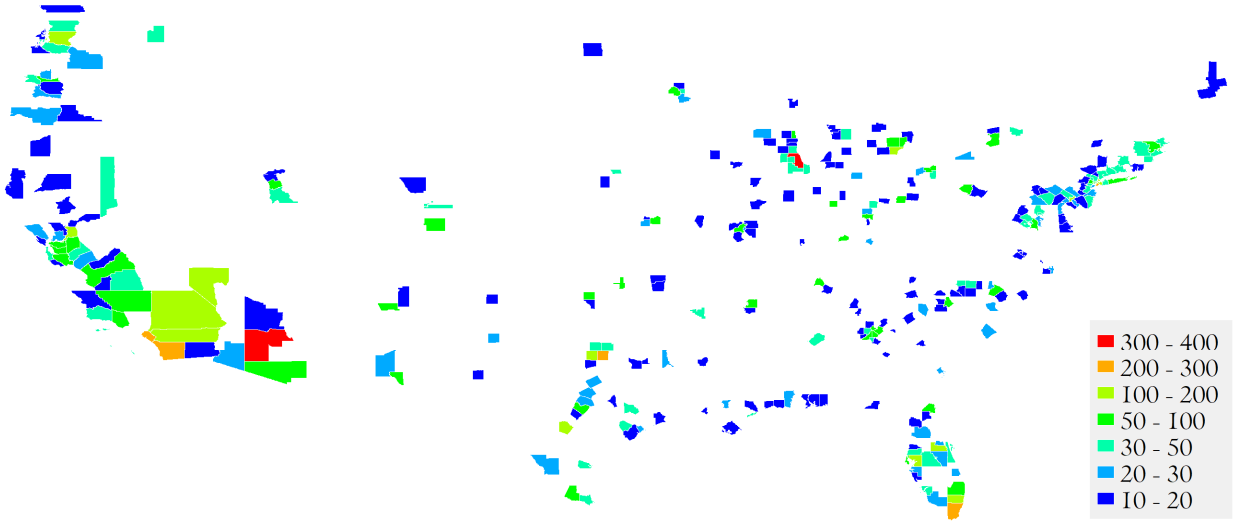
Table 1. State- and County-Level Analysis on EITC Take-Up Rates

	(1) **EITC Take-up**	(2) **EITC Take-up**	(3) **EITC Take-up**	(4) **State EITC Take-up**	(4) **EITC/pop**	(5) **EITC/pop**	(6) **EITC/pop**
% Hispanic	-0.15***	0.10	0.05	-0.02	-0.19***	0.10	-0.14
	(0.055)	(0.082)	(0.341)	(0.133)	(0.067)	(0.099)	(0.425)
% Black non-Hispanic	0.59***	0.61***	-0.43	-0.21	0.71***	0.73***	-0.68*
	(0.059)	(0.070)	(0.292)	(0.148)	(0.072)	(0.086)	(0.355)
% Asian	-0.18	0.02	-1.23**	-0.29	-0.22	0.02	-1.39**
	(0.172)	(0.228)	(0.539)	(0.279)	(0.210)	(0.276)	(0.692)
% Other Race	0.52*	0.38	-0.14	-0.37	0.65*	0.49*	-0.03
	(0.280)	(0.236)	(0.788)	(0.226)	(0.341)	(0.290)	(0.953)
% <200% FPL	-0.27*	-0.20	0.12	-0.13	-2.55***	-2.47***	-2.05***
	(0.159)	(0.183)	(0.282)	(0.122)	(0.194)	(0.244)	(0.364)
% Urban Population	0.03	0.04	-0.22	0.34*	0.03	0.05	-0.29
	(0.033)	(0.032)	(0.497)	(0.197)	(0.040)	(0.038)	(0.648)
% Does not speak English Well		-0.72***	-0.54***	-0.69**		-0.84***	-0.61**
		(0.192)	(0.198)	(0.302)		(0.234)	(0.243)
Demographic	Y	Y	Y	Y	Y	Y	Y
Year FE	Y	Y	Y	Y	Y	Y	Y
State FE			Y	Y			Y
N	768	768	768	102	768	768	768
R^2	0.249	0.263	0.413	0.927	0.361	0.371	0.493

NOTE: The data come from ACS and IRS. * p <0.1; ** p <0.05; *** p <0.01

Chart 1. Counties in the Analysis

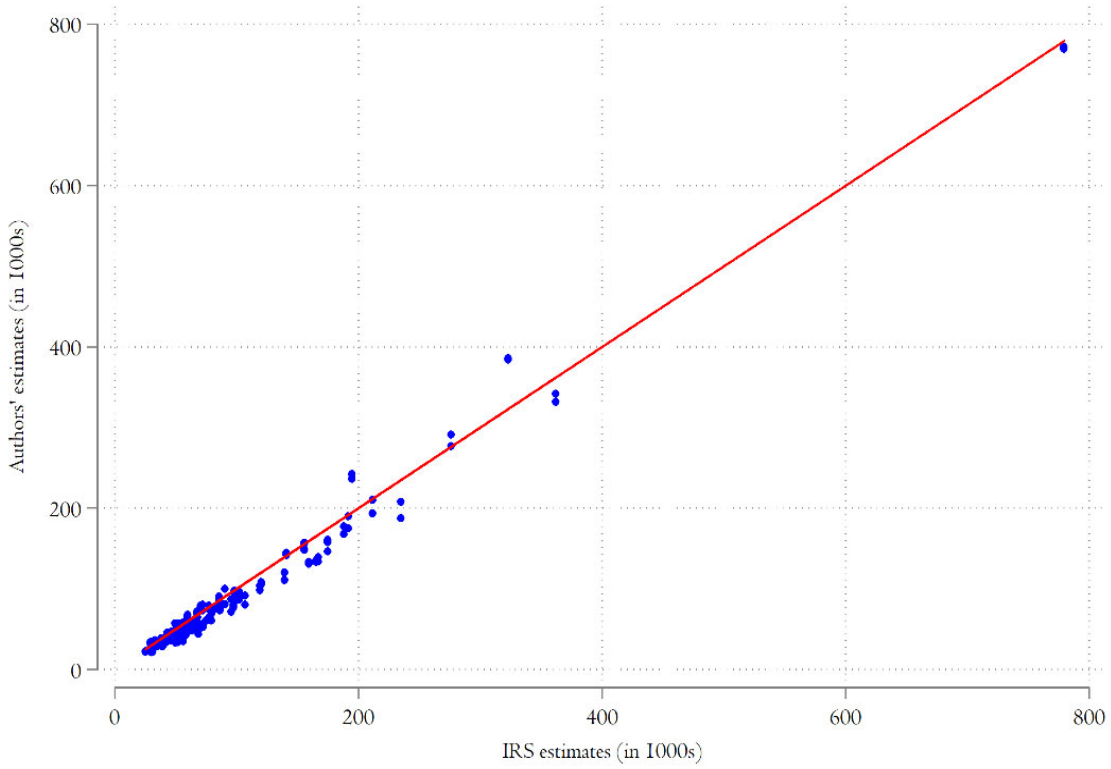
Thousands



SOURCES: IPUMS-CPS, authors' calculations. The color indicates eligible cases in thousands.

Chart 2. Comparing County EITC-Eligible Filers from IRS and Authors' Estimates

Thousands



NOTE: This figure compares EITC eligible filer estimates at the county-level from IRS to the authors' calculation. IRS only releases information on a small number of counties, but it allows us to verify the authors' methods. The horizontal axis is the estimate of the county EITC eligible filers reported by the IRS. The blue dots are the same estimates using authors' calculations. The red line marks the 45-degree line. Points fall near the line indicate small discrepancies between the IRS and the authors' estimates.

SOURCE: Authors' calculations from IRS, IPUMS-CPS data.