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Do Government Benefits Affect Officeholders' Electoral Fortunes? Evidence from State Earned Income Tax Credits

HUNTER E. RENDLEMAN *University of California, Berkeley, United States*
JESSE YODER† *Independent Researcher, United States*

When do public policies influence citizens' political attitudes and behavior, and among whom? We study this question using one of the largest social provision programs in the United States: the Earned Income Tax Credit (EITC). We exploit the staggered roll-out of state-level EITC programs to estimate the causal effect of the program on elections, voter behavior, and attitudes about the government. Contrary to predictions from the policy feedback literature, we show that the credit leads to higher vote shares and approval ratings for the implementing governor. These effects are temporally limited to the first years of the credit's availability and dissipate over time. Taken together, our results offer new insights about the conditions under which particularistic economic policies affect political outcomes.

"I was like, 'Oh my God, I can't believe this is the money we're going to get!' We can do so much."

— California resident after receiving her state Earned Income Tax Credit[1]

"Voters are not fools."

— V.O. Key (1966)

INTRODUCTION

When do public policies influence citizens' political attitudes and behavior, and among whom? Since Schattschneider (1935), scholars have understood that public policies sometimes generate "policy feedback effects," shaping political attitudes and participation. Such a phenomenon of policy feedback could shape voters' capacity to react to and evaluate elected officials' policy-making decisions and subsequently hold them accountable. The presence or absence of policy feedback effects therefore has implications for democratic governance more generally.

One line of research suggests that policy feedback effects do impact the behaviors, choices, and attitudes of voters (e.g., Campbell 2003; Mettler 2005; Soss and Schram 2007). According to this perspective, these effects can influence future policy-making (Pierson 1994), change the relative political power of groups through mobilization (Campbell 2003), and alter societal-level meanings of civic belonging (Soss and Schram 2007).

However, recent work suggests that even particularistic policies might not always have an effect on political behavior. For example, while policies such as trade adjustment assistance (Margalit 2011) and food stamps (Kogan 2021) have improved incumbents' performances on Election Day, child care tax credits (Mettler 2011) and anti-poverty urban policies (Patashnik and Zelizer 2009) have had little to no effect on political behavior. What settings lead some particularistic policies to have an effect while others do not?

To answer this question, we estimate the causal effect of the one of the largest anti-poverty programs in the United States—the Earned Income Tax Credit (EITC)—on election outcomes and political attitudes. The credit provides low-income workers with a potentially sizable tax refund, and in addition to lifting over five million people out of poverty each year (CBPP 2022), a multidisciplinary literature relates the credit to outcomes like feelings of economic security (e.g., Sykes et al. 2015) and improved health outcomes (e.g., Evans and Garthwaite 2014; Markowitz et al. 2017).

While the importance of the EITC to the lives of many Americans is reason enough to study its political effects, as a case, it offers analytic advantages that let us investigate whether and how the ways a policy is deployed impacts its public reception. Here, we conceive of policies as bundled treatments—or, as Campbell (2012) describes them, "constellations" of characteristics—that can promote or discourage attitudinal and behavioral changes among voters. We leverage the fact that, in recent years, 29 states introduced their own versions of the EITC that differ in the amount

Corresponding author: Hunter E. Rendleman, Researcher, Department of Political Science, University of California, Berkeley, United States, hrendleman@berkeley.edu.
Jesse Yoder, Independent Researcher, United States, jesseyoder90@gmail.com.

† Jesse Yoder worked on this article while at Stanford University and later as an independent researcher.

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[1] Botts (2020).

of resources they confer and their degree of visibility to beneficiaries, suggesting that the "same" policy in one polity can have different effects in another depending on its administration. Following calls to advance the study of feedback effects through the use of data with multiple measurements over time (Jacobs and Mettler 2018), we test competing theoretical expectations and provide new insights on how policy feedback effects work.

Using a series of difference-in-differences designs that exploit variation in states' adoption of EITC programs from 1992 to 2018, we find that state EITCs have small effects on gubernatorial elections. However, this finding does not mean voters are unresponsive to the policy. In follow-up analyses, we show that governors are rewarded electorally in the year after they implement an EITC program, but these effects dissipate over time. Additionally, these effects appear concentrated in counties where a Republican governor enacted the program and where many voters received the benefit, suggesting that low-income voters reward the Republican Party for implementing programs where they benefit. We also observe larger effect sizes in states with larger EITC payouts, indicating that voters may be responsive to the generosity of these programs.

Because the EITC has observable eligibility requirements, we also investigate the differential effects of the program on individuals who qualify for the refund and on those who do not. Using time-series cross-sectional data from the Cooperative Election Study, we find that both eligible and ineligible individuals increase their support for the governor after the credit is implemented. Eligible individuals who receive larger benefits, live in states with mandatory EITC notification laws, and live in areas where more people claim the credit particularly increase their support for the governor. Taken together, our results suggest voters are responsive to the benefit.

Overall, voters who benefit from EITC programs respond in a way consistent with their economic incentives by increasing their support for the officeholders responsible for enacting the policy. While these results may seem at odds with previous work showing muted feedback effects of the EITC (e.g., Mettler 2011; Shanks-Booth and Mettler 2019), they need not be interpreted as such. Through the use of a causal design, along with several years of data at both the aggregate and individual level, we show that the positive electoral effects of state EITCs are limited. This suggests that there is a chance that EITC programs can shape the political environment that they are deployed in before their effects weaken and they become "submerged," as previous work demonstrates (Mettler 2011).[2] Thus, we complement accounts documenting beneficiaries' and non-beneficiaries' positive views of the EITC (Halpern-Meekin et al. 2015; Sykes et al. 2015).

[2] Mettler (2011) describes policies in the "submerged state" as those that are not easily observed because they are embedded in the tax code, making it difficult for citizens to attribute them to specific officials.

THE EARNED INCOME TAX CREDIT

The EITC has been implemented at multiple levels of government as a means to support low-income workers and their households. First enacted at the federal level in 1975, the credit is characterized by a design that encourages work: households receive a refundable credit equal to a percentage of their earnings up to a maximum credit and then the credit remains flat until earnings reach a phaseout point.[3] Since 1994, the credit has been available to all low-income workers, though workers with dependent children receive a much larger credit (at most $6,431 in tax year 2018) than those without (at most $519 in tax year 2018). Section A.1 of the Supplementary Material presents further descriptives on the program. Take-up of the EITC is imperfect, with the IRS estimating that one in five individuals who are eligible for the credit do not claim it (Internal Revenue Service 2022).

To study the political effects of the EITC, we rely on the introduction of state-level EITCs from 1992 to 2018.[4] Most states have credits that mirror the design of the federal credit and provide eligible tax payers with some percentage of their federal EITC benefit. Table 1 describes state EITCs as of 2018 and shows the partisanship of enacting governors. At the time of their state's adoption (or readoption) of the EITC, 10 governors were Republican, 1 was an Independent, and 18 were Democrats.

THEORETICAL CONTEXT

Under which conditions do policies generate feedback effects, and when do they not? Since Schattschneider (1935), scholars have argued that particularistic policies can shape the behavior and attitudes of their recipients, often toward generating supportive constituencies. Inspired by this theoretical and empirical literature studying "policy feedback effects," we conceive of policies as "constellations" of characteristics—bundled treatments with multiple components that can each promote or discourage various political outcomes (Campbell 2012). For example, programs like the EITC can vary dramatically in their capacity to generate feedback effects depending on how (e.g., the procedures that guide their delivery) and where (e.g., a polity's socioeconomic composition) they are deployed. In this section, we develop theoretical expectations for when we might expect state-level EITC programs to impact the political behavior of beneficiaries and non-beneficiaries. While the policy feedback literature chiefly guides our predictions, our results also bear on

[3] Refundable in this case means that if a credit exceeds a taxpayer's income tax, the taxpayer receives the excess amount as a payment.

[4] North Carolina abolished its EITC in 2014 after establishing it in 2008. As of 2016, of the states with an EITC, three states had nonrefundable credits: Delaware, Ohio, and Virginia. Because we lack election data prior to 1990, states that adopted their own EITC before 1990 (Maryland, Rhode Island, Vermont, and Wisconsin) do not enter our analysis.

TABLE 1. State Earned Income Tax Credits as of 2018

State	Year enacted	Governor at the time of enactment	Party of governor	Refundable	Percentage of federal EITC
California	2015	Brown	D	Yes	85% of the federal credit, up to half of the federal phase-in
Colorado	1999; 2015	Romer; Hickenlooper	D	Yes	8.5%; 10%
Connecticut	2011	Malloy	D	Yes	30%
Delaware	2006	Miner	D	No	20%
District of Columbia	2000	Williams	D	Yes	10%
Hawaii	2018	Ige	D	No	20%
Illinois	2003	Blagojevich	D	Yes	5%
Indiana	1999	O'Bannon	D	Yes	3.4%
Iowa	2007	Culver	D	Yes	7%
Kansas	1998	Graves	R	Yes	10%
Louisiana	2008	Jindal	R	Yes	3.5%
Maine	2016	King	I	Yes	5%
Maryland	1998	Glendening	D	Yes	10%
Massachusetts	1997	Weld	R	Yes	23%
Michigan	2008	Granholm	D	Yes	10%
Minnesota	1992	Carlson	R	Yes	Varies
Montana	2017	Bullock	D	Yes	3%
Nebraska	2006	Heineman	R	Yes	8%
New Jersey	2000	Whitman	R	Yes	10%
New Mexico	2007	Richardson	D	Yes	8%
New York	1994	Cuomo	D	Yes	7.5%
North Carolina	2008	Easley	D	Yes	3.5%
Ohio	2013	Kasich	R	No	10%, limited to 50% of liability for Ohio taxable income over $20,000
Oklahoma	2002	Keatinig	R	No (as of 2016)	5%
Oregon	2006	Kulongoski	D	Yes	5%
Rhode Island	2015	Raimondo	D	Yes	10%
South Carolina	2017	McMaster	R	No	125%
Vermont	1988	Kunin	D	Yes	23%
Virginia	2006	Warner	D	No	20%
Wisconsin	1989	Thompsonn	R	Yes	5%

questions in the economic voting literature because EITC programs have targeted and diffused economic benefits in the polities where they are deployed.

To understand the political effects of state EITCs, we follow Pierson's assertion that policies have "resource" and "interpretive," or informational, effects that impact the interests and perceptions of the public (1993). We examine each of these effects by exploiting state-by-state variation in policy designs and sociopolitical contexts. Table 2 outlines the resource and information effects, along with each component of the effect, the hypothesis it implies, how we test each hypothesis, and which sample (i.e., county-level or individual-level) we use to test the hypothesis. We describe each of these in detail below.

Resource Effects

Policies convey *resource* effects to the public through benefits like directed payments. Scholars of distributive politics argue that policies like the EITC lead voters to reward the politicians that implement them as a result of their desire to protect their benefits[5] or keep politicians in office in expectation of future benefits (e.g., Downs 1957; Key 1966; Pierson 1994).

Alternatively, following Mettler's (2002) argument that policy design can shape citizens' psychological predispositions, the resources the EITC confers could trigger changes in beneficiaries' emotional states. Mood depression and stress are linked to feelings of economic insecurity, and prior work shows the positive impacts of anti-poverty programs on recipients' mental health (for a review, see Ridley et al. 2020). The psycho-emotional boost associated with receiving the credit could free-up beneficiaries' time and energy for politics that they otherwise would have been too mentally encumbered to consider (Rosenstone 1982; Verba, Schlozman, and Brady 1995). This, combined with the idea that

[5] Surveys of EITC recipients show that many plan to use their refunds to invest in economic mobility (Halpern-Meekin et al. 2015; Smeeding, Phillips, and O'Connor 2000). These investments may engender feelings of reciprocity that cause recipients to to reward incumbents (Mettler 2002).

TABLE 2. Predictors of EITC Feedback Effects

Category	Effect type	Hypothesis	Method of testing	Sample	Source
Size of benefits	Resource	Governors that pass more generous EITC programs will be rewarded more than the that pass less generous credits	The percent of the federal EITC paid out by a state EITC	County-level; Individual-level	Campbell 2003; Howard 2007; Patashnik and Zelizer 2009
Duration of benefits	Resource	The longer a state EITC is in effect, the more of an effect it will have on attitudes; The longer a state EITC is in effect, the less of an effect it will have on attitudes	Analysis on the temporality of the effect	County-level	Campbell 2003; Healy and Lenz 2014; Howard 2007
Visibility of benefits	Information	Governors in states with more visible EITC programs will be rewarded more than those in states with less visible programs	Indicator for whether a state or county has an EITC notification law	Individual-level	Arnold 1990; Mettler 2011
Concentration of beneficiaries	Information	Areas with more EITC beneficiaries will be associated with a larger electoral benefit to the enacting governor; EITC-eligible individuals living in areas with more beneficiaries will express greater approval than those living in areas with fewer beneficiares	County-level measure for percent of individuals taking up the federal EITC	County-level; Individual-level	Campbell 2012; Michener 2017
Partisan framing effects	Information	Republican governors will be rewarded more by beneficiaries than Democratic governors; Republican beneficiaries will exhibit less approval for the enacting governor than Democratic beneficiaries	Indicator for whether or not policy was passed by a Democratic governor (county analysis); split-sample analysis looking at Democrat versus Republican recipients	County-level; Individual-level	Jacobs and Mettler 2018; Kinder and Sanders 1996

beneficiaries may use their mood as a signal for the government's performance (Healy, Malhotra, and Mo 2010), could translate into higher vote shares for and warmer attitudes toward the incumbent party. While our findings cannot distinguish between these different mechanisms for *why* the resources from the EITC might influence attitudes and behavior, any results we do observe would be consistent with these explanations.

We test the resource effects of the EITC in two ways. First, scholarship on resource effects implies that voters may be responsive to the size of the monetary benefits they receive (Campbell 2003; Patashnik and Zelizer 2009). For example, Campbell (2003) finds larger feedback effects among less well-resourced seniors who are more dependent on social security. From this, we expect that governors who enact more generous EITCs will be rewarded more than those that pay beneficiaries less. To test this hypothesis, we rely on the fact that state-level EITCs vary greatly in how much they pay beneficiaries. As we show in Table 1, state EITCs often pay claimants some percent of their federal EITC credit. This value varies greatly between states—between 3% of the federal EITC in Montana and 125% of the federal EITC in South Carolina, meaning we observe substantial variation in the generosity of state EITC programs.

Our second test of the resource effect follows from the claim that voters may respond to how long they have been a policy beneficiary. Policies that can be claimed for a long time may yield larger feedback effects as beneficiaries become more dependent on them or begin to expect the benefits they provide (Campbell 2003; Kogan 2021). However, electoral feedback effects may be short-lived if voters are myopic (e.g., Healy and Lenz 2014), or they are prevented from properly attributing the benefits as a result of changes in the informational or political environment that they are in (e.g., private intermediaries may obscure the government's role as shown in Halpern-Meekin et al. 2015). By evaluating the temporality of voters' responses to EITCs over a long panel (1992–2018), we can test these competing explanations.

Informational Effects

The design of policies can impact the amount of new information revealed to voters about the politicians associated with them (Pierson 1993). For example, policy rules and procedures can lead citizens to acquire new information about societal values and the government's priorities (Downs 1957; Gerber and Green 1998; Soss 1999). Thus, policy designs can shape voters' attitudes toward incumbent politicians, which can inform their vote choice. These *informational* effects also allow for sociotropic reactions to policy, because non-beneficiaries are unlikely to be directly impacted by a program's resources.

We study the informational effects of state EITC programs in three ways. First, following Arnold (1990), programs that are traceable to government action are more likely to generate feedback effects because voters have more easily accessible information about the source of their benefits. Indeed, tax credits like the EITC are often theorized to not yield strong feedback effects because they are delivered through tax refunds, obscuring the government's role (Halpern-Meekin et al. 2015; Mettler 2011; Shanks-Booth and Mettler 2019). We therefore hypothesize that governors in states with more visible credits will be rewarded more by credit recipients than those in states with less visible credits. To evaluate this hypothesis, we rely on the fact that some states and localities have laws to notify potential beneficiaries of their federal EITC program eligibility.[6] Because of this variation, we can observe how credit eligibility status in our individual-level analysis interacts with the presence of notification laws. Because only potential beneficiaries receive this information, we do not expect that there would be an effect of these laws on ineligible individuals.

Second, we study whether an area's concentration of beneficiaries affects voters' responses to EITC programs. Michener (2017) theorizes that "policy concentration" can produce feedback effects among both policy beneficiaries and those that live alongside them, and this depends on individuals' degree of contact with the policy. EITC-eligible individuals who live among beneficiaries may be more likely to claim the credit (Chetty, Friedman, and Saez 2013), which would influence their behavior through the resources effects outlined above. They may also be more likely to discuss the policy with their neighbors or receive information from local civic organizations working to promote the program, which can facilitate policy attribution that can translate into warmer feelings toward the politicians responsible. While an EITC-eligible person in an area with few claimants may still change their views of government because of its resource effects, they may be less likely to reward governors for more sociotropic reasons as their social environment is unlikely to change post-implementation.

[6] California (2007–present); Illinois (1992–present); Maryland (2012–present); New Jersey (2005–present); Texas (2010–present); Louisiana (2005–present); Virginia (2009–present); the city of Philadelphia (2014–present).

Non-beneficiaries in high EITC-concentration areas may be exposed to people who have received benefits or messaging discussing the policy. These could meaningfully update the beliefs of non-beneficiaries—who may already harbor negative views toward the incumbent because of the relative disadvantage of their community context (de Benedictis-Kessner and Warshaw 2020). Non-beneficiaries living among more claimants may also be able to observe the myriad positive effects of the EITC. Hence, we hypothesize that higher concentration of claimants will be associated with greater electoral and attitudinal support for incumbent governors among both beneficiaries and non-beneficiaries. We thus construct county-level measures of EITC take-up rates from IRS data, meaning we identify areas within a state that have relatively more versus fewer EITC claims. To evaluate these hypotheses, we examine the effect of local policy concentration in both our county-level and individual-level analyses.

Finally, we evaluate potential political framing effects of EITC programs. The capacity of the public to properly attribute policies depends in part on the political context in which they are deployed (e.g., Patashnik and Zelizer 2013). For example, if candidates of opposing parties offer similar economic policies, individual beneficiaries might not change their preferences after receiving economic benefits (Ashworth and Bueno de Mesquita 2014; Stigler 1973). The partisan balance of those responsible for adopting state EITCs is relatively equal, which raises the possibility that voters might not be able to distinguish which party is responsible for providing their benefits. Hence, voters might lack information to assign responsibility for a policy to a particular official (e.g., Arceneaux 2006).

Partisanship might also bias voters' perceptions of their economic circumstances, preventing them from properly attributing policies (e.g., Achen and Bartels 2016; Green, Palmquist, and Schickler 2004). With the EITC, the expected role of partisanship is not clear ex ante. For low-income voters who tend to vote for left-leaning parties, their reactions to the EITC may be purely partisan. Beneficiaries who are not the same party as their state's governor may simply dismiss or adopt critical attitudes toward the new policy. Alternatively, being the target of a policy like the EITC may lead beneficiaries to warm to out-party incumbents. The partisanship of non-beneficiaries may also influence their reactions to the EITC. Non-beneficiaries could view an expansion of their state's welfare system as a sign of good or bad governance, depending on their partisanship (Lowry, Alt, and Ferree 1998). To investigate these ideas, we investigate the effect of partisanship in both our county-level and individual-level analyses.

STUDYING HOW STATE EITCs AFFECT ELECTIONS

To study how the state EITC affects elections, we build two main datasets (Rendleman and Yoder 2024). First, we code the information in Table 1 to

generate a state-year dataset of whether a state had an EITC in place in each year along with the party of the enacting governor.

The main empirical challenge to estimating the political effects of state EITCs is that there might be factors that both lead to states to adopt EITC and affect gubernatorial elections. For example, states might experience shifts in public opinion that favor providing more benefits to low-income families—resulting in both the enactment of an EITC and a shift toward electing Democratic governors. To mitigate this potential source of bias, we assemble a county-level panel, which is the smallest available level of aggregation for which we can measure election returns for our study period.[7] By doing so, we can make more refined comparisons by only comparing similar counties from different states, and we can match these counties directly based on their pretreatment political trends.

Another advantage of our county-level dataset is that counties experience different levels of "exposure" to the EITC. We merge the state EITC treatment variable to county-level information from the IRS on the proportion of tax filers who claim the EITC. Following our discussion in our theory section, we use the proportion of EITC claimants in a county to measure the policy's concentration of beneficiaries.[8] We merge each county-year observation to vote shares for governor in that county-year, and we also include information about the county population and turnout rate in each year.[9]

Second, to understand how individual attitudes change after a state adopts an EITC, we use pooled cross-sectional data from the Cooperative Election Study (CES) from 2008 to 2018 (Kuriwaki 2024). We merge respondents to the state-level EITC treatment and county-level exposure measures described above. With this individual-level data, we can determine whether a respondent is eligible to receive the EITC by using data on their reported income, marital status, and number of children. Requirements largely remain constant over time, and we use the lower bound of income brackets in the CES to code EITC eligibility. Our analysis, therefore, likely underestimates the number of eligible individuals surveyed in the CES. If eligible respondents are coded as ineligible, this would likely attenuate the effects of EITC eligibility in our analyses.

OVERALL NON-EFFECTS OF EITC PROGRAMS ON ELECTIONS

We first estimate the effect of state EITCs on the Democratic vote share for governor at the county level. We estimate the following equation:

$$\begin{aligned} \textit{Dem Vote Pct}_{cst} = \alpha \textit{EITC}_{st} + \beta(\textit{EITC}_{st} \ * \\ \textit{Implemented by Democrat}_{s}) \\ + \gamma_c + \delta_t + \epsilon_{cst}, \end{aligned} \tag{1}$$

where Dem Vote Pct_{cst} is the two-party Democratic vote share for governor in county c and state s in election year t, which can range from 0 to 1. The variable EITC_{st}, takes a value of 1 if a state EITC was in place in election year t, and 0 otherwise, while $\text{Implemented by Democrat}_s$ is a state-level variable and takes a value of 1 if a Democratic Governor enacted the EITC, and–1 if a Republican Governor enacted it.[10,11] The terms γ_c and δ_t represent county and year fixed effects, respectively. The treatment effect of interest, then, is β, which measures the extent to which the party that implemented the EITC is rewarded after adoption.

The direction of the effect is not obvious ex ante. As we show in Table 1, the party affiliation of governors who have enacted state EITCs over time is relatively balanced. In Table 3, we estimate the effect of implementing the EITC on Democratic vote share using six different specifications. In the first column, we use county and year fixed effects, and we do not find evidence of an increase in the Democratic vote share for governor in counties where a Democrat was responsible for enacting the EITC. The 95% confidence interval on the interaction term ranges from about −4.2 to +2.9 percentage points. The standard deviation of the county-demeaned governor vote share is about 10.9 percentage points, so we can comfortably rule out effect sizes of more than about 1/2 of a standard deviation.

The analysis is a difference-in-differences design in which we compare within-county changes in the Democratic governor's vote share over time across within-county changes in whether that county had a state EITC. To interpret this estimate as causal, it must be the case that, in the absence of the treatment, counties in states that adopt EITCs would have had similar trends in Democratic vote shares as counties in states that did not adopt an EITC. One way to relax this parallel trends assumption is to the alter the time fixed effects in a variety of ways to change the implied counter-factual comparisons. We do this in columns 2–6 of Table 3, and the results remain substantively similar, suggesting that the parallel trends assumption might hold.

[7] This is similar to Feigenbaum, Hertel-Fernandez, and Williamson (2019), which has a state-level treatment but uses county-year as the unit of analysis to estimate effects on elections using similar counties.
[8] In Table A.2 in the Supplementary Material, we show that state EITCs have no effect on the credit's uptake.
[9] The county-level election data for Gubernatorial races come from Dave Leip's Atlas of Presidential Elections for 1990–2014 (Leip 2014). For 2015–2018, we collect county-level election returns for Gubernatorial races from the *New York Times*. County population comes from the U.S. Census, and we linearly interpolate population for non-Census years. Turnout rate is measured as the total number of votes in the county divided by the county population.

[10] Maine is dropped from the analysis because Angus King (I) was governor at the time of adoption.
[11] $\text{Implemented by Democrat}_s$ does not vary within a state over the sample time period, hence it is omitted in our presentation of the results as a result of our fixed effect specifications.

TABLE 3. Effects of State EITC Expansion on Implementing Governor Performance, County Level, 1990–2018

	Dem. gov. vote pct. (0–1)					
	1	2	3	4	5	6
State EITC	−0.00	−0.01	−0.01	−0.01	−0.02	−0.00
	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)
State EITC × Dem. gov. implemented	−0.01	−0.02	0.00	−0.01	0.02	0.02
	(0.02)	(0.01)	(0.01)	(0.02)	(0.02)	(0.01)
No. of obs.	23,875	23,875	23,875	23,606	13,100	13,504
County FEs	✓	✓	✓	✓	✓	✓
Year FEs	✓					
Pop. decile-year FEs		✓				
Census division-year FEs			✓			
EITC exposure decile-year FEs				✓		
Pre-trend match-year FEs					✓	
Border pair-year FEs						✓

Note: Robust standard errors clustered by state in parentheses in columns 1–5. Robust standard errors clustered two-way by state and border-pair in column 6. Dem. Party Inc. is 1 for Dem., −1 for Rep. Implementing Dem. gov. is 1 for Dem, −1 for Rep. All regressions apply county population weights.

In column 2, we assign each county to a separate decile based on its population in the 1990 Census and construct a set population decile-by-year fixed effects. Implicitly, this design estimates a separate difference-in-differences within each population decile and averages the estimates together. This specification would adjust for the potential concern that more populous counties might be on different political trends (trending toward Democratic candidates faster, for example) than less populous ones. The estimate grows slightly more negative to nearly −2 percentage points, which is substantively similar to column 1, and the sign is in the opposite direction of what we would predict if counties reward governors for enacting EITCs. In column 3, we construct Census Division-by-year fixed effects, so that we only make comparisons among counties within the same region. Again, the results are similar. In column 4, we bin counties into deciles based on the fraction of people in the county that file for the EITC, such that we only compare trends within places that have similar levels of people who qualify for the EITC. Taken together, these first four columns show that governors do not seem to be rewarded electorally for implementing EITCs.

These results, however, still might be biased if the fixed effects do not generate comparisons among counties with parallel trends. Columns 2–4 of Table 3 might make the parallel trends assumption more plausible, but we can still try to estimate the same regression after matching on pretreatment trends directly. To do so, in column 5 of Table 3, we implement a matching procedure similar to Imai, King, and Nall (2009) to generate matched pairs of counties that exhibit the best possible match on pretreatment trends.[12] We interact year fixed effects with pre-trend matched pairs, exploiting only the variation within matched pairs over time. This approach, like all of our other specifications, does not guarantee that the parallel trends assumption will be satisfied. Indeed, the balance on observable characteristics within these matched pairs is not perfect (see Figure A.3 in the Supplementary Material), so we are cautious to overinterpret this specification as our most preferred. But it is reassuring that the estimate is substantively similar to other specifications.

Finally, following Feigenbaum, Hertel-Fernandez, and Williamson (2019), we implement a border pair design, where we limit the sample to pairs of counties on either side of a state EITC border between 1990 and 2018.[13] Specifically, we estimate the following equation:

$$\begin{aligned} Dem\ Vote\ Pct_{cspt} = \alpha EITC_{st} + \beta(EITC_{st} * \\ Implemented\ by\ Democrat_{s}) \\ +\gamma_c + \delta_{pt} + \epsilon_{cspt}, \end{aligned} \tag{2}$$

where δ_{pt} represent border pair by year fixed effects. This border pair design assumes that across-border

[12] For every treated unit, we calculate the squared distance in Democratic vote share for governor in every period prior to EITC implementation for every possible control unit. We weight these squared distances according to the following equation: $w = (y-1990)^2/(\text{treatment year}-1990)$, where w is the weight, y is the year, 1990 is the first year in the governor election panel, and treatment year is the first year where the treated county is treated. This weight penalizes large distances in the vote share between the treated and control units more heavily when the year is closer to the time when the treated county enacts an EITC. For each treated county, we match them to a county that was never treated that minimizes the mean squared distance in pretreatment vote shares.

[13] To generate comparable matched pairs, we analyze border pairs where both states are on the same gubernatorial electoral cycles. These matched pairs produce better balance on observable characteristics than our vanilla specification and our pre-trend matches (see Figure A.3 in the Supplementary Material).

counties in states that do not implement EITCs provide valid counterfactual trends for counties in states that do implement EITCs. The results from this border-pair design, shown in column 6 of Table 3, are again very similar. Overall, governors do not seem to reap long-term electoral rewards from implementing a state EITC.

Another concern with our design is that if states tend to enact EITCs in good economic times, our estimates might instead be identifying the effect of a strong economy on voters' behaviors and attitudes, rather than the effect of the EITC itself. In Section A.3 of the Supplementary Material, we look at the dynamic effect of the EITC on various state budget and economic outcomes. From these analyses, we conclude that there are no significant differences between treatment and control states in the years before EITC implementation, providing suggestive evidence that any effects of state EITCs are not simply identifying effects of the local economy.

Overall, we do not observe large effects of state EITCs on political outcomes. This non-effect, however, could be masking important dynamics of the EITC's effect. Next, we explore a few dimensions of heterogeneity to test the mechanisms theorized above.

Resource Effects at the County-Level

Counties Reward Governors for EITC Generosity

We continue our analysis by testing the first component of the resource effect: the size of EITC benefits. To capture this, in Table 4, we code a continuous version of our treatment variable, which captures the state EITC benefit as a fraction of the federal EITC benefit. Looking at the interaction terms across each column, we see that an increase in the generosity of the EITC leads to a higher vote share for the implementing governor. The magnitude of the effect is small—an increase of 1 within-state standard deviation of the EITC variable leads to about a 0.3 percentage point increase in the vote share for the implementing governor. This represents a relatively small, but non-negligible effect of the program's generosity on the implementing governor's electoral fortunes. Voters appear to reward governors for the generosity of their EITC programs.[14]

The Electoral Effect of the EITC Dissipates Over Time

Do the political effects of state EITCs persist over time? Above, we outlined competing predictions for how tax benefits might influence voters' behaviors over time. For example, if voters care solely about what benefits they receive, EITC beneficiaries should increase their support for a party in a way that is constant over time. However, the electoral benefits for implementing a welfare program might decay over time. This could be, for example, if the benefits are large enough that the opposition party strategically repositions on the program in the long run, driving the benefits from beneficiaries voting for the enacting party to zero. Alternatively, voters might only reward the party in the near term if voters respond only to a *change* in benefits from one year to the next—for example, if voters notice a large tax refund and receive some psychological boost in the year they notice the increase (Mullainathan and Thaler 2000). Lastly, the benefits for the enacting governor's party might increase over time. Because individuals might phase in or out of eligibility for the EITC over time, the number of unique individuals that the program has benefited at some point in time will be increasing.

To distinguish between these potential explanations, Figure 1 estimates the dynamic effect of state EITCs. We take a similar approach as Kogan (2021), generating lags and leads of the EITC's introduction to model the effect flexibly over time. Specifically, we estimate the following equation:

$$\begin{aligned} DemVoteShare_{ct} &= \gamma_c + \lambda_t + \sum_{\tau=0}^{m} \delta_{-t} D_{t-\tau} + \sum_{\tau=0}^{m} \theta_{-t} D_{t-\tau} * Implemented\ by\ Democrat_c \\ &\quad + \sum_{\tau=1}^{q} \delta_{+\tau} D_{t+\tau} + \sum_{\tau=1}^{q} \theta_{+\tau} D_{t+\tau} * Implemented\ by\ Democrat_c + \epsilon_{ct}, \end{aligned} \tag{3}$$

where D is the EITC treatment indicator, and the sums on the right-hand side allow for m lags and q leads, or anticipatory effects. On the right-hand side, $\gamma_i + \lambda_t$ stand in for county and year fixed effects, respectively. The idea here is that future EITC status should not affect rewards for the present governor's vote shares, so each of the q θ terms should be substantively small. We implement this test with 3 leads of the EITC program, a switching indicator at $t = 0$, and 4 lags of the EITC program.

We find that the governor's party might be rewarded in the short term following the introduction of an EITC program. One year following the program's introduction ($t = 1$), the effect of the program on the enacting governor's vote share is about +9.9 percentage points, with the 95% confidence interval ranging from 4.6 to 15.3 percentage points. In the years following the program's implementation, the effect goes back to zero, which suggests that the effect of the EITC decays over time. This could be a result of strategic parties repositioning over time to win over voters, or it could be the result of a psychological effect of noticing a large boost in a voter's tax refund as a result of the program. While

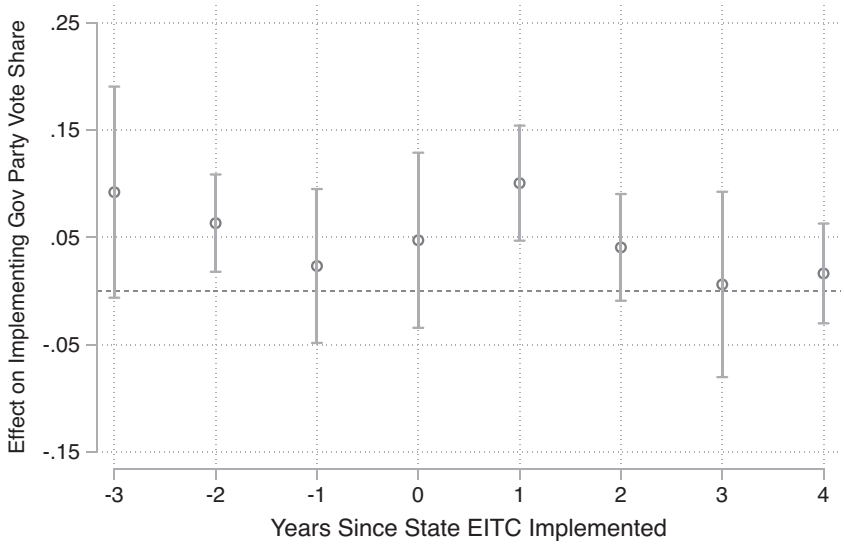
[14] We examine the effect of within-state changes to the generosity of the credit on our outcomes of interest in Section A.7 of the Supplementary Material. We find no effect of program change on either vote shares or attitudinal changes. This echoes past scholarship documenting minimal policy feedback effects in response to policy *change* vis-à-vis initial implementation (e.g., Morgan and Campbell 2011; Soss and Schram 2007).

TABLE 4. Effects of State EITC Expansion on Gubernatorial Elections, County Level, 1990–2018

	Dem. gov. vote pct. (0–1)				
	1	2	3	4	5
State EITC % of federal EITC (0–1)	0.04	0.02	0.04	0.03	–0.05
	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)
State EITC % of federal EITC (0–1) ×	0.04	0.02	0.05	0.04	0.08
Dem. gov. implemented	(0.02)	(0.02)	(0.03)	(0.02)	(0.03)
No. of obs.	23,827	23,827	23,827	23,560	13,376
County FEs	✓	✓	✓	✓	✓
Year FEs	✓				
Pop. decile-year FEs		✓			
Census division-year FEs			✓		
EITC exposure decile-year FEs				✓	
Border county pair-year FEs					✓

Note: Robust standard errors clustered by state in parentheses in columns 1–4. Robust standard errors clustered two-way by border pair and by year in column 5. All regressions apply county population weights.

FIGURE 1. Dynamic Effect of EITC on Implementing Governor's Party Vote Share



Note: The plot models the dynamic effect of the EITC program on the implementing governor party's vote share. Year = 0 is the year the state adopted the EITC program. Vertical lines indicate 95% confidence intervals using robust standard errors clustered by state, using the specification in column 1 of Table A.8 in the Supplementary Material.

the aggregate-level data cannot help us distinguish between these possible explanations, in the next section we explore resource-effect explanations using individual-level data from the CES.

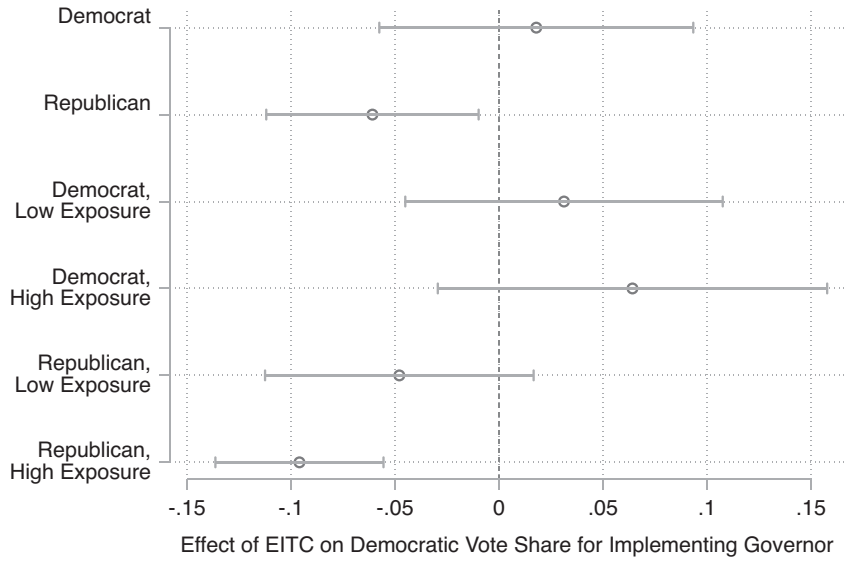
Informational Effects at the County-Level

From the policy feedback literature, we identify two components of "informational effects" that we can test with our county-level data.

First, we study whether the geographic concentration of beneficiaries in an area affects voters' responses to EITC programs. In our theory section, we hypothesized that there will be larger electoral rewards to governors in areas with more beneficiaries.

Second, framing effects can influence voters' interpretations of EITC benefits. Hence, we may see different effects of EITC programs by the party of the implementing governor. For example, if EITC beneficiaries already tend to support Democrats, receiving a benefit from a Democratic governor might not shift the recipient's beliefs about which party they should support. If a Republican implements the program, however, EITC beneficiaries might update their beliefs in the direction of the Republican Party being more likely to provide them with economic benefits.

FIGURE 2. Effect of State EITC on Democratic Vote Share for Governor, 2002–2018



Note: The horizontal axis shows the treatment effect of state EITC programs on Democratic vote share for governor, whereas the vertical axis denotes four different categories for which we estimate treatment effects. Republican and Democrat indicate the party of the governor who enacted the EITC program, while high and low exposure indicate whether the county is above or below the median proportion of tax filers who claim the EITC. The point estimates and 95% confidence intervals are constructed using robust standard errors clustered by state, using the specifications in Tables A.9 and A.10 in the Supplementary Material.

To test these two explanations, we measure each county's exposure to the EITC program, defined as the proportion of tax filers in 2004 who claimed the federal EITC.[15] We bin these counties into two groups to create an indicator variable, High Exposure$_c$, for whether the county falls above the median in terms of its exposure to the EITC program. We interact this with the state EITC treatment and with the party of the governor responsible for enacting the program.

Figure 2 shows the effect of state EITC programs on Democratic vote share for governor by exposure and by enacting governor party. The findings suggests that EITC programs lead to a decline in Democratic vote share in counties where both a Republican implements the program and many individuals in the county benefit from the program. Thus, feedback effects may be stronger both in places that stand to benefit most from the policy and where the partisanship of the policy implementer reveals more information to the voter.

Summary

In this section, we provided evidence that state EITC programs do not have large, long-term overall effects on gubernatorial elections. Governors seem to be rewarded for EITC programs in the first years following EITC adoption, but these effects dissipate quickly. We find that characteristics that might affect politicians' ability to credit-claim—the size of the benefit, the partisanship of the governor, and the concentration of benefits in an area—all have small, albeit detectable, effects. These results indicate that the EITC may be a program where, in some cases, political rewards can be gained before the policy becomes less visible.

EITCs INCREASE INDIVIDUALS' APPROVAL FOR GOVERNORS

So far, we have estimated the effect of state EITCs on aggregate election outcomes, but how do EITCs affect individuals' attitudes about their government? In this section, we show that individuals who benefit from EITC programs increase their approval for governors after the program is implemented. Our main outcome of interest is a respondent's approval of her governor, which we code as a variable that ranges from 0 (strongly disapprove) to 1 (strongly approve).[16]

[15] County-level IRS data on the proportion of tax filers who claim the EITC begins in 2004. To avoid posttreatment bias, we subset our analyses to include only 2002–2018, where the relevant variation to identify the treatment effect, EITC program within a county, comes on or after 2004.

[16] Using gubernatorial approval levels is an attractive dependent variable because it allows us to understand how voters' sentiments about the government change in response to the EITC and it allows us to study a sample of individuals who participate in elections at lower rates (Rosenstone 1982; Shanks-Booth and Mettler 2019).

TABLE 5. Effects of State EITC Expansion on Gubernatorial Approval Levels, 2008–2018

	Approval of governor (0–1)								
	Full sample			*Eligible individuals*			*Ineligible individuals*		
	1	2	3	4	5	6	7	8	9
State EITC	0.06	0.05	0.03	0.05	0.05	0.04	0.06	0.05	0.03
	(0.03)	(0.03)	(0.04)	(0.02)	(0.02)	(0.02)	(0.04)	(0.03)	(0.04)
No. of obs.	420,046	420,046	420,046	36,721	36,721	36,721	383,325	383,325	383,325
County FEs	✓	✓	✓	✓	✓	✓	✓	✓	✓
Year FEs	✓			✓			✓		
Pop. decile-year FEs		✓			✓			✓	
Census division-year FEs			✓			✓			✓

Note: Robust standard errors clustered by state in parentheses. All specifications control for individual-level characteristics, including gender, age, race, and level of education. Models 1–3 present results for the full sample. Models 4–6 present results for the sample of EITC-eligible individuals. Models 7–9 present results for the sample of EITC-ineligible individuals. Full model results are shown in Table A.14 in the Supplementary Material.

We first estimate the effect of state EITC roll-out on gubernatorial approval levels for the full sample of CES respondents. Specifically, we estimate equations of the form:

$$Approval\ of\ Gov_{ict} = \alpha + \beta State\ EITC_{ct} + \gamma_c + \delta_t + \zeta X_i + \epsilon_{icst}, \quad (4)$$

where Approval of Gov_{ict} measures a given individual i's approval of the governor at time t in county c, running from 0 to 1. The variable State $EITC_{ct}$ is an indicator variable for whether or not a state offers an EITC. Parameters γ_c and δ_t stand in for county and year fixed effects, respectively. Finally, X_i is a vector of individual-level characteristics, including gender, age, race, and level of education. We cluster standard errors at the state level. As before, we relax the assumption of parallel trends in a variety of ways. The results do not change meaningfully, suggesting that the parallel trends assumption appears to hold.

The first three columns of Table 5 presents estimates from our full CES sample. The introduction of a state-level EITC is associated with a 0.06 point increase in approval for governors overall. This finding alone implies that voters are responding positively to the introduction of the new credit, but this could be because individuals are reacting to an increased refund or because voters generally approve of the governor's efficacy. To distinguish between these explanations, we separately look at the gubernatorial approval levels of EITC-eligible and ineligible individuals. These results are shown in the remaining columns of Table 5. We still observe that approval levels increase among eligible individuals after the passage of a state EITC; however, the magnitude of the effect is slightly smaller at 0.05. We also observe that credit-ineligible individuals increase their support for governors post-policy implementation, although the result is not significant at conventional levels. The increase in ineligible individuals' approval scores could be attributed to a variety of explanations, including sociotropic effects. We look into this option below.[17]

Resource Effects at the Individual-Level

Following our theoretical expectations, we study how the generosity of EITC programs might impact voters' attitudes toward their governors through a resource effect.[18]

Figure 3 shows the marginal effect of state EITC implementation on gubernatorial approval levels, moderated by credit generosity, for our credit-eligible sample as well as our ineligible sample. For the credit-eligible sample, while the marginal effects of state EITC implementation are not significantly different from zero at the 95% level at low levels of generosity, at high levels of generosity the marginal effects are both statistically and substantively significant. For the credit-ineligible sample, the marginal effects of state EITC are statistically indistinguishable from zero.

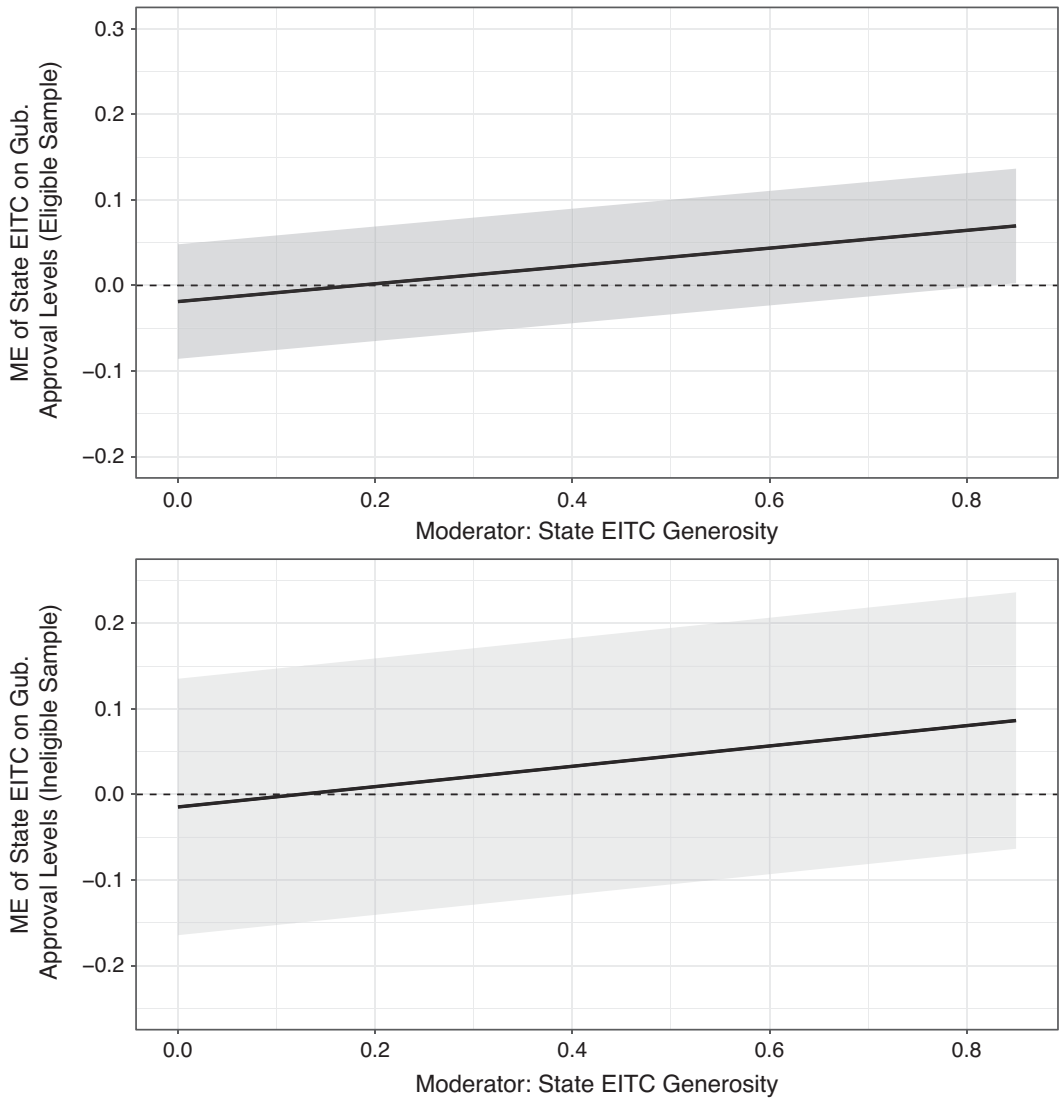
The results suggest that eligible voters are at least in part reacting to the generosity of the EITC when evaluating their governors post-implementation. Further, as we might expect, because the resource effect is theorized to only impact policy beneficiaries, we observe no significant interaction between the presence of a state EITC and its level of generosity in our sample of credit-ineligible individuals. This implies that the sociotropic effect we observed in columns 7–9 of Table 5 is likely due to factors separate from the generosity of the credit.[19]

[17] Table A.13 in the Supplementary Material shows that these results are robust to simplifying the specification to only include state and year fixed effects.

[18] We prefer the county-level dataset to assess the temporality component of the resource effect because it represents a longer panel and provides more stable estimates.

[19] Because people with children receive a larger EITC benefit on average, in Table A.18 in the Supplementary Material, we analyze whether eligible individuals with children are more approving of their governors. We find no significant difference between eligible individuals with children and those without children.

FIGURE 3. Marginal Effect of State EITC Implementation on Gubernatorial Approval Levels



Note: The figure shows the marginal effect of state EITC implementation, moderated by a state's credit size relative to the federal EITC. The top panel depicts results for our EITC-eligible sample and the bottom panel depicts results for our EITC-ineligible sample. Regressions include state and year fixed effects as well as controls for respondent age, education, and race. Vertical lines include 95% confidence intervals using robust standard errors clustered by state. Estimates based off specification in columns 1 and 2 of Table A.17 in the Supplementary Material.

Informational Effects at the Individual-Level

Next, we study the role of informational effects and present results for our analyses examining EITC notification laws, the concentration of beneficiaries, and the role of partisanship.

Individuals in States with Notification Laws Approve More of Their Governors

Following the logic that benefits that are easier to trace will yield larger feedback effects, we study how variation in EITC notification laws impacts voters' approval of their governors. To do this, we interact our indicator variable denoting whether or not a state has an EITC program and another indicator variable for whether the state has an EITC notification law. Table 6 shows that eligible individuals in states with notification laws have significantly higher gubernatorial approval levels than those in states without notification laws. Further, while the point estimates on the interaction term for the analysis conducted on the full sample and the credit-ineligible sample is positive, it is statistically indistinguishable from zero. This follows from our expectations, as we hypothesized that notification laws would better enable beneficiaries to attribute the credit to the government responsible.[20]

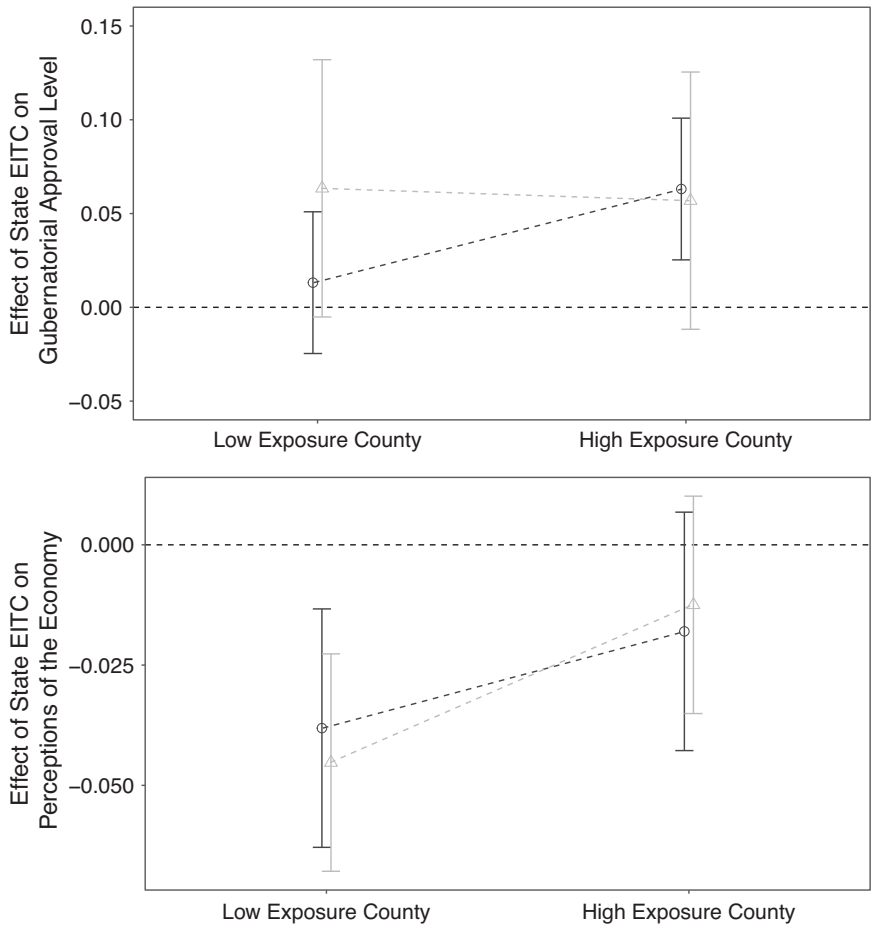
[20] Table A.12 in the Supplementary Material presents results for our county-level analysis. However, because the estimates are relatively

TABLE 6. Heterogeneous Effects of State EITC Expansion on Gubernatorial Approval Levels, 2008–2018

	Approval of governor (0–1)		
	(Full sample)	(Eligible sample)	(Ineligible sample)
State EITC	0.00	0.01	0.00
	(0.05)	(0.03)	(0.06)
State notification law	0.02	0.03	0.01
	(0.02)	(0.02)	(0.02)
State EITC × state notification law	0.09	0.07	0.09
	(0.05)	(0.03)	(0.05)
No. of obs.	420,046	36,721	383,325
County FEs	✓	✓	✓
Year FEs	✓	✓	✓

Note: Robust standard errors clustered by state in parentheses. All specifications control for individual-level characteristics, including gender, age, race, and level of education. Full model results are shown in the columns 1, 4, and 7 of Table A.19 in the Supplementary Material, alongside additional time fixed effect specifications.

FIGURE 4. Heterogenous Effects of State EITC on Gubernatorial Approval Levels



Note: The top panel shows the interactive effect between state EITC implementation and whether or not the proportion of individuals in a county claiming the federal EITC is above the state median, using the specifications in columns 1 and 4 of Table A.15 in the Supplementary Material. The second panel shows the same interactive effect on perceptions of the economy, using the specification in columns 1 and 4 of Table A.16 in the Supplementary Material. The point estimates and 95% confidence intervals are constructed using robust standard errors clustered by state. The estimates in dark gray present the results for our sample of eligible individuals and the estimates in light gray present the results for our sample of ineligible individual. Regressions include county and year fixed effects.

Individuals in Counties with More EITC Claims Approve More of Their Governors

Next, we investigate whether county context matters in how individuals evaluate the state EITC program. If individuals evaluate the benefits of a program sociotropically, then individuals in high exposure counties—counties that benefit the most from the program—should increase their approval of the governor more, regardless of their own individual eligibility. However, if individuals primarily evaluate programs based on the resources they confer, then there should be a divergence among eligible versus ineligible individuals in high exposure counties in approval for governors.

We use the same exposure measure as in our county-level analysis. The first panel of Figure 4 plots the results. As we hypothesized in our theory section, this could indicate that eligible individuals in high exposure areas are more aware of the EITC as they and their neighbors regularly claim the credit. EITC-eligible individuals in high exposure counties are more approving of their governors than those in low exposure counties. We observe no effect of state EITC implementation on credit-ineligible individuals, regardless of their county of residence.

One could make the argument that the result in the first panel of Figure 4 stems from eligible individuals in counties with more EITC claimants being more sensitive to the downstream economic effects of the EITC. If the EITC leads to more business spending, less unemployment, and more consumption, then we might expect that living in a high EITC-exposure county leads individuals to have a more positive outlook on the economy. To test this, we analyze responses to the CES question asking respondents whether the economy has improved in the past year. We dichotomize the variable such that a value of 1 indicates that a respondent felt the economy had improved and a value of 0 indicates that a respondent felt the economy had gotten worse.

Our results for both credit-eligible and credit-ineligible individuals are presented in the second panel of Figure 4. We show that individuals in high exposure counties feel more positively about the economy compared to other eligible individuals in low exposure counties after the credit is implemented. However, for both samples, the effect is negative, its magnitude is relatively small, and it is insufficient on its own to explain the results in Table 5.[21] Thus, we might conclude that changes in sociotropic evaluations of the economy are not driving our main results.

Partisanship Influences Approval of Governors Post-EITC Implementation

Finally, we examine how partisanship impacts our individual-level results. A large literature in economic voting (e.g., Achen and Bartels 2016; Green, Palmquist, and Schickler 2004) and a growing one in policy feedback (e.g., Jacobs and Mettler 2018) argue that partisanship might prevent feedback effects in individuals who are unaffiliated with the party associated with the policy. To conduct our analysis, we separately study self-identified Democrats and Republicans. We then examine whether there are significant intra-party differences between individuals who are eligible for the credit and those that are not by regressing gubernatorial approval levels on the interaction between state EITC presence and respondent eligibility. In this period of analysis, we only observe policy variation in five states, all of which have Democratic governors. If partisanship completely biases eligible individuals' perceptions of policy, we should expect no significant interaction between EITC presence and eligibility.

Figure 5 presents our results. For both credit-ineligible and credit-eligible respondents, Democrats exhibit higher gubernatorial approval levels than Republicans post-implementation. For credit-ineligible Democrats, the effect of the EITC is positive. This result could be interpreted as ineligible individuals reacting to the policy's benefit in a sociotropic fashion or as ineligible individuals increasing their approval of co-partisan governors that are enacting policies that widen the safety net. For credit-ineligible Republicans, we observe a negative effect on gubernatorial approval levels post-EITC implementation.

Turning to EITC-eligible individuals, we observe no significant difference between eligibility status for our Democrat sample. Credit-eligible Republicans, however, evaluate EITC-implementing governors slightly higher than credit-ineligible Republicans. Moreover, this interaction is significant at the 10% level. This result suggests that partisanship does not completely preclude the possibility for feedback effects.

Summary

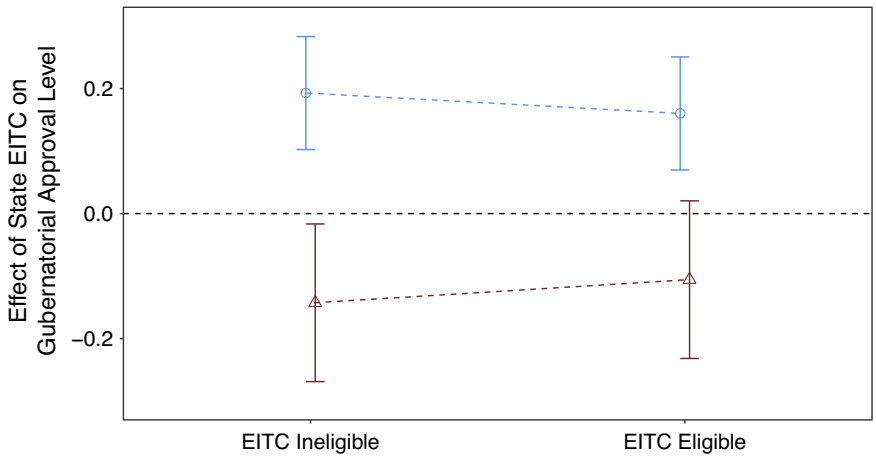
Overall, this section shows that the introduction of state-level EITCs results in higher gubernatorial approval ratings among those who are eligible for the credit. This result is stronger for beneficiaries receiving more generous credits, living in areas with mandatory EITC notification laws, and for beneficiaries in areas with more individuals claiming the credit. As an additional robustness check, Section A.6 of the Supplementary Material shows that eligible recipients do not seem to increase their support for their incumbent President or U.S. House Representatives. While U.S. Senators are associated with increased approval levels post-EITC implementation, we cannot interpret these results causally due to the lack of satisfactory parallel trends for federal-level officeholders.[22] This suggests that voters

noisy, we prefer to test the visibility component of our resource effect mechanism at the individual level.

[21] These results also comport with our analysis of state economic conditions in Figure A.2. In the years after state EITCs are implemented, we observe lower employment numbers and no effect on average annual pay.

[22] To the extent we are identifying a result on other officeholders, it could be because EITC programs may lead to general improvements in recipients' mood, which could translate into more positive assessments of incumbent politicians (Healy, Malhotra, and Mo 2010). This

FIGURE 5. Heterogenous Effects of State EITC on Gubernatorial Approval Levels



Note: The figure shows the results of a regression studying the interaction between state EITC implementation and a survey respondent's imputed EITC eligibility status for a sample of self-identifying Democrats (in blue circles) and self-identifying Republicans (in red triangles). Regressions include county and year fixed effects. The point estimates and 95% confidence intervals are constructed using robust standard errors clustered by state, using the specification in columns 1 and 4 of Table A.20 in the Supplementary Material.

are successfully able to map the introduction of the benefit they receive to the officeholder responsible it.

CONCLUSION

When do public policies influence citizens' political attitudes and behaviors, and among whom? In this article, we have sought to consider how the different ways a government employs to implement a particularistic policy can generate feedback effects by studying one of the largest anti-poverty programs in the United States: the Earned Income Tax Credit. Our efforts build on and extend seminal work in political science—especially the policy feedback literature—that examines policies as bundled treatments that can influence the mass public. In our analysis of the EITC, we have tested how the credit's resource and informational effects can influence electoral and attitudinal outcomes.

To assess the political effects of the EITC, we leverage the fact that states enacted their own EITCs over time to estimate the impact of the program on elections through the use of a county-level panel of gubernatorial election results and individuals' attitudes toward their governors using time-series, cross-sectional data from the CES. Importantly, because of the credit's observable eligibility requirements, our individual-level analysis enables us to estimate the differential effects of the program for beneficiaries and non-beneficiaries.

We find that state EITCs do not have large effects on elections for governor overall. This finding is reasonable as EITC claimants make up a small proportion of the population, and—given their demographics—are less likely to participate in politics. However, in line with expectations from the policy feedback literature, we observe pronounced results in counties with more EITC claimants and in states with more generous credits. These patterns hold when making comparisons only among counties with similar populations, from similar regions, and with similar pretreatment political trajectories. We also find evidence that Republican governors are particularly rewarded in the year after they enact the program, and especially in places where there are more credit beneficiaries. One reason for this could be that voter reactions to new policies are conditional on expectations, which differ for each party (Lowry, Alt, and Ferree 1998). Democratic governors expanding their state's safety net may not reveal much new information to EITC recipients, who are more likely to be left-leaning. In contrast, Republican governors may be perceived as behaving "against type" by recipients, and thus they may be able to gain additional votes in elections where the policies are particularly salient. This comports with the idea that new, partisan-linked information can lead voters to change their views of incumbents, potentially translating into a change in vote choice (e.g., Gerber and Green 1998).

The small overall effects we observe on elections, however, mask important individual-level dynamics of the program's effects. In our analysis using CES data, we find that individuals who are eligible for state EITC programs increase their approval of the governors responsible for enacting the program after it is implemented. Again, we show that this increase is particularly pronounced among beneficiaries receiving more generous credits. These results echo other work that finds larger feedback effects in response to benefits that

result would still be consistent with the policy feedback literature we are in conversation with, as it would represent a resource effect on beneficiaries' psychological predispositions that ultimately translates into changes in their attitudes and vote choices.

represent a greater share of recipients' incomes (Campbell 2003). Additionally, we find larger effects among credit-eligible individuals who have an easier time tracing their benefits to the government as a result of laws that notify workers of their EITC eligibility. We view our work as being able to test the relative impact of making "submerged" policies more visible, affirming past scholarship on the EITC that does not identify political effects. It also suggests that governors have an incentive to elevate the visibility of plausibly popular policies in an attempt to credit claim before strategic party repositioning (Stigler 1973) or voter myopia settles in (Tufte 1978).

This article illustrates that while beneficiaries might update their approval of officeholders for policies they are responsible for implementing, it need not imply that officeholders will reap long-term electoral rewards for these policies. The relationship between EITC programs and electoral rewards for those who implement them is based on a series of conditions: the party of the governor, the eligibility of the population for EITC benefits, and the visibility of EITC programs, to name a few. This is important because it helps us understand why not all public policies that have resource and informational effects ultimately lead to the development of invested, politically active constituencies. This may especially be true for cases like state EITC programs because they affect a subset of the population who also happen to participate in real world elections at lower rates than non-beneficiaries.

Our findings also provide insights into how particularistic policies influence non-beneficiaries—whom the policy feedback literature tends not to focus on.[23] Because we observe a positive effect of EITC programs on non-beneficiaries that are the same party as the implementing governor, and a negative effect among out-partisans, our findings can be situated among a larger body of work showing a mediating effect of partisanship on feedback effects for policies with a strong partisan identity (e.g., Green, Palmquist, and Schickler 2004; Jacobs and Mettler 2018; Soss and Schram 2007). When thinking about the capacity of anti-poverty policies to generate feedback effects in the mass public, this scholarship collectively raises the question: what policy *design* features might influence the opinions and behavior of non-beneficiaries? This may have implications for when invested constituencies develop in support of anti-poverty policies, given the relatively small population they target. As Jacobs and Mettler (2018) describe, if partisan polarization is as obdurate as scholars report, "it may override policy feedback effects [in the mass public] for years to come" (347).

This study also suggests promising avenues for future research asking how policy implementation matters. As previous work has shown—and we demonstrate suggestively using county-level information in Table A.1 in the Supplementary Material—EITC uptake is higher in areas where more people are eligible for the benefit (e.g., Chetty, Friedman, and Saez 2013). Given that we identify a relatively short-lived feedback effect in these areas, it could be a result of both private and civic intermediaries operating in these areas and obscuring the role of government in crafting the EITC. Existing work on the EITC emphasizes the role of tax-preparation services in blurring the attribution process, but more generally, we might think that nongovernmental organizations facilitating benefit take-up prevent the production of invested stakeholders that scholars traditionally think about when studying policy feedback and instead create constituencies dependent on the organizations themselves (e.g., Halpern-Meekin et al. 2015). For example, Table A.1 in the Supplementary Material also shows that EITC take-up varies positively with the number of tax returns filed using the Volunteer Income Tax Assistance program in a county, one of the many government-funded initiatives administered by local civic groups. An open question is how programs like this impact low-income voters' attitudes and behaviors.

Finally, this article emphasizes the positive side of political accountability: our results could be interpreted as individuals rewarding their governors for expanding their state's safety net. Much of the extant literature in American politics and beyond focuses on whether voters punish incumbents for misbehavior or poor economic conditions, whereas less work investigates what happens when incumbents pursue welfare-enhancing policies for their constituents. Indeed, in one of the best known studies on accountability, Key (1966, 60) posits that "people vote only against, never for." Our study provides a useful contrast to that perspective and offers a promising avenue for future work investigating when voters reward their elected officials for economic policy.

SUPPLEMENTARY MATERIAL

To view supplementary material for this article, please visit https://doi.org/10.1017/S000305542400087X.

DATA AVAILABILITY STATEMENT

Research documentation and data that support the findings of this study are openly available at the American Political Science Review Dataverse: https://doi.org/10.7910/DVN/HDOEPP.

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[23] Noteworthy counter-examples are Soss and Schram (2007) and Jacobs and Mettler (2018).

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CONFLICT OF INTEREST

The authors declare no ethical issues or conflicts of interest in this research.

ETHICAL STANDARDS

The authors affirm this research did not involve human participants.

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