

# Does Relative Deprivation Condition the Effects of Social Protection Programs on Political Support? Experimental Evidence from Pakistan

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- Does perceived income inequality moderate the relationship between social protection and political support?

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- Mixed literature on how social protection affects political attitudes
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  - Null or negative impacts: Green 2006; Ellis and Faricy 2011; Correa and Cheibub 2016; Imai, King, and Velasco Rivera (2020); Lyall, Zhou, and Imai (2020)

# Background

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- Existing explanations for selective increases in support for government following social protection (mixed findings):
  - 1 Attribution challenges
  - 2 Partisan targeting
  - 3 Timing and duration

# Our Hypothesis

- Behavioral economics, sociology, and psychology: reference points (Kahneman and Tversky 1979; Levy 2003; Bendor 2010), which are affected by perceived relative welfare, influence attitudes toward both the state (Healy et al. 2017) and non-state actors (Fair et al. 2018)

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- We argue: citizens' perceptions of their relative economic position moderate the effects of social protection on attitudes:
  - When a citizen does not feel relatively deprived, social protection has minimal sustained effect on attitudes toward government
  - Relative deprivation being salient causes beneficiaries to increase support for government, and non-beneficiaries to feel politically disgruntled

# Benazir Income Support Program (BISP)



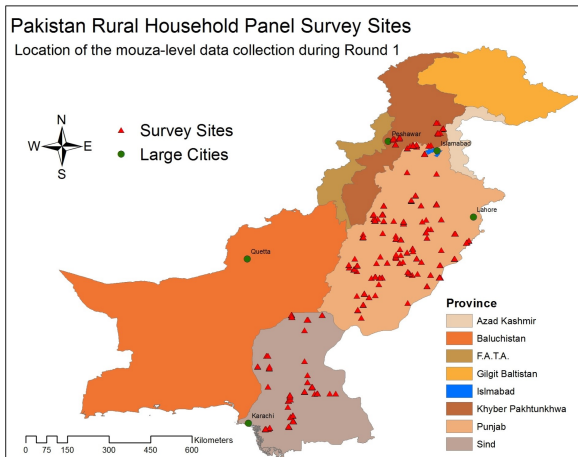
*Stated Goals:* (1) eradicate extreme poverty; (2) empower women; and (3) achieve universal primary education by providing unconditional cash transfers to poor women (Ambler and De Brauw 2019)

- Oct. 2010 – Dec. 2011: Poverty census carried out to identify prospective beneficiaries
- Jul. 2011: Use of wealth scores to distribute transfers begins

# Data

- Administrative Data: Benazir Income Support Program (BISP) Database
  - Poverty score and eligibility dummy for the BISP, Pakistan's national unconditional cash transfer program
  - Matched with our survey data on CNIC (national identity card) number
- Household Survey Data: Pakistan Rural Household Panel Survey, Round 2, April–May 2013
  - Governance module: survey experiment + seven questions about support for/ satisfaction with Pakistani government
  - 76 rural villages in Punjab, Sindh, and Khyber-Pakhtunkhwa (KPK)
  - $N = 2,639$  (that overlaps with the administrative data)

# Map of Household Survey Villages (N=76)



# Identification of Effects of the BISP: Fuzzy Regression Discontinuity Design (RDD)

*Need to overcome selection bias.*

- Exploit a threshold rule in the BISP selection process
  - Assignment Variable  $X$ : Wealth Score
  - Cutoff  $c$ : Standardized to be 0 (cutoff = 16.17)
  - Treatment Receipt  $D = 1[X \geq c^*]$

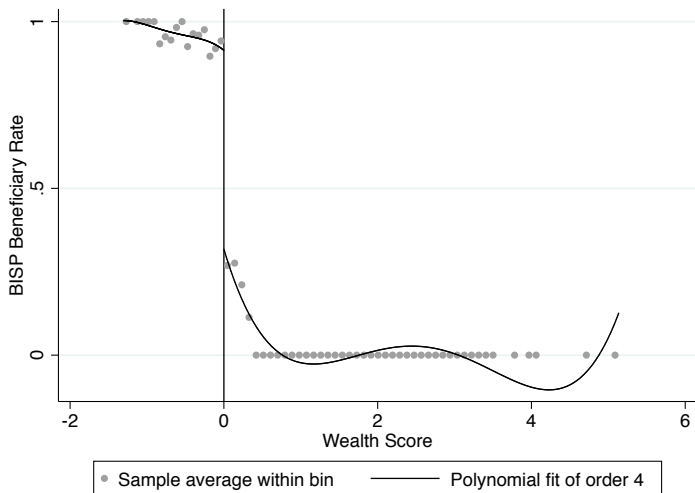
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  - Treatment Receipt  $D = 1[X \geq c^*]$
- Fuzzy rather than sharp cutoff because households could appeal and receive transfers if their score was between 16.17 and 21.17 and the household had:
  - at least one disabled member;
  - at least one senior citizen (65 years of age or older) and less than three total household members; or
  - have four or more children under age 12

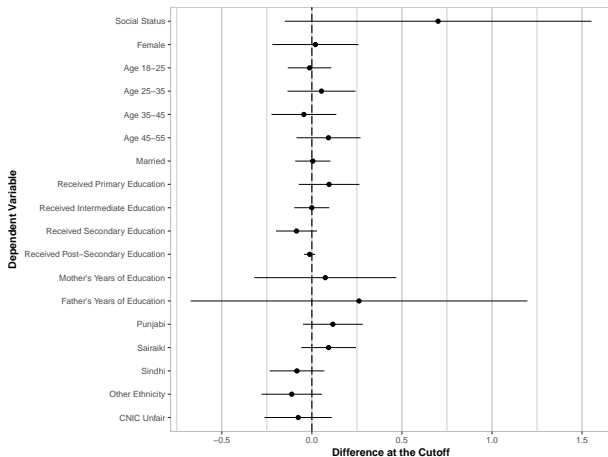


# First Stage Results



Notes:  $\beta = 0.593$  ( $p < 0.001$ ).

# Balance on Pre-Treatment Characteristics



Notes: The 95 percent (two-tailed) confidence intervals surround point estimates.

## Experiment: Poverty Prime

- “Annual income is the amount of CASH income you earn from all agricultural and non-agricultural activities, and money from Benazir Income Support Programme (BISP) or other programs. How much income did your family earn last month?”
- Individuals are asked to select their income level from one of five brackets (50 percent of individuals are in each of two groups):

Control Group (No Poverty Prime)	Relatively Poor Group (Poverty Prime)
0-2,000 Rs.	0-12,500 Rs.
2,001-4,000 Rs.	12,501-25,000 Rs.
4,001-6,000 Rs.	25,001-45,000 Rs.
6,001-10,000 Rs.	45,001-60,000 Rs.
More than 10,000 Rs.	More than 60,000 Rs.

▶ Baseline Test: Relative Poverty Prime Assignment

▶ Baseline Characteristics at Threshold by Prime

▶ Distribution

## Key Outcome Measure: Government Support Index (GSI)

- Index of seven questions (Cronbach's alpha score = 0.88), which we will call the Government Support Index (GSI):
  - To what extent to you ...
    - ... think the courts in Pakistan guarantee a fair trial?
    - ... respect the political institutions of Pakistan?
    - ... think citizens' basic rights are protected by the political system of Pakistan?
    - ... proud of living under the political system of Pakistan?
    - ... think that one should support the political system of Pakistan?
    - ... trust the political system of Pakistan?
    - ... feel your leaders are doing the best job possible for Pakistanis?
  - Answer Choices: 0 (Not at all), 0.25 (A little), 0.5 (Somewhat), 0.75 (A lot), and 1 (A great deal)

# Manipulation Check: Effect of BISP on Economic Welfare

	2SLS	Robust p-value	Obs.
Total Food Expenditures per Month (Rupees)	2,596***	0.003	2,610
Total Expenditures per Month (Rupees)	3,107.5**	0.014	2,610
Cash Loans as Share of Yearly Expenditure	-0.109***	0.001	2,639
Total Savings as a Share of Monthly Expenditure	0.403**	0.016	2,610
Household Earns Income from Outside Agriculture	0.382***	0.000	2,608

Notes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  based upon conventional standard errors. The estimate is the average treatment effect at the cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth (Calanico, Cattaneo, and Titiunik 2014).

# Effect of BISP on Government Support

	2SLS	Robust p-value	Obs.
<b>Government Support Index</b>	0.080*	0.134	2,636
Courts Guarantee Fair Trial	0.125*	0.088	2,637
Respect for Political Institutions	0.104*	0.151	2,637
Citizens' Basic Rights Protected	0.116**	0.058	2,636
Proud of Political System	0.008	0.932	2,636
Others Should Support Political System	0.038	0.501	2,637
Trust Leaders	0.072	0.303	2,637
Leaders Doing the Best Job Possible	0.096	0.224	2,637

Notes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  based upon conventional standard errors. The estimate is the average treatment effect at the cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth (Calanico, Cattaneo, and Titiunik 2014).

# Effect of BISP on Attitudes Toward Government by Poverty Prime (2SLS)

	BISP, Poverty Prime			BISP, No Poverty Prime		
	Coefficient	Robust p-value	Obs.	Coefficient	Robust p-value	Obs.
Government Support Index	0.155**	0.021	1,303	0.015	0.791	1,333
Courts Guarantee Fair Trial	0.203**	0.045	1,303	0.034	0.819	1,334
Respect for Political Institutions	0.196**	0.035	1,303	-0.002	0.911	1,334
Citizens' Basic Rights Protected	0.195**	0.036	1,303	0.042	0.715	1,333
Proud of Political System	0.117	0.270	1,303	-0.064	0.679	1,333
Others Should Support Political System	0.118	0.177	1,303	-0.023	0.904	1,334
Trust Political System	0.116	0.283	1,303	0.050	0.507	1,334
Leaders Doing the Best Job Possible	0.155*	0.121	1,303	0.061	0.630	1,334

Notes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  based upon conventional standard errors. The estimate is the average treatment effect at the cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth (Calanico, Cattaneo, and Titiunik 2014).

▶ Bandwidth Sensitivity

▶ Figure

# Effect of BISP on Attitudes Toward Government by Perceived Income Standing Pre-Treatment Among Primed Individuals (2SLS)

	Didn't Feel Relatively Poor Pre-Treatment			Felt Relatively Poor Pre-Treatment		
	Coefficient	Robust p-value	Obs.	Coefficient	Robust p-value	Obs.
Government Support Index	0.239***	0.001	758	-0.047	0.505	545
Courts Guarantee Fair Trial	0.159	0.151	758	0.042	0.879	545
Respect for Political Institutions	0.345***	0.000	758	-0.079	0.467	545
Citizens' Basic Rights Protected	0.258**	0.012	758	0.008	0.803	545
Proud of Political System	0.196*	0.061	758	-0.017	0.767	545
Others Should Support Political System	0.225**	0.016	758	-0.044	0.754	545
Trust Political System	0.215**	0.025	758	-0.120	0.447	545
Leaders Doing the Best Job Possible	0.284***	0.009	758	-0.145	0.312	545

Notes: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$  based upon conventional standard errors. The estimate is the average treatment effect at the cutoff estimated with local linear regression with triangular kernel and MSE-optimal bandwidth (Calanico, Cattaneo, and Titiunik 2014).

► Figure



## Which Group is Being Affected by the Poverty Prime?

- The group that got the BISP (feeling relatively poor means the BISP buys even more of their support)? Or

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- The group that got the BISP (feeling relatively poor means the BISP buys even more of their support)? Or
- The group that did not get the BISP (feeling relatively poor means that not getting the BISP stings / generates anger toward government even more)?

Variable	Estimates to Left of Cutoff (Eligible)			Estimates to Right (Ineligible)		
	$\mu_{notprimed}$	$\mu_{primed}$	Difference	$\mu_{notprimed}$	$\mu_{primed}$	Difference
Government Support Index	0.371	0.388	0.017	0.360	0.300	-0.060
Courts Ensure Justice	0.439	0.428	-0.010	0.415	0.314	-0.101
Respect for Political Institutions	0.501	0.507	0.006	0.502	0.397	-0.105
Citizens' Basic Rights Protected	0.414	0.401	-0.013	0.386	0.292	-0.094
Proud of Political System	0.334	0.368	0.034	0.378	0.302	-0.075
Support of Political System	0.355	0.383	0.028	0.371	0.317	-0.054
Trust Leaders	0.313	0.338	0.026	0.279	0.273	-0.006
Leaders Doing Best Job Possible	0.240	0.295	0.055	0.198	0.207	0.009

Source: Pakistan Rural Household Panel Survey (RHPS), Round 2 (2013) and Benazir Income Support Program Database (2013). Notes: The difference ( $\mu_{primed} - \mu_{notprimed}$ ) is computed by subtracting the local polynomial estimate for the subgroup that received the prime ( $\mu_{primed}$ ) from the estimate for the subgroup that did *not* receive the prime ( $\mu_{notprimed}$ ).

# Conclusions

- We use a quasi-experiment (RDD) to assess the impact of a social protection program in Pakistan on support for government
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- We find that:
  - Citizens' evaluations of government can be altered by social protection programs
  - Reactions to the provision of social protection are sensitive to individual beliefs about their own relative poverty level
- Has important implications for our understanding of the political ramifications of rising inequality, and how positive overall effects of social protection programs on trust in government should be interpreted

# Thank you

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# Balance Test: Relative Poverty Prime Assignment

Demographic Characteristic	(1) $\mu_{NotPrimed}$	(2) $\mu_{Primed}$	(3) Difference in Means	(4) Test of Balance (P-Value)
Social Status	4.084	4.012	-0.072	0.238
Female	0.505	0.504	-0.001	0.924
Age 18-25	0.105	0.107	0.002	0.869
Age 25-35	0.254	0.260	0.006	0.663
Age 35-45	0.252	0.243	-0.009	0.520
Age 45-55	0.208	0.218	0.01	0.447
Married	0.897	0.899	0.002	0.874
Received Primary Education	0.159	0.151	-0.008	0.472
Received Intermediate Education	0.077	0.067	-0.01	0.238
Received Secondary Education	0.104	0.108	0.004	0.698
Received Post-Secondary Education	0.018	0.015	-0.003	0.462
Mother's Years of Education	0.171	0.174	0.003	0.919
Father's Years of Education	1.009	1.034	0.025	0.780
Punjabi	0.359	0.364	0.005	0.738
Sairai	0.209	0.219	0.01	0.448
Sindhi	0.131	0.113	-0.018	0.098
Other Ethnicity	0.301	0.304	0.003	0.880
CNIC Unfair	0.225	0.233	0.008	0.612
<i>Proportion</i>	0.501	0.499	.	.

Notes: For each of the observable demographic characteristics, Columns (1) and (2) report means by the experimental condition. Column (3) reports the difference in means ( $\mu_{Primed} - \mu_{NotPrimed}$ ), and Column (4) reports the p-value when conducting a difference in means test by experimental condition. The *proportion* row indicates what share of the total sample was assigned to each of the two conditions.

▶ Experiment: Poverty Prime

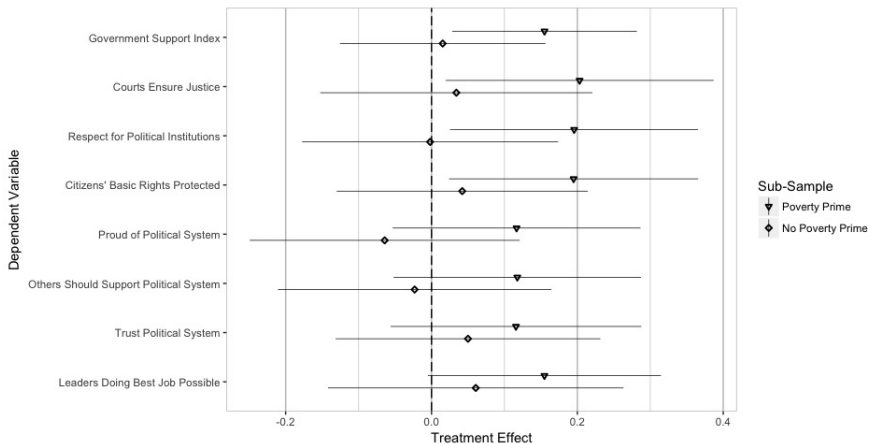
# RD Estimate by Bandwidth Selection Procedure

Bandwidth Selection Procedure	(1) Full Sample	(2) No Poverty Prime	(3) Poverty Prime
(a) MSE-Optimal Bandwidth (Calanico, Cattaneo, and Titiunik 2014)	0.080* (0.044)	0.015 (0.072)	0.155** (0.065)
(b) MSE Minimizing Bandwidth (Imbens and Kalyanaraman 2011)	0.077 (0.051)	0.007 (0.048)	0.152** (0.065)
(c) 1/2 the MSE Minimizing Bandwidth (Imbens and Kalyanaraman 2011)	0.071 (0.067)	-0.005 (0.068)	0.108 (0.086)
(d) 2X the MSE Minimizing Bandwidth (Imbens and Kalyanaraman 2011)	0.064* (0.036)	0.015 (0.033)	0.093** (0.043)
N	2636	1333	1303

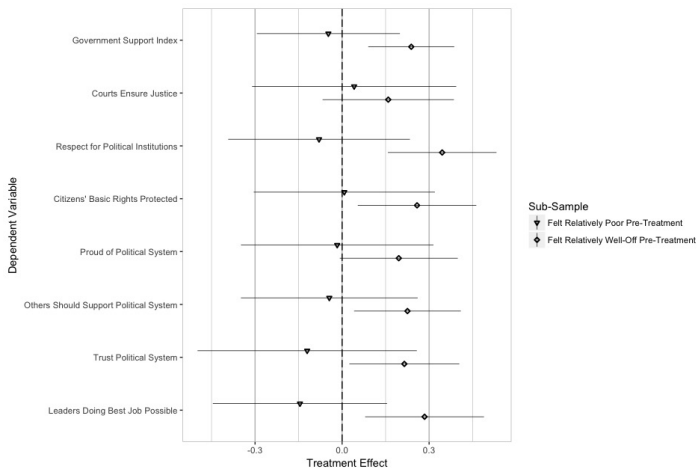
*Notes:* Standard errors are in parentheses, and \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Each row presents the regression discontinuity (RDD) estimate when employing different bandwidth strategies. Row (a) reports estimates when employing the MSE-optimal bandwidth procedure recommended in Calanico, Cattaneo, and Titiunik (2014). Row (b) reports estimates when employing the optimal bandwidth recommended in Imbens and Kalyanaraman (2011). Row (c) and (d) report estimates when the bandwidth selection procedure is half and double the optimal bandwidth recommended in Imbens and Kalyanaraman (2011), respectively. Column (1) reports RDD estimates when analyzing the full sample, column (2) reports RDD estimates when analyzing the sample that was not primed with the poverty prime, and column (3) reports RD estimates when analyzing the sample that was primed with the poverty prime.



# Attitudes Toward Government by Poverty Prime



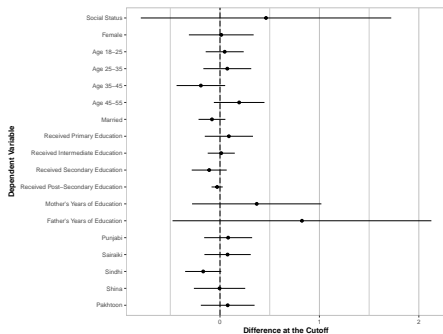
# Attitudes Toward Government by Perceived Income Standing Pre-Treatment Among Primed Individuals



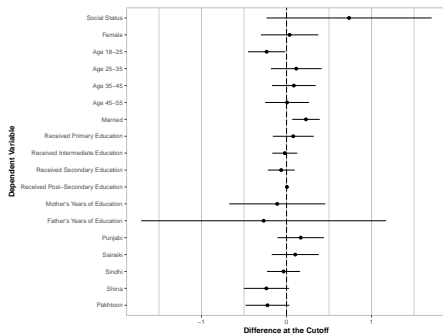
► Effect of BISP by Perceived Income Standing Pre-Treatment

# Baseline Pre-Treatment Characteristics at Threshold by Poverty Prime

## Poverty prime sample

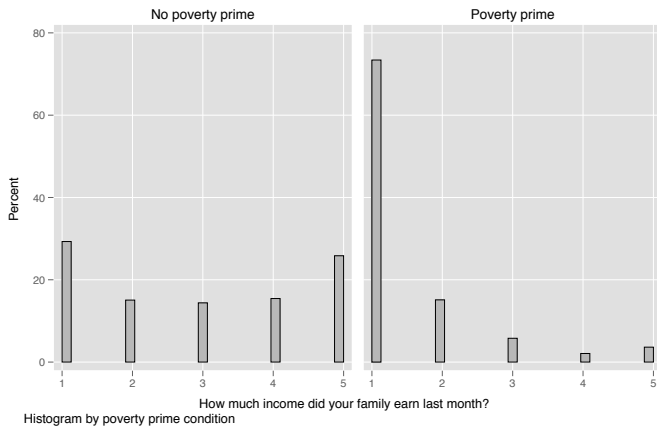


## No poverty prime sample



▶ Experiment: Poverty Prime

# Income Bucket by Prime Condition



▶ Experiment: Poverty Prime

Table A.1: Evidence Review of the Effect of Cash Transfer Programs on Political Attitudes

Author (Year)	Country/Context	Dataset	Population	Glut Index	Outcome(s)	Effect
Lyall, Zhou, and Inati (2020)	Alghanistan	Pre-baseline enrollment form (2015), baseline survey (2015), and two offline surveys (2016)	Individuals who were young, underemployed, displaced, and shared Paktia an ethnicity with the Taliban	27.8 (2013)	1. Beliefs support for the Taliban versus the Afghan government 2. Binary and frequency variables of violence	Mixed
Pap-Eleches and Pap-Eleches (2012)	Romania	Gallup public opinion survey of program participants (2007), Basic Information about program participants (2005)	Comparable eligible and ineligible applicants	28.2 (1994)	1. Dummy for voting 2. Dummy for voting for the incumbent party 3. Trust in incumbent	Positive
Bethel and Hainemeyer (2011)	Germany	Panel report (2002), State election and constituency data (1994, 1998, 2002, 2005, 2009)	All voters	29.2 (1994)	Vote share for the incumbent party	Positive
Lee, Jensen, Arndt, and Wundersberger (2017)	United Kingdom and Denmark	Polling data for government support in United Kingdom (1946-2014) and Denmark (1907-2014)	British and Danish poll respondents	30.5	Mean percentage of support for governing parties	Positive
Kwasa (2016)	18 European countries	European Social Survey (1999-2015)	Representative sample of Europeans	30.7	Dummy for having voted for leftist parties	Mixed
Cole, Brady, and Wreter (2012)	India	Election and rainfall data (1977-1999)	Representative sample of Indian voters	32.1 (1983)	Vote share for the ruling coalition	Positive
Healy and Malhotra (2009)	United States	Presidential election results, natural disaster, and government opening data (1964-2004)	All voters	34.6 (1979)	Presidential vote share for the incumbent party	Positive
Brayns, Honeay, and Walsh (2015)	Malawi	Malawian Welfare Monitoring Survey (2008), Election data (2004, 2009)	All voters	39.9 (2004)	Vote share for the incumbent party	Positive
Dinane and Horowitz (2016)	Malawi	Panel survey of rural Malawians (2008, 2010)	Representative sample of rural Malawians	39.9 (2004)	Dummy for supporting the incumbent party	Positive
Margalit (2011)	United States	Data of applications for compensation for trade-related job loss (1996-2004)	Representative sample of workers hurt by trade	40.2 (1994)	Change in Republican presidential vote share	Positive
Ennas, Hoffmeyer, and Rosen (2019)	Tanzania	Survey on beneficiaries and would-be beneficiaries (2009, 2011, 2012)	Representative sample of rural households with vulnerable children and elderly individuals	40.3 (2007)	Dummy for trusting political leaders	Positive
Chen (2013)	United States	Data on hurricane disaster aid awards (2004), Election data (2002, 2004)	Applicants to hurricane disaster aid	40.4 (2000)	Vote turnout for the incumbent party	Positive
Clinton and Sances (2016)	United States	Daso Leige Atlas of US Presidential Elections (2010, 2012, 2014, 2016)	Representative sample of residents in Medicare expansion and non-expansion states	40.4 (2010)	1. Voter registration 2. Voter turnout	Positive
Mettler and Shores (2008)	United States	Maxwell Poll (2005)	Poll respondents	40.5 (2004)	Vote turnout	Mixed
Lahoue (2013)	Philippines	Province-level electoral data (2007, 2010), Poverty statistics (2003, 2007)	All voters	41.5 (2003)	Vote share for incumbent	Positive
Li (2014)	China	Chinese Attitudes toward Inequality and Distributive Injustice (2004, 2009)	Representative sample of rural and urban Chinese	42.1 (2002)	1. Trust in central government 2. Trust in local government	Positive
Marshall, Aydogan, and Batur (2016)	Turkey	Mayoral election data (2004, 2009, 2014), Data of housing projects (2005-2014)	All voters	42.2 (2003)	# of times ruling party won mayoral election over last three elections	Positive
Mansoura, Miguel, and Vignetto (2011)	Uruguay	Baseline and 2 follow-up survey amongst applicants for the cash transfer program (2005-2008)	Applicants to the cash transfer program	42.4 (1980)	Support for the current government	Positive
Elhottan, Emerson, and Fils (2019)	Uganda	Baseline and two follow-up survey (2008, 2010, 2012)	Representative sample of applicants to the program	45.2 (2008)	Index of presidential support	Mixed
Leyton and Smith (2015)	24 countries in Latin America and Caribbean	Americafluorometer survey (2012)	Representative sample of Latin Americans	47.3	Dummies of voting for the incumbent in a hypothetical voting	Positive
Inati, King, and Velasco Rivera (2020)	Mexico	Presidential election data (2000, 2006), Baseline and follow-up survey (2005, 2006) of the SF79 program, Poverty data of Progress (1996, 1995)	Representative sample of poor Mexicans	48.9 (1984)	1. Voter turnout in presidential election 2. Vote share of incumbent party	Null
De La O (2013)	Mexico	Province level election data (2000), Poverty data (1996, 1995)	Representative sample of poor Mexicans	48.9 (1984)	1. Voter turnout 2. Vote share of the incumbent party	Positive
Linea (2013)	Madagascar	Presidential and municipal election data (1993-2005), Survey of targeted municipalities (2000, 2002)	All voters	51.8 (1992)	1. Vote share for incumbent mayor 2. Vote share for incumbent president	Positive
Cerda and Vergara (2000)	Chile	Election data (1980, 1993, and 1999), Survey of Socioeconomic Characteristics of the Chilean Population (1990, 1992, 1998)	All voters	56.2 (1987)	Vote share for the incumbent	Positive
Conover, Zarate, Camacho, and Rose (2016)	Colombia	Electional census and household-level electoral results (2010), the CCT's management information system of beneficiaries (2001-2010)	All voters	57.2 (2001)	1. Turnout 2. Vote share of incumbent party candidate 3. Magna of victory	Positive
Zacco (2013)	Brazil	National household survey on program enrollment (2000), Municipal election data (2002, 2006, 2010)	All voters	59 (1999)	1. Vote share for incumbent 2. Vote share for incumbent party candidate	Positive

Note: Papers are ordered according to the value of the Glut index for the study context (lowest to highest). The Glut index is taken from the first year in the data set used, the closest year that pre-dates the first year of the data set, or the earliest year that the Glut index is available. For studies involving multiple countries, the Glut index is calculated by averaging the Glut indexes of all countries.