Table A12: Overview of 34 studies on the effect of rainfall on turnout – additional information

Source	County	Election	Time frame	Design details	Effect of rain on turnout
Merrifield (1993)	United States	General election (off-year)	1982	State level turnout linked to rain in state's largest city on Election Day. Linear model with a range of state aggregated SES and institutional controls.	-2.36*** percentage points per centimeter.
Knack (1994)	United States	Presidential	1984, 1988	ANES survey combined with individual validated turnout linked to weather at county level. Logit maximum-likelihood model and linear model with a range of individual SES and institutional controls.	Insignificant: -4.79 percentage points per centimeter.
Knack (1994)	United States	House	1986	*See above*	Insignificant: 0.40 percentage points per centimeter.
Shachar & Nalebuff (1999)	United States	Presidential	1948-1988	State-level turnout linked to state weather. Linear model with a few state-aggregated SES and institutional controls, most importantly closeness of the race.	-1.37*** percentage points per centimeter.
Gatrell & Bierly (2002)	United States (Kentucky)	Presidential, gubernatorial, state legislature	1990-2000	County-level turnout linked to weather stations in the county. OLS model with election, year, and county fixed effects as indirect control for SES. Additional control for race competitiveness, urban/rural, and temperature.	Not possible to calculate due to a somewhat opaque interaction model. Claims a negative significant effect of rain on turnout.
Lakhdar & Dubois (2006)	France	Parliament (first round)	1986, 1988, 1993, 1997, 2002	County-level (departments) linked to weather stations. Linear auxiliary regressions adjusted for rain trends and average weather. Controls for unemployment and temperature at county-level. Fixed effects for county.	-1.5* percentage point per centimeter.
Gomez et al. (2007)	United States	Presidential	1948-2000	County-level turnout linked to weather stations. Linear model with a range of aggregated county SES and institutional controls. Uses relative rainfall, lagged county turnout control, and year and election dummies. Maximum-likelihood random effects linear model. Most cited study.	-0.33** percentage points per centimeter.
Horiuchi & Saito (2009)	Japan	Parliament	1990-2000	Municipal-level turnout linked to local weather stations transformed to a dummy of at least 3 mm rain on election day. Municipality and year fixed effects. Main part is an instrumental variable regression to understand policy outcomes.	Reports a negative significant dummy variable for rain.
Fraga & Hersh (2010)	United States	Presidential	1948-2000	County-level turnout linked to weather stations. Linear model with a range of aggregated county SES and institutional controls (incl. average weather). Lagged county turnout, year and election dummies. Matching applied (CEM) between control- and treatment group	-0.26** percentage points per centimeter. Stronger in uncompetitive states compared to competitive states, where is there is a slightly positive effect of rainfall.
Hansford & Gomez (2010)	United States	Presidential	1948-2000	Aggregate (county), OLS. Their focus is on weather as IV for the effect of parties' supports. We only report the first stage. 2,000 non-Southern counties in the continental	-0.40* percentage points per centimeter.