

# **When the election rains out and how bad weather excludes marginal voters from turning out**

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## **Abstract**

Ostensibly random and trivial experiences of everyday life like those related to local weather can have significant political consequences. In the context of democratic elections, there is conflicting evidence about whether bad weather on Election Day depresses voter turnout by raising the cost of going to the polls. We first present a meta-analysis of the 33 studies of rainfall and electoral turnout and show that the average effect is -0.76 percentage points per centimeter of rainfall. Secondly, we present our own study, which is the first to use individual-level time series of validated turnout for a complete electorate merged with fine-grained meteorological observations. We show that poor weather does in fact reduce turnout by -0.84 percentage points per centimeter of rainfall. Importantly, marginal voters – specifically young voters except first-time voters – are up to seven times more susceptible to the negative shock caused by bad weather and also more responsive to pleasant weather (sunshine). These results suggest that bad weather can exacerbate inequalities in democratic participation by pushing low-propensity voters to abstain. The policy implication is that efforts to include marginal voters in the democratic process should be intensified at elections with poor weather and that elections even could be moved to a time of the year with more pleasant Election Day weather.

**Keywords:** electoral turnout, individual voter panel, weather, climate, marginal voter, cost of voting, participation.

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