

Traditional political institutions, cooperation, and public goods in Oaxaca, Mexico

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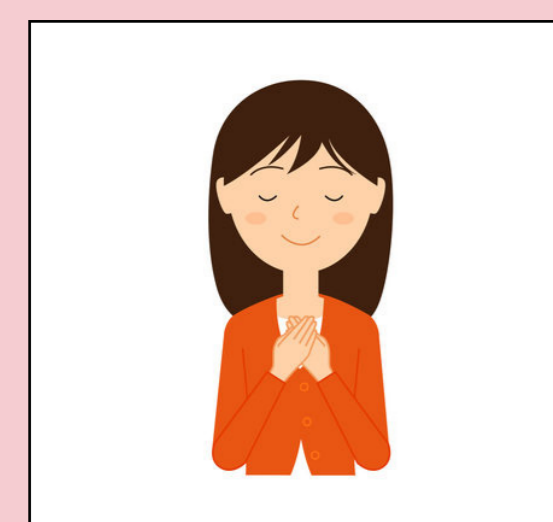
How can we explain the broad observed cross-cultural variation in cooperation?

Cultural evolutionary theory suggests that norms and institutions play a key role. We leverage secondary and ethnographic data from the culturally diverse state of Oaxaca, Mexico to examine whether community cooperation relates to institutional variation.

We find that....

Communities with stronger traditional political institutions

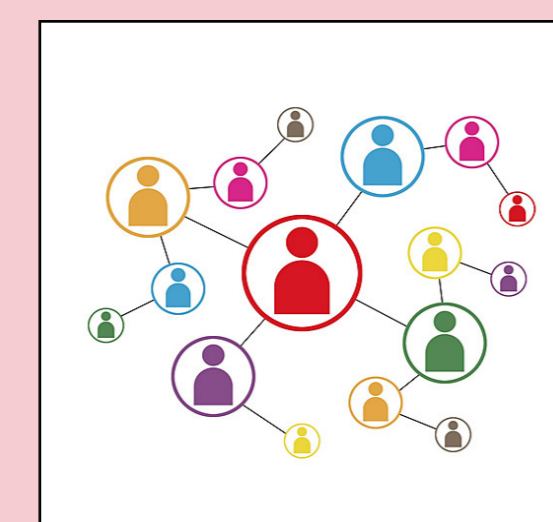
institutions that...



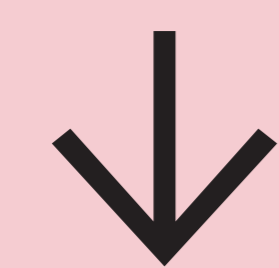
comprise stronger cooperative norms



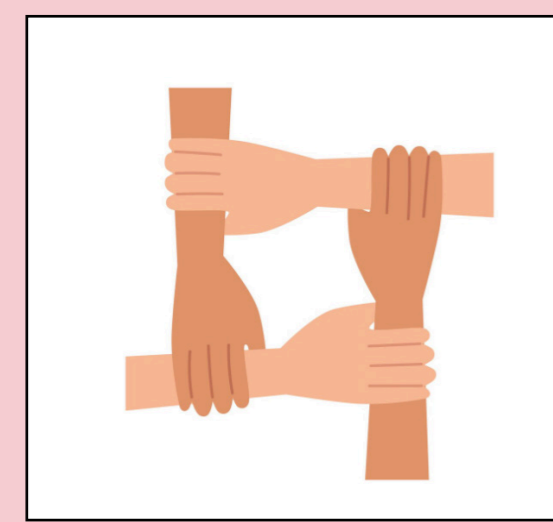
punish defectors more harshly



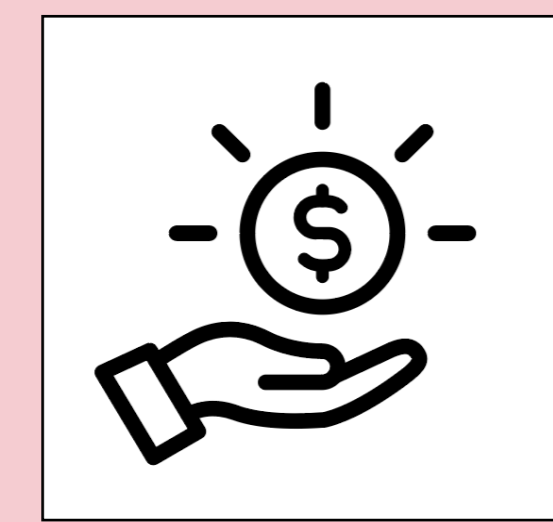
build greater interdependence



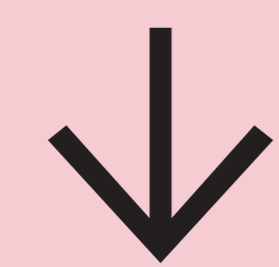
Mobilize more collective action



participation in community service



migrant remittances for public works projects



But do not have better tangible public goods outcomes



read the manuscript

Oaxaca: A unique natural laboratory

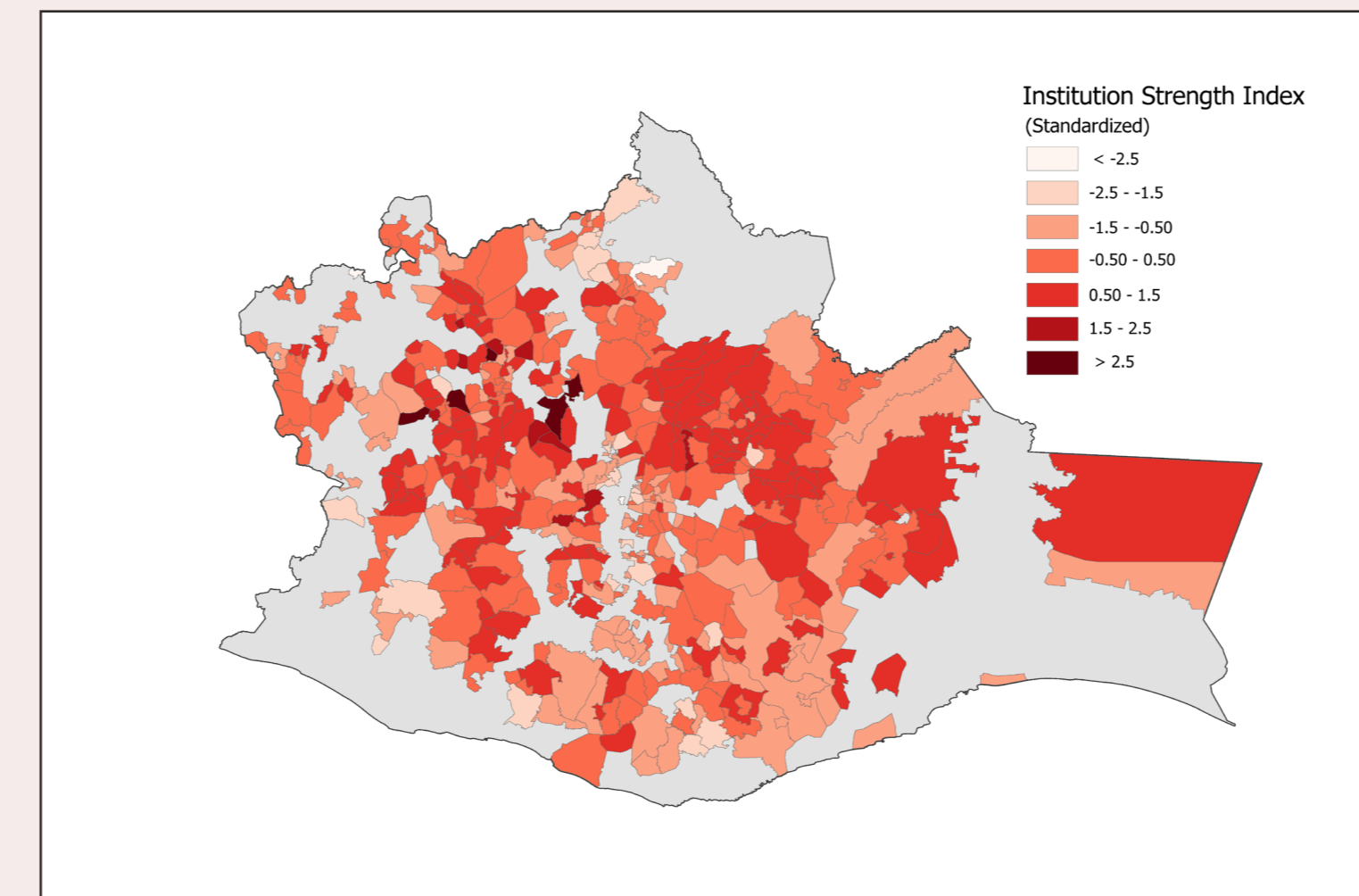
In this indigenous and diverse state, 418 of 570 municipalities self-govern and provide public goods using traditional political institutions called *usos y costumbres*:

- decisions made by the **Communal Assembly**
- obligatory **community service**, including *cargos* (unpaid leadership positions) and *tequio* (communal labor, e.g. lay pipes, fix roads)
- **sanctions** against defectors (e.g. fines, jail, loss of rights, formal expulsion)
- **communal land tenure**

We quantified the strength of these institutions along three dimensions: (1) strength of norms about service, (2) severity of sanctions, & (3) ability to build interdependence (via communal land tenure).



Men doing communal labor (*tequio*) to clear a landslide



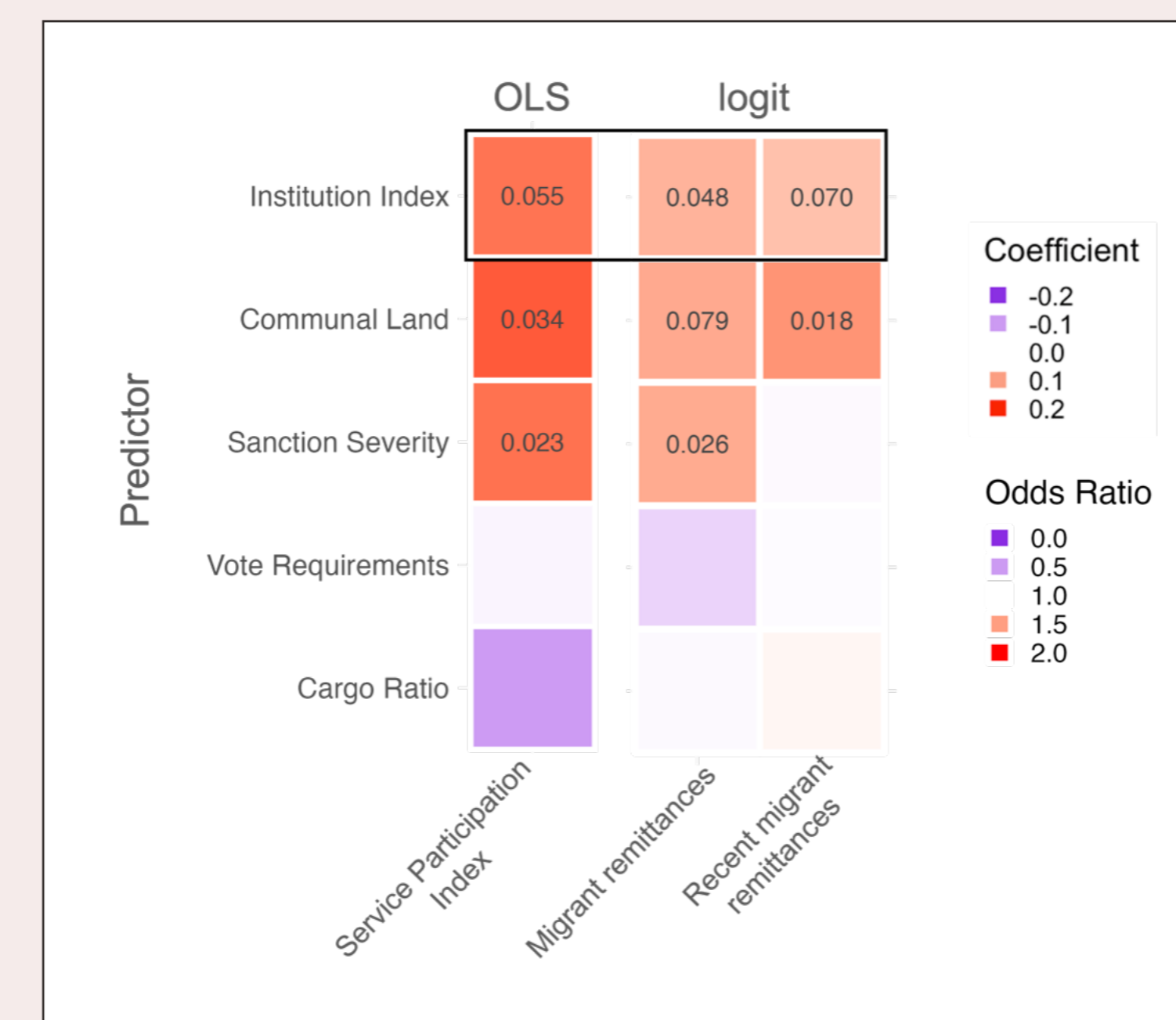
Variation in the strength of traditional political institutions across 418 self-governing municipalities of Oaxaca, Mexico

1. Communities with stronger institutions mobilize more cooperation

As institution strength increases, so does:

- level of participation in community service (*cargos* and *tequios*)
- probability that migrants send remittances for public works projects

Effects are driven by the Sanction Severity Index and Communal Land Tenure (% land) sub-indicators, suggesting **roles for punishment and interdependence**.



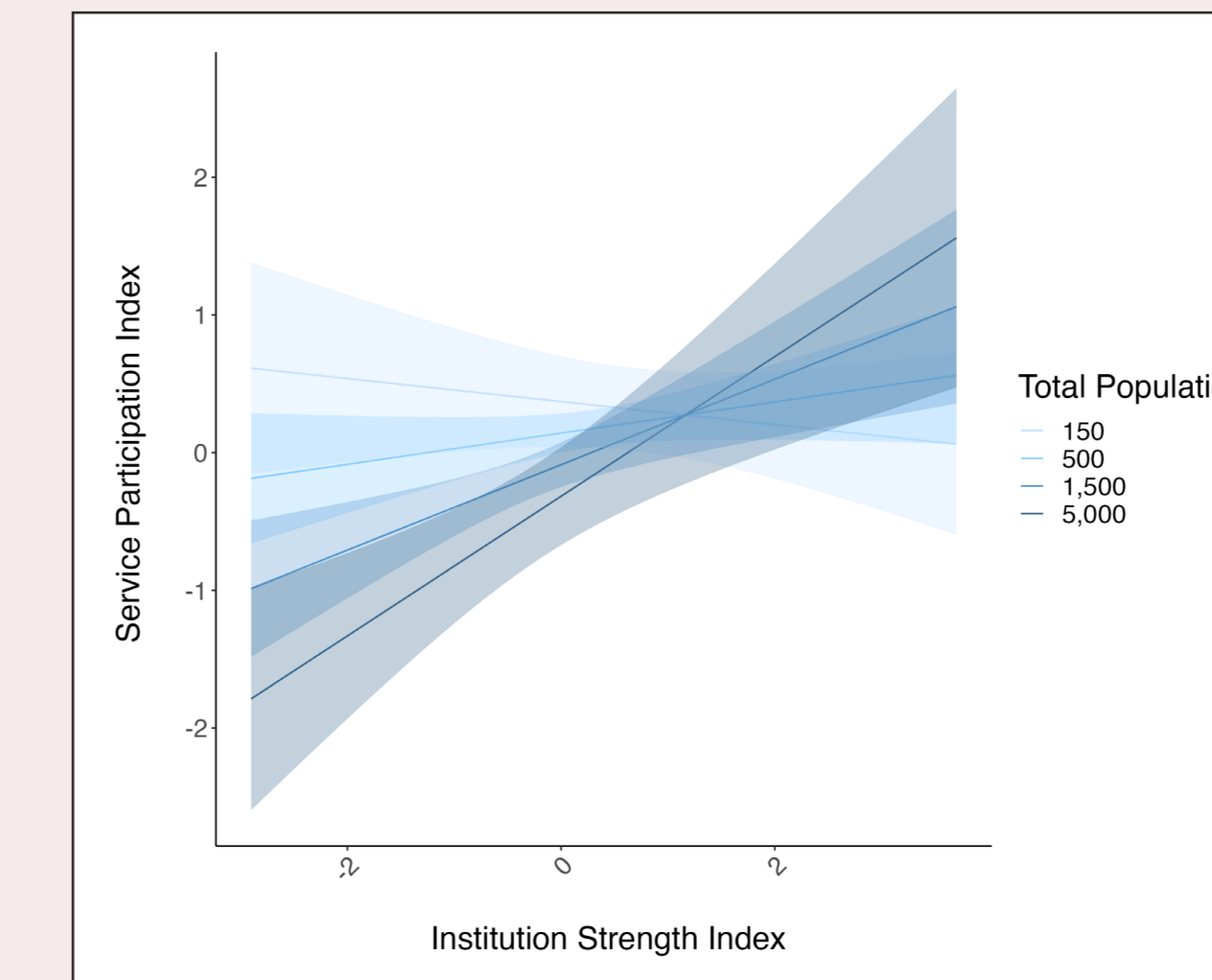
Relationship between institution strength and community cooperation. Plot shows standardized OLS coefficients (left) and logistic regression odds ratios (right) from models where the main predictors are Institutions Strength Index (top row) or the four sub-indicators. P-values below 0.10 are printed on the grid.

2. Strong institutions have more impact in larger communities

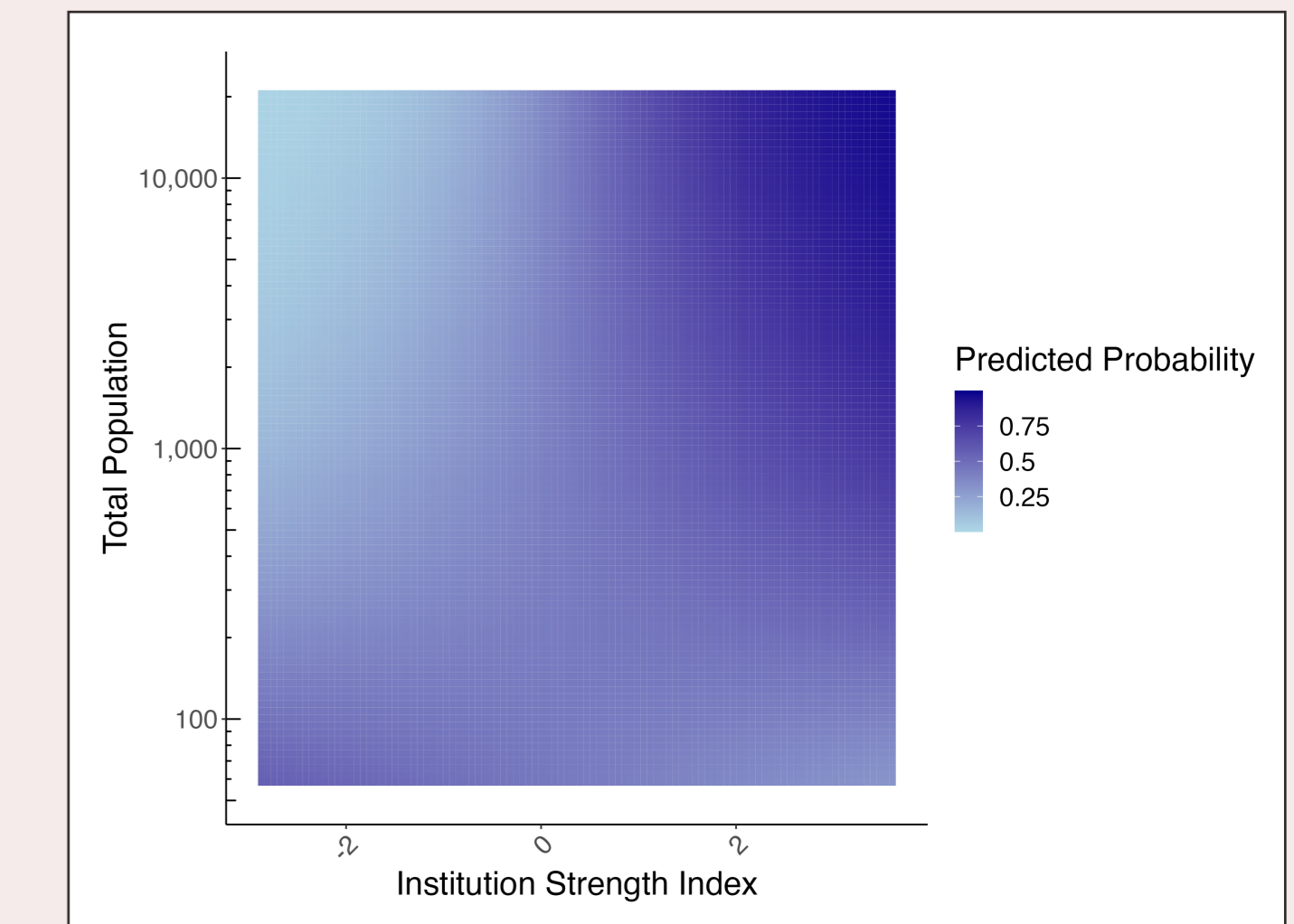
There is an interaction between institution strength and population size on measures of cooperation:

- Participation in community service and the probability of migrant remittances for public works increase sharply with institution strength in larger communities, but not in smaller ones.
- Without strong institutions, small communities stabilize higher levels of cooperation than large ones.

So, other forces (e.g. kinship, reciprocity) may be sufficient to sustain cooperation in very small populations, but that as **groups expand, institutions that can stabilize cooperation at larger scales may culturally evolve**.



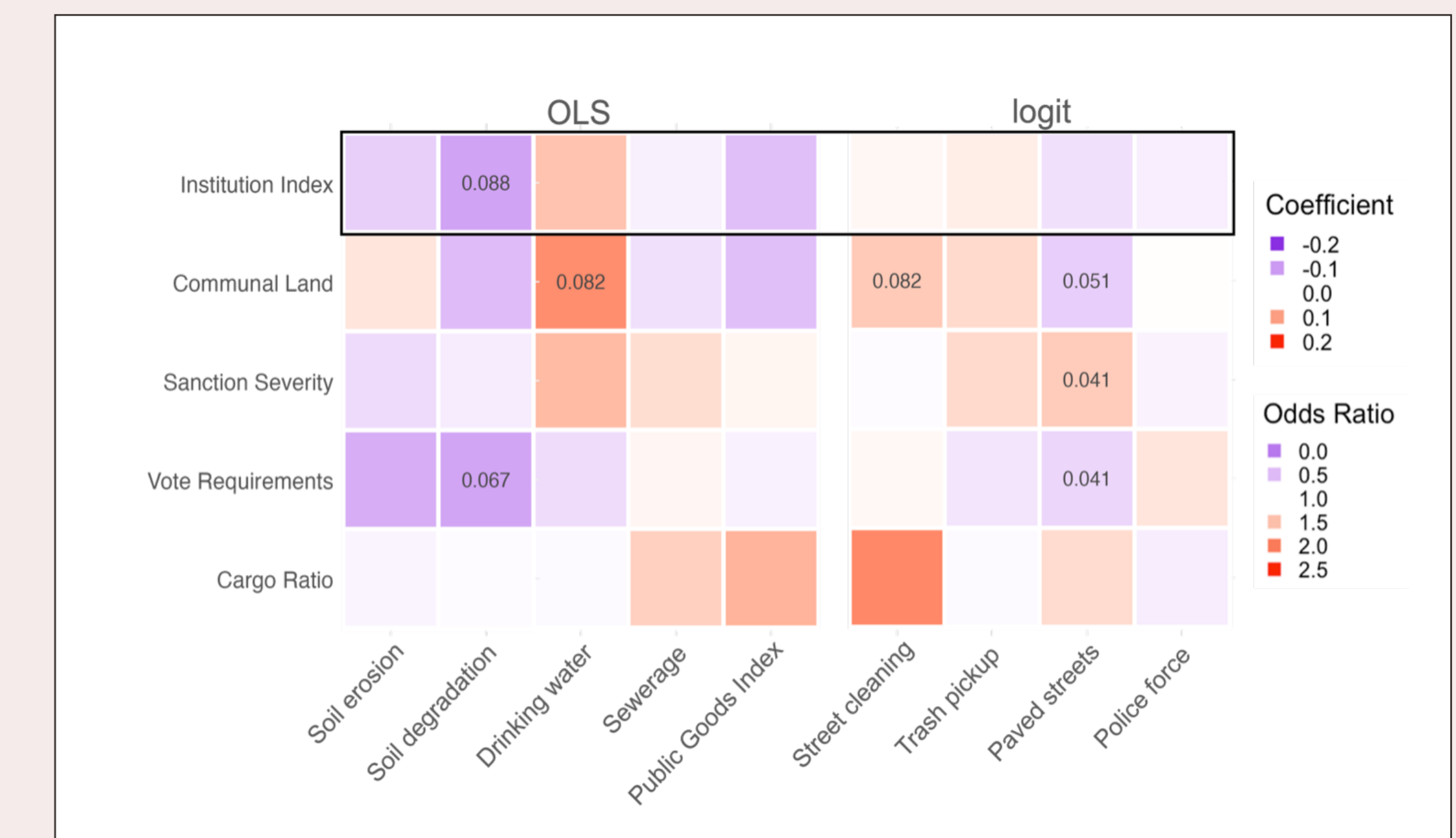
Participation in community service (*cargos* and *tequios*). Interaction term: $b = 0.14[0.05, 0.23]$, $p < 0.01$



Probability that migrants send remittances for public works. Interaction term: OR = 1.31[1.1, 1.7], $p < 0.05$

3. Stronger institutions are not associated with better public goods outcomes

- No clear evidence that institution strength is associated with public goods such as drinking water or sewerage service.
- So, **community cooperation does not appear to translate into tangible public goods outcomes**.
- Why is this the case? Implications for understanding how traditional political institutions impact economic development.



Relationship between institution strength and public goods outcomes. Plot shows standardized OLS coefficients (left) and logistic regression odds ratios (right) from models where the main predictors are Institutions Strength Index (top row) or the four sub-indicators. P-values below 0.10 are printed on the grid.

Empirical strategy: Analyses are correlational. We minimized omitted variable bias by including a rich set of covariates, including controls for climate, geography, isolation, wealth (all using exogenous ecological measures), and community demographics. We pre-registered our hypotheses and analysis plan.

