

# Supplemental Material for Policy Deliberation and Voter Persuasion: Experimental Evidence from an Election in the Philippines

March 17, 2017

## 1 Accounting for Deviations in the Randomization Protocol

In section 3.1, we explain that three barangays that were originally selected to be treated with the implementation of town hall meetings, could not be reached in practice due to logistic difficulties in the field. This led us to estimate the average treatment effects with three barangays that were not originally in the randomized sample. Here, instead of estimating the average treatment effect of town hall meetings over the entire population of barangays, we estimate the average causal effect of town hall meetings on the subpopulation of “complier” barangays. These are defined as those that were assigned to the treatment group and were actually treated. This group of barangays exclude the three “never-taker” barangays (i.e., Concepcion Dos, Isla and San Roque), where town hall meetings could not be implemented as originally intended. The CACE is given by:

$$E [Y_{jk}(T_{jk} = 1) - Y_{jk}(T_{jk} = 0) | T_{jk}(A_{jk} = 1)], \quad (1)$$

where  $A_{jk} \in \{0, 1\}$  is the randomized assignment status for barangay  $j$  in city  $k$ . The effect can be estimated with the following instrumental variable system:

$$Y_{jk} = \beta_0 + \beta_1 T_{jk} + \epsilon_{jk}$$

$$T_{jk} = \alpha_0 + \alpha_1 A_{jk} + v_{jk}$$

The estimated CACE is given by the estimate of  $\beta_1$  and presented in Table 1. The results of this exercise indicate that the causal effect of town hall meetings on those barangays that comply is significant at conventional levels only for Umalab Ka barangays.<sup>1</sup> This effect is similar to the ATE estimated in the main body of the paper. In particular, Umalab Ka vote shares increased 3.8 times with respect to the control condition.<sup>2</sup>

**Table 1: Complier Average Casual Effect On Electoral Returns**

	<i>Dependent variable:</i>			
	Population	Registered Voters		
	(1)	(2)	(3)	(4)
ATE	-2.235	0.921	0.372	0.616*
	p = 0.917	p = 0.132	p = 0.387	p = 0.025
Control	61.082*	2.425*	5.368*	0.162
	p = 0.000	p = 0.002	p = 0.0001	p = 0.334
Observations	39	39	18	21
R <sup>2</sup>	-0.012	0.025	0.026	0.231

*Note:* \* $p \leq 0.05$ .  
Inference for the ATE under randomization of the treatment  
Permutation  $p$ -values for ATE

*Note:* \* $p \leq 0.05$ .  
Inference for the ITT under randomization of the treatment.  
Permutation  $p$ -values for ATE.

Table 2 and Figure 1 presents the estimates of the ATE excluding the municipalities of Luisiana, Marikina and Valenzuela, where the original randomization protocol was not followed as originally designed. This exclusion delete the entire randomization stratum (e.g., control and treatment units of a municipality), so that this deletion maintains the randomization-induced balance in the sample. The ATE of the presence of town hall meetings is similar in magnitude and statistically significant on Umalab Ka's vote shares ( $p = 0.053$ ). This is despite the fact that we are left with 12 and 18 observations to estimate Akbayan's and Umalab Ka's treatment effects, respectively.

<sup>1</sup>Pooling both treatment parties together fails to achieve statistical significance ( $p = 0.132$ )

<sup>2</sup>Compared to 4.3 times under the ATE.

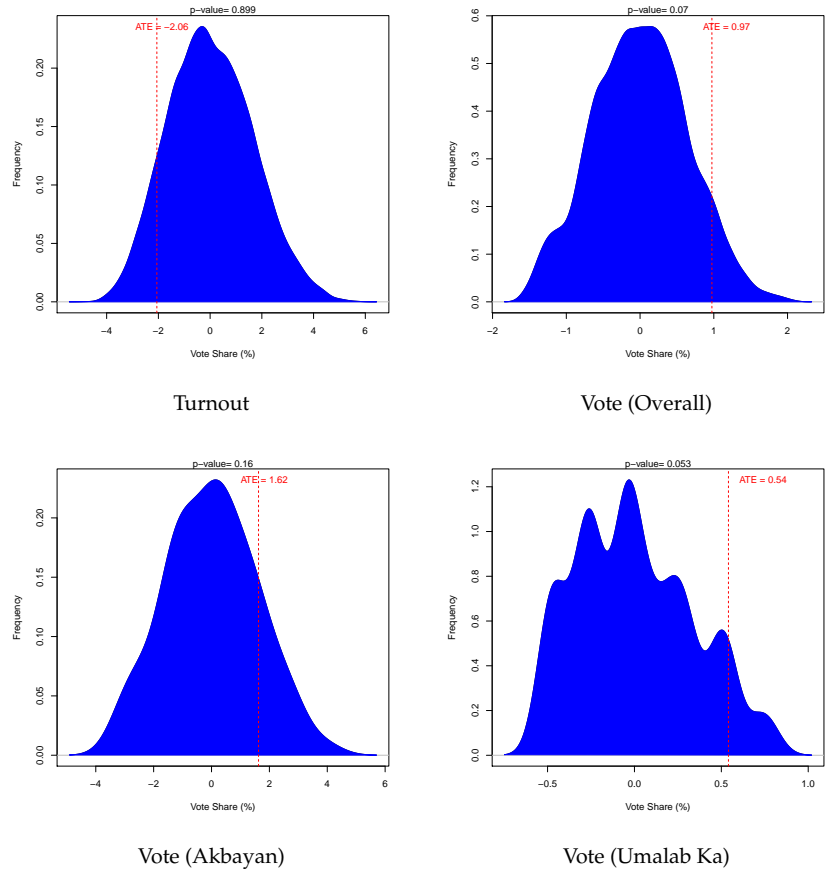
**Table 2: Average Treatment Effect on Electoral Returns at the Barangay Level (Excluding Luisiana , Marikina and Valenzuela)**

	<i>Dependent variable:</i>			
	Turnout (1)	Vote (Overall) (2)	Vote (Akbayan) (3)	Vote (Umalab Ka) (4)
ATE	-2.059 p = 0.896	0.974 p = 0.073	1.625 p = 0.161	0.541* p = 0.053
Control	60.364* p = 0.000	1.963* p = 0.007	4.657* p = 0.001	0.168 p = 0.365
Observations	30	30	12	18
R <sup>2</sup>	0.024	0.025	0.087	0.159

Note: \* $p \leq 0.05$ .

*Inference for the ATE under randomization of the treatment.*

*Permutation p-values for ATE.*



**Figure 1: Permutation Distribution for the Average Treatment Effect.** The dashed red line indicate the observed ATE. The distribution is constructed from 1000 within-city/municipality resamples from the observed outcomes (Excluding the cities of Luisiana, Marikina and Valenzuela).

## 2 ITT Effects with Pre-treatment Covariates

**Table 3: Intention to Treat Effect on Electoral Returns at the Individual Level (with covariates)**

	<i>Dependent variable:</i>			
	Turnout (1)	Vote (Overall) (2)	Vote (Akbyan) (3)	Vote (Umalab-Ka) (4)
ATE	-4.424	6.276	3.981	4.247*
	p = 0.684	p = 0.105	p = 0.124	p = 0.038
Control	78.716*	6.501	13.177	2.972
	p = 0.000	p = 0.383	p = 0.304	p = 0.343
Female	-2.906	3.795	11.019	-3.475
	p = 0.496	p = 0.335	p = 0.074	p = 0.070
Income	-0.272	-4.112	-10.600	1.897
	p = 0.961	p = 0.328	p = 0.142	p = 0.365
Religion	1.079	1.844	8.901	-2.047
	p = 0.885	p = 0.658	p = 0.263	p = 0.537
Education	5.929*	1.440	0.847	-1.484
	p = 0.020	p = 0.473	p = 0.771	p = 0.081
Age	0.682	0.427	-1.361	0.717
	p = 0.691	p = 0.821	p = 0.667	p = 0.068
Observations	732	594	297	297
R <sup>2</sup>	0.394	0.229	0.761	0.273

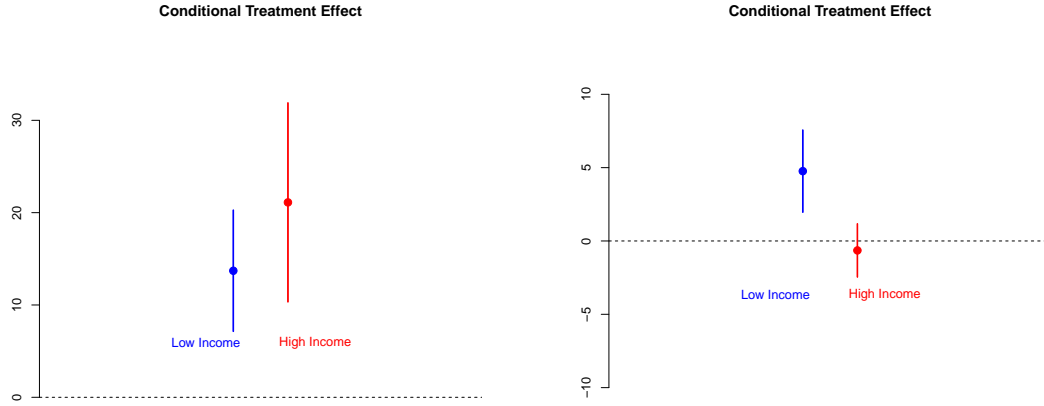
Note: \* $p < 0.05$ .

*Inference for the ITT under randomization of the treatment.*

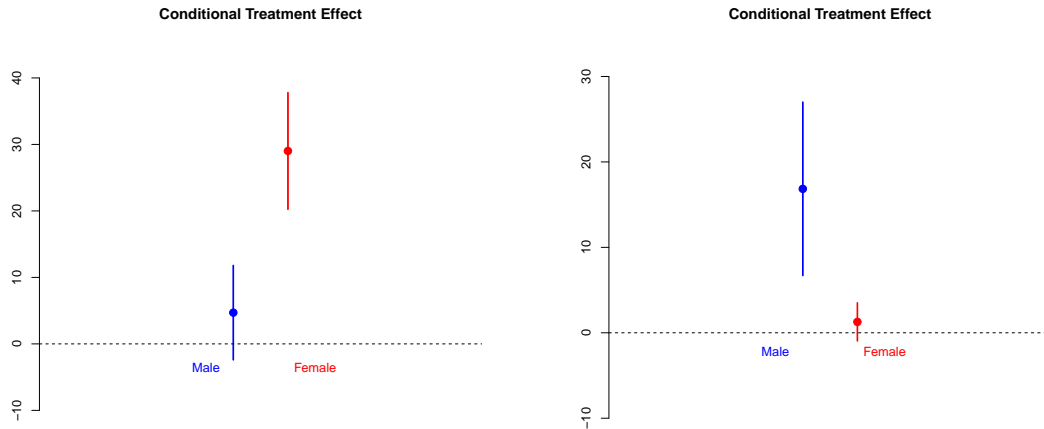
*Permutation p-value for the ITT and p-value constructed with clustered standard errors at the barangay level for pre-treatment covariates.*

*The cities of Imus, Pateros and Santa Maria were not included.*

### Effect by Income



### Effect by Gender



### Vote for Akbayan

### Vote for Umalab Ka

**Figure 2: Marginal effect of town hall meetings on outcomes by income and gender (with covariates). All estimates are based on a linear probability model with city fixed effects and clustered standard errors at the barangay level. Pre-treatment controls include Income, Female, Age, Religion, and Education. Marginal effects are calculated as  $\frac{dY_{ijk}}{dT_p} = \beta_0 + \beta_1 T_p Z_{ijk}$ . Standard errors are calculated as  $s.e.(\frac{dY_{ijk}}{dT_p}) = [\text{var}(\beta_1) + Z_{ijk}^2 \text{var}(\beta_2) + 2Z_{ijk} \text{cov}(\beta_1, \beta_2)]^{\frac{1}{2}}$ .**

### 3 ITT Effects with Unweighted Attendance Responses)

Table 4: Intention to Treat Effect on Electoral Returns at the Individual Level

	<i>Dependent variable:</i>			
	Turnout (1)	Vote (Overall) (2)	Vote (Akbyan) (3)	Vote (Umalab-Ka) (4)
ATE	-0.255 p = 0.510	16.251* p = 0.013	22.616* p = 0.029	4.524* p = 0.050
Control	81.994* p = 0.000	10.345* p = 0.031	18.092* p = 0.019	0.810 p = 0.305
Observations	902	739	417	322
R <sup>2</sup>	0.998	0.993	0.988	0.983

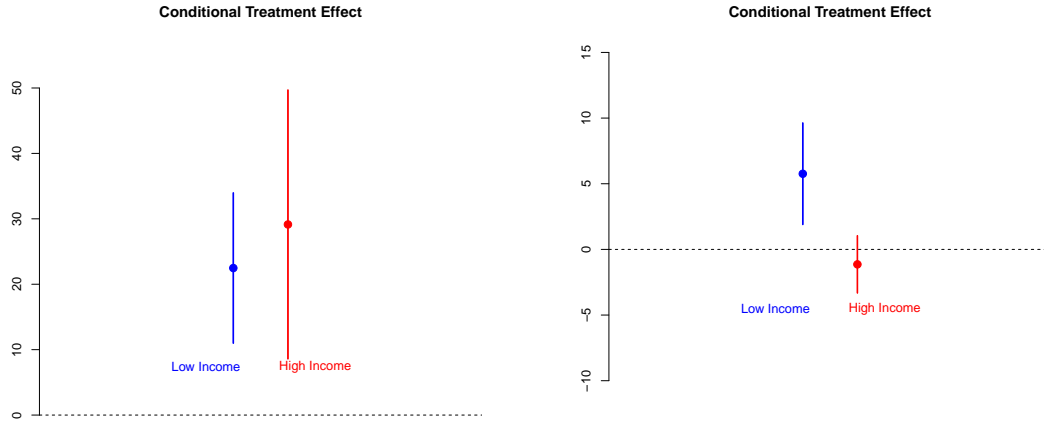
Note: \*  $p < 0.05$ .

*Inference for the ITT under randomization of the treatment.*

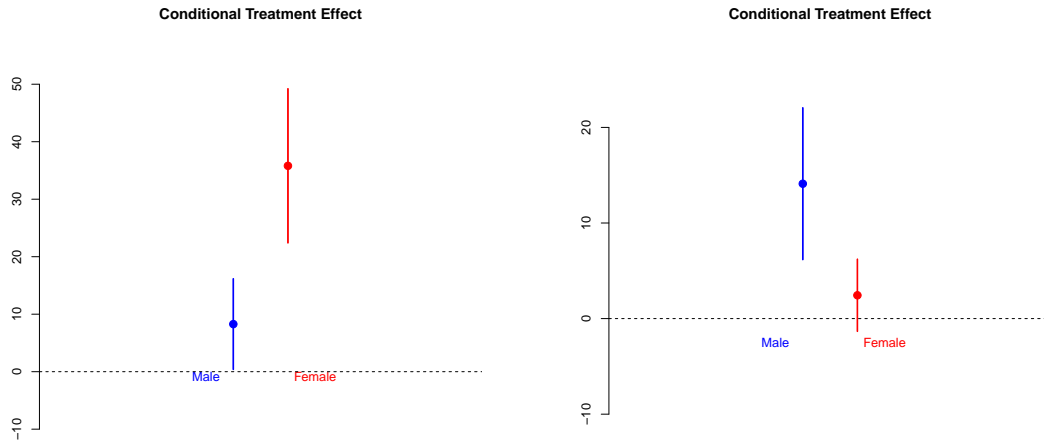
*Permutation p-values.*

*The cities of Imus, Pateros and Santa Maria were not included.*

### Effect by Income



### Effect by Gender



### Vote for Akbayan

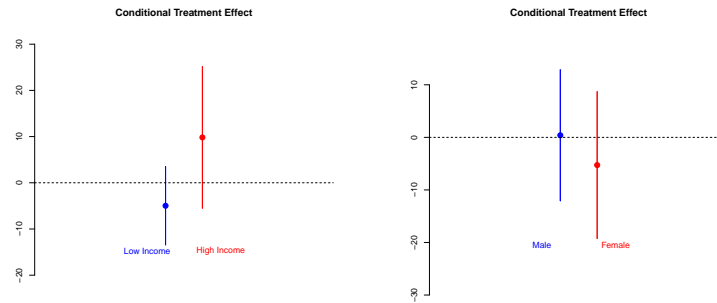
### Vote for Umalab Ka

**Figure 3: Marginal effect of town hall meetings on outcomes by income and gender (Un-weighted Attendance Responses).** All estimates are based on a linear probability model with city fixed effects and clustered standard errors at the barangay level. Marginal effects are calculated as  $\frac{dY_{ijk}}{dT_p} = \beta_0 + \beta_1 T_p Z_{ijk}$ . Standard errors are calculated as  $s.e.(\frac{dY_{ijk}}{dT_p}) = [var(\beta_1) + Z_{ijk}^2 var(\beta_2) + 2Z_{ijk} cov(\beta_1, \beta_2)]^{\frac{1}{2}}$ .

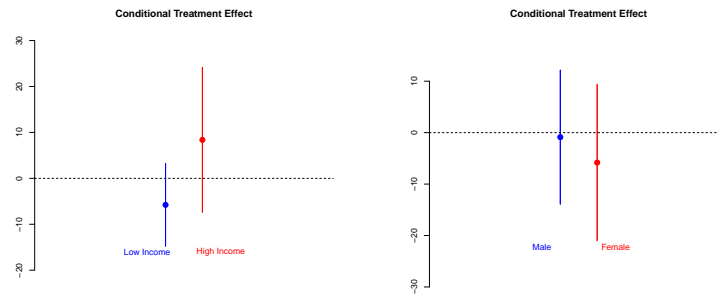


# 4 No Heterogenous Effects on Party-list Turnout

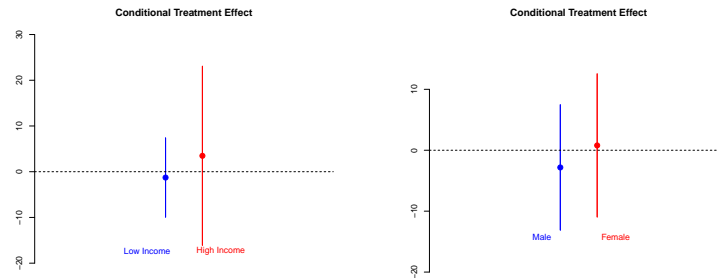
## Baseline Results



## With Pre-treatment Covariates



## Not Adjusted for Attendance



Effect by Income

Effect by Gender

Figure 4: Marginal effect of town hall meetings on party-list turnout by income and gender.

## 5 Survey Questions Used in the Individual-level Analysis

### 5.1 Demographics

The enumerator will ask the respondent and circle the corresponding choice number.

- (Income) What is your monthly household income in pesos?
  1. Below 10K
  2. Up to 60K
  3. Up to 100K
  4. Over 100K
- (Female) Indicate your gender
  1. Male
  2. Female
- (Age) What is your age?
  1. 18-29
  2. 30-39
  3. 40-49
  4. 50 and up
- (Religion) Do you belong to any particular religion?
  1. Roman Catholic
  2. Protestant
  3. Islam
  4. Others
- (Status) What is your marital status?
  1. Married
  2. Single
  3. Widowed
  4. Separated
  5. Other
- (Linguistic) What is the ethnic or linguistic group you identify with?
  1. Tagalog

2. Cebuano
  3. Hiligaynon
  4. Waray
  5. Bikol
  6. Ilokano
  7. Kapampangan
  8. Pangasinense
  9. Others
- (Education) What is your highest level of education?
    1. None
    2. Elementary
    3. High School
    4. College
    5. Post-Graduate

## 5.2 Turnout and Vote Choices

- (Turnout) We would like to ask you about the last national elections that happened on May 13. Did you go to a polling station?
  1. Yes
  2. No
  - (Vote) If yes, which party-list did you vote for in the election of party-list representatives? (Open Answer).

## 5.3 Town-Hall Meeting Attendance

For the enumerator in treatment barangays, please ask the next question:

- (Attendance) During the campaign, did you attend town-hall meetings enabled for you by the party-list (PL NAME) in favor of its candidates?
  1. Yes
  2. No

## 5.4 Gender Attitudes

- (Female Rep.) Who would do a better job in the House of Representatives? A representative who is Male, a representative who is Female, or would they do an equally good or bad job?
  1. Male
  2. Female
  3. Both
  
- (Female Pol.) Would you say that women have too much influence in Philippines politics, just about the right amount of influence in Philippines politics, or too little influence in Philippines politics?
  1. Too much
  2. Too little
  3. Just the right amount
  
- I am going to read several statements. After each one, I would like you to tell me how strongly you agree or disagree
  - (Equality) “When women demand equality these days, they are actually seeking special favors”. Do you:
    1. Agree strongly
    2. Agree somewhat
    3. Neither agree nor disagree
    4. Disagree somewhat or
    5. Disagree Stronglywith this statement?
  
  - (Discrimination) “Women often miss out of good jobs because of discrimination”. Do you:
    1. Agree strongly
    2. Agree somewhat
    3. Neither agree nor disagree
    4. Disagree somewhat or
    5. Disagree Stronglywith this statement?
  
  - (Harassment) “Women who complain about sexual harassment cause more problems than they solve”. Do you:
    1. Agree strongly
    2. Agree somewhat

3. Neither agree nor disagree
  4. Disagree somewhat or
  5. Disagree Strongly
- with this statement?

## 5.5 Poverty Attitudes

- For each of the following issues, please indicate how strongly you agree or disagree that it is one of the Philippines' main problems:
  - Poverty.
  - Wide income gap between rich and poor.

  1. Agree strongly
  2. Agree somewhat
  3. Neither agree nor disagree
  4. Disagree somewhat or
  5. Disagree Strongly

- (CCT) Please read the following three options of government policies in the Philippines.
  1. Conditional Cash Transfers or CCT (like the Pantawid Pamilya Pilipino Program)
  2. Anti-Corruption Drive
  3. Increased Investments (including Public-Private Partnership, or PPP)

Which of these options would you most like to see implemented?