Distributive Implications of Competitive Clientelism: Evidence from Bangladesh

Youjin Hahn[1]   Kanti Nuzhat[2]   Hee-Seung Yang[3]   Haishan Yuan[4]

[1]Yonsei University, Korea

[2]North South University, Bangladesh

[3]KDI School of Public Policy & Management, Korea

[4]University of Queensland, Australia

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[†]Asian Meeting of the Econometric Society

Patron-Client Relationship

A patron provides protection and benefits for a person with lower social status, namely the client, who in exchange offers general support and services to the patron (Scott, 1972).

- ► e.g., landlords
    - • build their patronage networks on land leases, sharecropping and hired labor; and
    - • extend their influence through the provision of credit, protection and some public services such as dispute mediation.

- ► Clientelism is prevalent in many developing countries.

Clientelistic Distribution

- In young democracies, distributive politics are often clientelistic:

  - government policies include a high level of spending that targets narrow groups of voters and provides a low level of public goods;

  - targeted transfers to narrow groups of voters in exchange for their votes.

- Problems with clientelistic spending:

  - inefficient

  - weakens political accountability

Distributive Politics

- Programmatic redistribution:
  - Broad-based social programs
  - Progressive taxation

- Constraints?
  - Governments may lack state capacities (Besley & Persson, 2009; 2011).
  - Political parties may lack credibility to campaign on broad-based social programs (Keefer, 2007; Keefer & Vlaicu, 2007).

Clientelistic Distribution: Second Best?
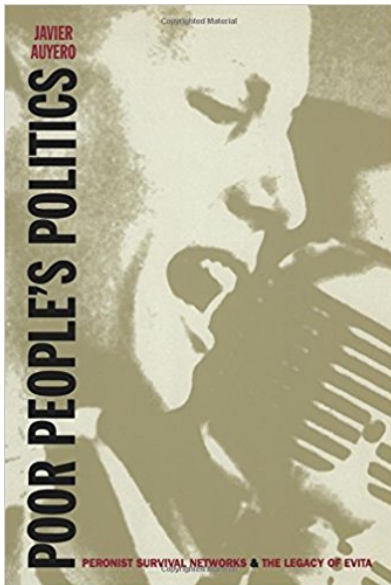
- ▶ The votes of the poor are cheaper to buy.

- ▶ Clientelistic redistribution at least make sure some distribution to the poor (Fukuyama, 2018).

Intermediated Clientelism

In many young developing democracies, patrons and local elites intermediate the exchanges of goods and services for political support between voters and political parties.

- ► Vote buying requires patrons and local elites to ensure turnout (Finan & Schechter, 2012).

- ► Brokers may extract rents from the exchanges, offsetting any pro-poor tendency of the clientelistic distribution of state spendings.

Brokered Clientelistic Spending

▶ In Argentina, more than 90% of respondents reported that at least some brokers extracted resources intended for voters.

Brokers, Voters, and Clientelism
The Puzzle of Distributive Politics

matador

Susan C. Stokes
Thad Dunning
Marcelo Nazareno
Valeria Brusco

CAMBRIDGE

Questions

- Do households benefit from clientelistic spendings?

- Is the clientelistic spending pro-poor?

In This Paper:

- Bangladesh: Competitive Clientelism (Khan, 2013)

- Do governing party constituencies have higher consumption and public goods? (Yes)

- What households benefit the most? (Not the poor)

- Empirical Approach: RD
  - Local Average Treatment Effect
  - Local *Quantile* Treatment Effect

Related Literature

- ▶ Partisan alignment & inter-governmental transfers

  - e.g., Arulampalam et al. (2009); Sole-Olle and Sorribas-Navarro (2008); Brollo and Nannicini (2012)

- ▶ How existing socioeconomic inequality affects the allocation of public spending

  - e.g., Bardhan & Mookherjee (2006); Araujo et al. (2008); Anderson et al. (2015)

- ▶ Roles of political brokers and the agency problems between political parties and brokers in the distribution of clientelistic transfers

 - Stokes et al. (2013); Larreguy et al. (2016)

Background: Bangladesh

- Public finance: highly centralized

- Legislature: Westminster system
  - majoritarian
  - unicameral
  - 300 single-member seats (first-past-the-post)
  - + 50 reserved seats for women

- Two parties alternate in governing.

Numbers of Constituencies Won by Party

Party / Year	1996	2001	2008
Bangladesh Awami League (AL)	**146**	62	**230**
Bangladesh Nationalist Party (BNP)	116	**193**	30
Independent	1	6	4
Islami Oikya Jote	1	2	
Jamat-E-Islami Bangladesh (JI)	3	17	2
Jatiya Party (JP)	32	4	27
Jatiya Samajtantric Dal (Rab)	1		3
Islami Jatiya Oikya Front		14	
Jatiya Party (manju)		1	
Krisak Sramik Janata League		1	
Bangladesh Worker's Party			2
Liberal Democratic Party (LDP)			1
Bangladesh Jatiya Party (BJP)			1
Total	300	300	300

Parliamentary Seat Shares and National Vote Shares
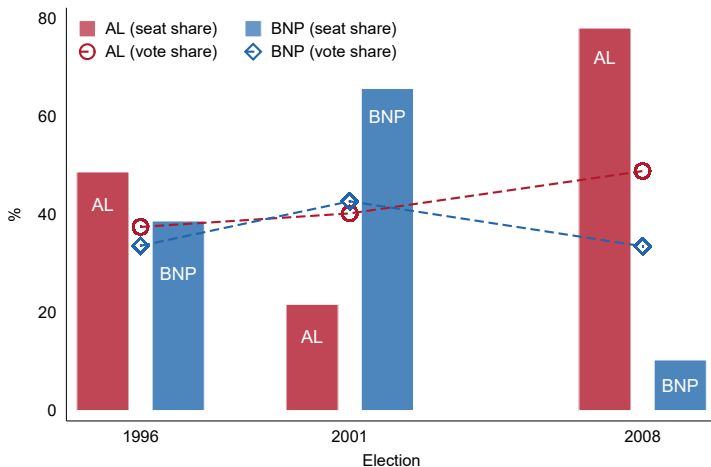
AL: Bangladesh Awami League
BNP: Bangladesh Nationalist Party

Distributive Politics

- Grants to be allocated by each MP in their district:
  - 150 million Taka ($2.5 million) of developmental grants
  - 600 tons of wheat or rice for poverty relief

- The grants are subject to the approval by the Local Gov. Engineering Department.

- MPs could lobby for additional developmental grants.
  - MPs of the governing parties are often more successful.

Data

- Household Income and Expenditure Survey (HIES)
  - access to infrastructure & HH consumption
  - by the Bangladesh Bureau of Statistics
  - 1995, 2000, 2005 & 2010

- Poverty rates at sub-district level:
  - by BBS, joint with World Bank & World Food Program

- Election outcomes
  - candidates names, party affiliations, vote shares etc.
  - from the Election Commission of Bangladesh
  - general elections: 1996, 2001 & 2008

Summary Statistics

	1995	2000	2005	2010
	Households			
Age	24.247	25.768	26.823	28.435
	(9.694)	(10.195)	(10.772)	(11.987)
Literacy	0.332	0.416	0.480	0.495
	(0.325)	(0.353)	(0.356)	(0.323)
Female	0.503	0.501	0.504	0.513
	(0.185)	(0.178)	(0.180)	(0.188)
Participation in Social Safety Programs	-	-	0.151	0.245
	-	-	(0.358)	(0.430)
Access to Clean Drinking Water	-	-	0.583	0.559
	-	-	(0.493)	(0.497)
Access to Improved Sanitation	0.324	0.350	0.530	0.523
	(0.468)	(0.477)	(0.499)	(0.499)
Access to Electricity	0.284	0.371	0.459	0.575
	(0.451)	(0.483)	(0.498)	(0.494)
Per-capita Household Consumption ($)	338.0	300.7	312.5	437.5
	(297.6)	(256.2)	(256.0)	(351.0)
Per-capita Household Food Consumption ($)	187.0	159.2	166.8	233.0
	(104.9)	(84.7)	(82.4)	(123.8)
Household Size	5.239	5.160	4.904	4.525
	(2.325)	(2.193)	(2.105)	(1.876)
Number of Constituencies	242	230	258	237
Number of Households	6,979	6,479	4,786	11,787
	Subdistricts			
Poverty Rate	-	-	0.417	0.308
	-	-	(0.163)	(0.142)
Extreme Poverty Rate	-	-	0.268	0.174
	-	-	(0.142)	(0.107)
Number of Subdistricts			423	421

Empirical Approach

Regression Discontinuity (RD) Design:

$$Y_{ijt} = \alpha + \beta G_{jt} + f(M_{jt}) + \mu_t + \epsilon_{ijt}$$

where i indexes households, j indexes electorates, t indexes time, and

Y_{ijt}: outcomes variable, e.g. household consumption

G_{jt}: binary indicating governing party constituency

$f(M_{jt})$: polynomial of running variable M_{jt}

μ_t : year fixed effect

Empirical Approach: RD

$$Y_{ijt} = \alpha + \beta G_{jt} + f(M_{jt}) + \mu_t + \epsilon_{ijt}$$

Running variable M_{jt} is the margin of victory for the governing party candidate:

$$M_{jt} = \text{Vote Share of Governing Party Candidate}$$
$$- \text{Vote Share of the Main Competitor}$$

Treatment variable G_{jt} is determined by M_{jt}:

$$G_{jt} = \begin{cases} 1 & \text{if } M_{jt} > 0 \\ 0 & \text{if } M_{jt} \leq 0 \end{cases}$$

Empirical Approach: RD

$$Y_{ijt} = \alpha + \beta\, G_{jt} + f(M_{jt}) + \mu_t + \epsilon_{ijt}$$

- Non-parametric (local-linear) with optimal bandwidth (Calonico et al., 2014).

- Bootstrapped S.E. clustered by constituency.

Balancing Tests of Pre-determined Variables

	Coefficient	Std. Error	# Obs.
Age	0.728	(0.637)	17,938
Literacy	-0.073	(0.051)	17,938
Female	-0.018	(0.011)	17,938
Poverty Rate	-0.052	(0.072)	399
Extreme Poverty Rate	-0.069	(0.056)	399
Participation in Social Safety Programs	-0.042	(0.065)	3,821
Access to Clean Drinking Water	0.114	(0.174)	4,500
Access to Improved Sanitation	0.051	(0.090)	17,938
Access to Electricity	0.054	(0.097)	17,938
Per-capita Household Consumption ($)	-3.646	(47.94)	17,938
Per-capita Household Consumption (log)	0.009	(0.110)	17,938
Per-capita H.H. Food Consumption (log)	0.045	(0.082)	17,938
Per-capita H.H. Nonfood Consumption (log)	-0.023	(0.155)	17,938
Household Size	0.308*	(0.170)	17,938

Notes: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

McCrary Density Test of Continuity
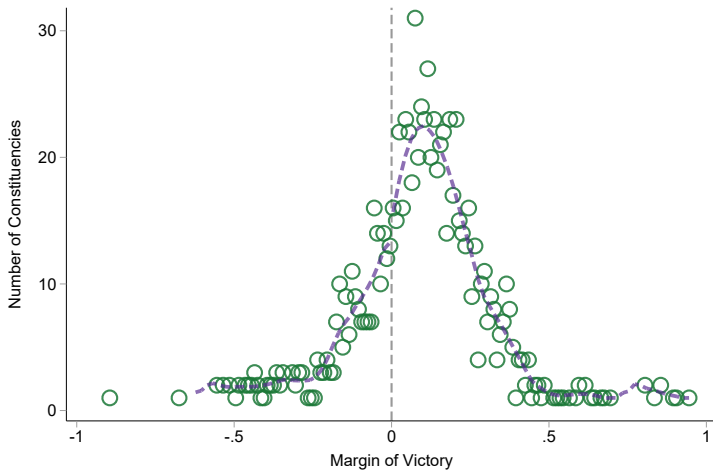
Government MPs & Household Expenditures
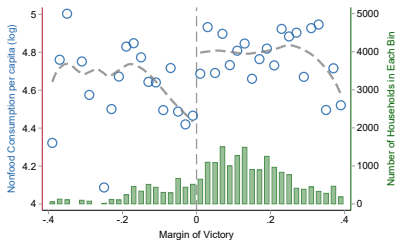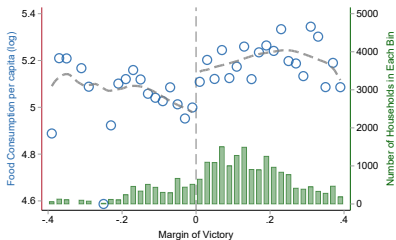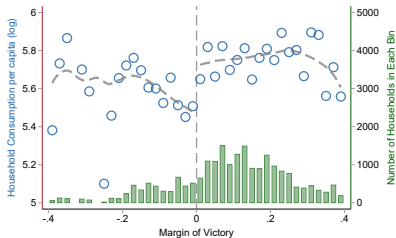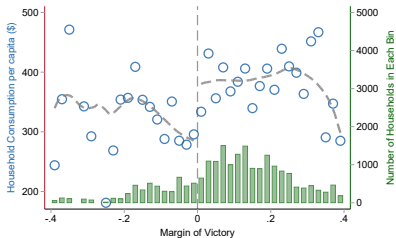
Government MPs & Household Consumption

	(1)	(2)	(3)	(4)	(5)
Per-capita HH Consumption ($)	71.7**	45.2***	82.7***	49.3**	59.7**
	(28.2)	(16.8)	(22.0)	(20.8)	(28.8)
Per-capita HH Consumption (log)	0.184**	0.108**	0.213***	0.109***	0.154***
	(0.074)	(0.043)	(0.060)	(0.041)	(0.056)
Per-capita HH Food Consumption (log)	0.112*	0.070**	0.128***	0.063*	0.104**
	(0.061)	(0.033)	(0.046)	(0.034)	(0.045)
Per-capita HH Nonfood Consumption (log)	0.299***	0.159**	0.329***	0.168***	0.213***
	(0.101)	(0.063)	(0.088)	(0.059)	(0.080)
Running Variable	**Nonparametric**	Linear	Quadratic	Linear	Quadratic
Year Fixed Effects	Y	Y	Y	Y	Y
Constituency Fixed Effects				Y	Y
Number of Observations (HHs)	22969	22969	22969	22969	22969

Notes: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Government MPs and Poverty

Photo Source: Daily Sun
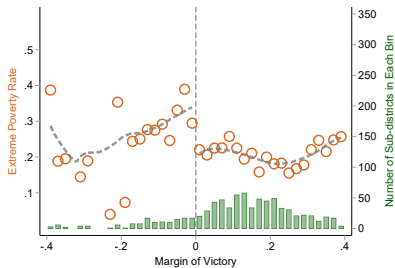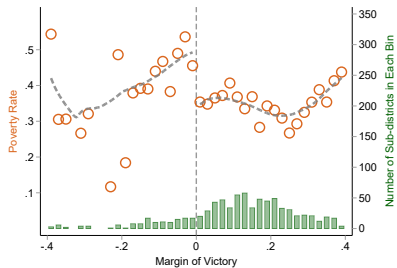
Government MPs and Poverty

	Poverty Rate	Extreme Poverty Rate
GovMp	-0.124***	-0.104***
	(0.044)	(0.035)
Number of Subdistricts (*N*)	844	844

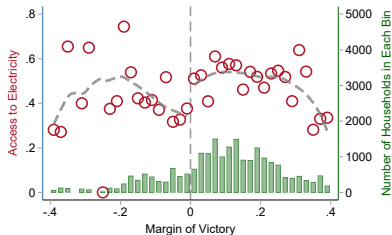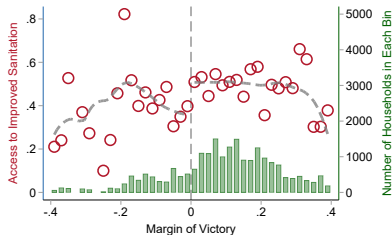Notes: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

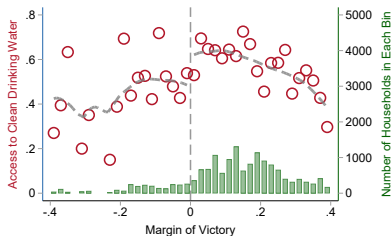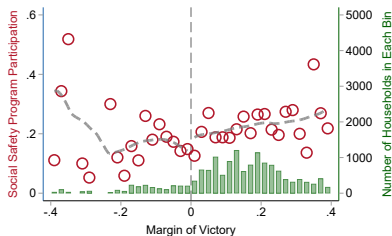# Government MPs and Publicly Provided Goods and Services

Photo Source: gofundme.com

Government MPs and Publicly Provided Goods & Services

Government MPs and Publicly Provided Goods & Services

	(1)	(2)	(3)	(4)	(5)
Participation in Social Safety Programs	0.041 (0.060) $N = 15,727$	0.050* (0.029) $N = 15,727$	-0.024 (0.039) $N = 15,727$	0.108** (0.046) $N = 15,727$	0.062 (0.061) $N = 15,727$
Access to Clean Drinking Water	0.080 (0.133) $N = 16,490$	0.150** (0.064) $N = 16,490$	0.189** (0.093) $N = 16,490$	0.062 (0.061) $N = 16,490$	0.116 (0.086) $N = 16,490$
Access to Improved Sanitation	0.057 (0.114) $N = 22,969$	0.071 (0.050) $N = 22,969$	0.156** (0.072) $N = 22,969$	0.057* (0.033) $N = 22,969$	0.050 (0.047) $N = 22,969$
Access to Electricity	0.065 (0.081) $N = 22,969$	0.088* (0.047) $N = 22,969$	0.211*** (0.064) $N = 22,969$	0.087*** (0.024) $N = 22,969$	0.109*** (0.032) $N = 22,969$
Running Variable	**Nonparametric**	Linear	Quadratic	Linear	Quadratic
Year Fixed Effect	Y	Y	Y	Y	Y
Constituency Fixed Effect				Y	Y

Notes: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.

Distributional Impacts within Governing Party Constituencies

- ▶ Are increases of household consumption evenly distributed?

- ▶ Extend RD design to identify impacts on the distribution of household consumption

  (Frandsen et al., 2012)

- ▶ Quantile Treatment Effects δ_τ:

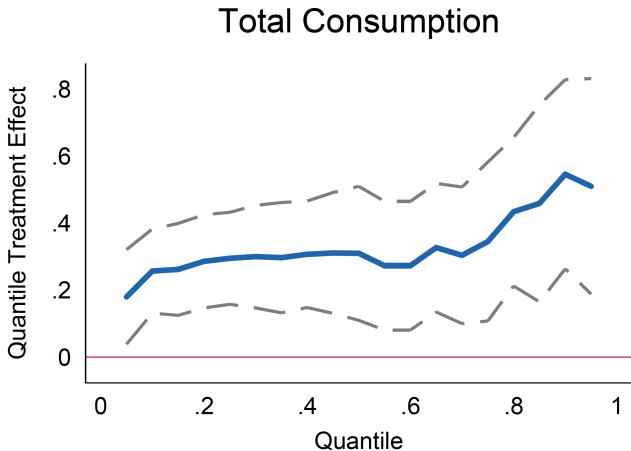$$Q_\tau(Y_{ijt}) = \alpha_\tau + \delta_\tau G_{jt} + f_\tau(M_{jt}) + \mu_{\tau,t}$$

where

Y_{ijt}: log per-capita household expenditure of individual i in constituency j in year t
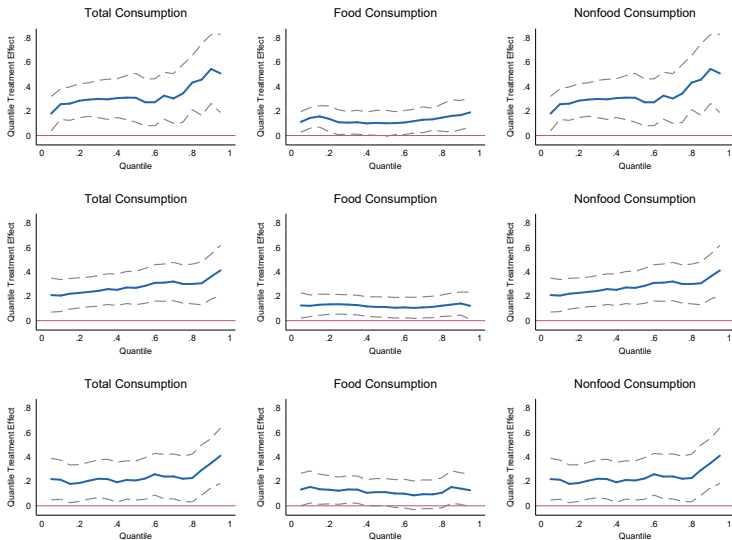
$Q_\tau(Y_{ijt})$: τ-quantile of Y_{ijt}, $\forall\ \tau \in (0,1)$

Quantile Treatment Effects on Household Expenditures

$$Q_\tau(Y_{ijt}) = \alpha_\tau + \boldsymbol{\delta_\tau}\, G_{jt} + f_\tau(M_{jt}) + \mu_{\tau,t}$$

Total Consumption

Quantile Treatment Effects on Household Expenditures

Heterogeneous QTE?

- Quantile Treatment Effects δ_τ:

$$Q_\tau(Y_{ijt}) = \alpha_\tau + \delta_\tau G_{jt} + f_\tau(M_{jt}) + \mu_{\tau,t}$$

- Hypothesis Test:

$$H_0: \delta_{\tau_L} = \delta_{\tau_H}$$
$$H_1: \delta_{\tau_L} < \delta_{\tau_H}$$

where $0 < \tau_L < \tau_H < 1$.

- Randomization Inference

Randomization Tests: Procedures

1. Randomly split the sample into 2: one for $\hat{\delta}_{\tau_L}$; the other for $\hat{\delta}_{\tau_H}$. Get $\mathbf{1}_i(\hat{\delta}_{\tau_L} < \hat{\delta}_{\tau_H})$.

2. Repeat (i) 250 times: each split sample yields an indicator $\mathbf{1}(\hat{\delta}_{\tau_L} < \hat{\delta}_{\tau_H})$. In the end, a test statistic $S = \sum_i \mathbf{1}_i(\hat{\delta}_{\tau_L} < \hat{\delta}_{\tau_H})$.

3. Simulate a binomial distribution $B(250, 0.5)$ with 100,000 draws.

4. Compare the test statistics S to the simulated binomial distribution for the occurrences in which $S < S_j$, where $j = 1, 2, \cdots, 100,000$ indicates a draw.

5. The one-side p-value is the frequency that $S < S_j$. If the p-values < 0.05, we reject the null in favor of the alternative, $\delta_{\tau_L} < \delta_{\tau_H}$.

Randomization Tests: Results

τ_H vs. τ_L	$\hat{\delta}_{\tau_H}$	$\hat{\delta}_{\tau_L}$	p-value
90 vs. 50	0.546	0.310	0.0000
80 vs. 50	0.434	0.310	0.0002
70 vs. 50	0.304	0.310	0.2075
60 vs. 50	0.273	0.310	0.2851
90 vs. 10	0.546	0.257	0.0000
80 vs. 20	0.434	0.286	0.0006
70 vs. 30	0.304	0.300	0.7954
60 vs. 40	0.273	0.307	0.6726

Gov. MPs & Household Consumption: by Land Ownership

	(1)	(2)	(3)	(4)
GovMP	0.063*	0.146***	0.059*	0.140***
	(0.036)	(0.050)	(0.035)	(0.050)
Q_1	0.135***	0.137***	0.079***	0.081***
	(0.029)	(0.028)	(0.027)	(0.027)
Q_2	0.158***	0.161***	0.184***	0.189***
	(0.031)	(0.030)	(0.028)	(0.028)
Q_3	0.224***	0.230***	0.247***	0.254***
	(0.031)	(0.032)	(0.029)	(0.029)
Q_4	0.424***	0.432***	0.397***	0.400***
	(0.031)	(0.032)	(0.029)	(0.029)
GovMP $\times$ Q_1	-0.050	-0.052	-0.015	-0.017
	(0.035)	(0.035)	(0.033)	(0.033)
GovMP $\times$ Q_2	0.047	0.044	0.018	0.014
	(0.036)	(0.035)	(0.032)	(0.032)
GovMP $\times$ Q_3	0.056	0.051	0.046	0.038
	(0.035)	(0.036)	(0.032)	(0.032)
GovMP $\times$ Q_4	0.075**	0.066*	0.098***	0.095***
	(0.035)	(0.036)	(0.033)	(0.034)
Running Variable	Linear	Quadratic	Linear	Quadratic
Quartile Definition	National	National	Local	Local
# Observations	15,026	15,026	15,026	15,026

Notes: * $p < 0.10$; ** $p < 0.05$; *** $p < 0.01$.
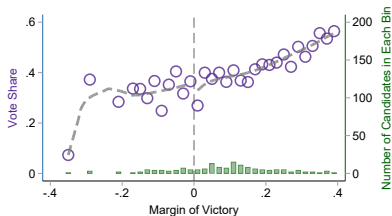
Incumbency Advantages?
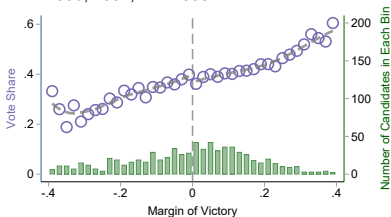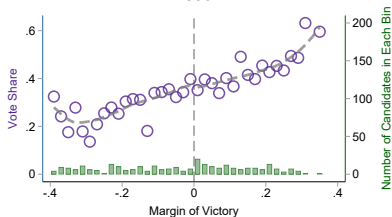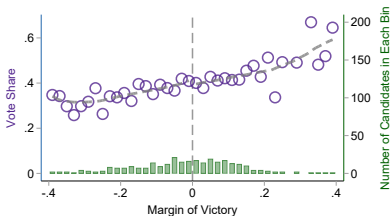
Concluding Remarks

- Having a government MP provides greater consumption for households and reduces poverty in Bangladesh.

- However, the quantile treatment effects of having a government MP are significantly greater at the high end of consumption distribution than at the low end.

- The largest landowners by acre also benefit the most.

- Our findings suggest that in Bangladesh's competitive clientelistic politics, wealthy households disproportionately benefit from the rents brought by a government MP.

Thanks! Comments are welcome!

Haishan Yuan

haishan-yuan.weebly.com

Basic Health Infrastructure

- According to WHO & UNICEF (2015):
  - 2.4 billion people still lack basic sanitation facilities;
  - 946 million people still practice open defecation.
  - 663 million people still have no access to clean drinking water;

- Poor water quality, inadequate sanitation & hand hygiene caused about one million deaths in 2012.

Electricity

- Necessary for the industrialization.

- Central in the development agenda.

- Increases female employment by increasing productivity of domestic production (Dinkelman, 2011).

- South Asia and Sub-Saharan Africa lagged behind in electrification.

Measures of Infrastructure Access

- Access to clean drinking water
  - pipe water or arsenic-tested tube water
  - 36 million people in Bangladesh could be drinking arsenic-contaminated groundwater.
  - Bangladesh government tested over 5 million tube wells since late 1990s.

- Basic sanitation
  - access to sanitary latrines
  - The National Sanitation Strategy set out policy to invest and subsidize in public sanitation infrastructure.

- Access to Electricity