Do Autonomous Anti-Corruption Entities Improve Governance? A Counterfactual Analysis

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Motivation

- To enhance peaceful and inclusive societies, provide access to justice for all and build effective, accountable, and inclusive institutions at all levels in an importance component of SDGs.

- The prevalence of corruption is the prime obstacle ensuring good governance globally.

- To eradicate corruptions and improve other components of governance, many nations established autonomous commission and precisely anti-corruption entities.

Literature Loophole

• Very few studies emphasis on the interaction between anti-corruption entities and governance.

• Existing literature mostly highlight on the relationship between anti-corruption authorities and corruption groups (Neverova et al., 2015), anti-corruption law and corruption (Hitch & Kuchma, 2011), limits to the independent anti-corruption commission and corruption reform (Jacobs & Wagner, 2007; Marchenko, Akimova & Akimov, 2021) and anti-corruption discourse from different perspective (Bukovansky, 2006; Ionescu, 2016).

• Existing studies also apply relatively backdated methods which motivates us to conduct the current study applying robust method.

• The effectiveness of commission in reducing corruption, improving budgetary accountability, fostering law and order, and improving bureaucracy quality remain puzzle in the empirical literature.

Set Up

Treatment (46)	Control (173)	Control	Control
Argentina	Albania	Gambia, The	Puerto Rico
Afghanistan	Algeria	Georgia	Qatar
Barbados	American Samoa	Ghana	Reunion
Bhutan	Andorra	Greenland	Russian Federation
Bosnia and Herzegovina	Angola	Grenada	Samoa
Brazil	Anguilla	Guam	San Marino
Burkina Faso	Antigua and Barbuda	Guinea	Sao Tome and Principe
Cameroon	Armenia	Guinea-Bissau	Saudi Arabia
Croatia	Aruba	Guyana	Seychelles
Ethiopia	Azerbaijan	Honduras	Solomon Islands
Guatemala	Bahamas, The	Hong Kong SAR, China	Somalia
Haiti	Bahrain	India	St. Kitts and Nevis
Indonesia	Belarus	Iran, Islamic Rep.	St. Lucia
Jamaica	Belize	Iraq	Vincent and the Grenadines
Jordan	Benin	Jersey, Channel Islands	Sudan
Kenya	Bermuda	Kazakhstan	Suriname
Kosovo	Bolivia	Kiribati	Syrian Arab Republic
Lesotho	Brunei Darussalam	Korea, Dem. People's Rep.	Taiwan, China
Madagascar	Bulgaria	Kuwait	Tajikistan
Malawi	Burundi	Kyrgyz Republic	Thailand
Mauritius	Cabo Verde	Lao PDR	Timor-Leste
Moldova	Cambodia	Lebanon	Tonga
Mongolia	Cayman Islands	Liberia	Trinidad and Tobago
Montenegro	Central African Republic	Libya	Tunisia
Morocco	Chad	Liechtenstein	Turkmenistan
Mozambique	China	Macao SAR, China	Tuvalu
Namibia	Comoros	Malaysia	Ukraine
Nepal	Congo, Dem. Rep.	Mali	United Arab Emirates
Nigeria	Congo, Rep.	Malta	Uruguay
Pakistan	Cook Islands	Marshall Islands	Uzbekistan
Palau	Cote d'Ivoire	Martinique	Vanuatu
Philippines	Cuba	Mauritania	Venezuela, RB
Romania	Cyprus	Micronesia, Fed. Sts.	Vietnam
Rwanda	Djibouti	Monaco	Virgin Islands (U.S.)
Senegal	Dominica	Myanmar	West Bank and Gaza
Serbia	Dominican Republic	Nauru	Zimbabwe
Sierra Leone	Ecuador	Netherlands Antilles	
Singapore	Egypt, Arab Rep.	Nicaragua	
South Africa	El Salvador	Niger	
South Sudan	Equatorial Guinea	Niue	
Sri Lanka	Eritrea	North Macedonia	
Tanzania	Eswatini	Oman	
Togo	Fiji	Panama	
Uganda	French Guiana	Papua New Guinea	
Yemen, Rep.	Gabon	Paraguay	
Zambia		Peru	

Measures

Outcome Variable :
- Quality of Governance (QoG)
- Six Components of QoG specifically

Components of QoG:
- Control of Corruption (CoC)
- Political Stability (PS)
- Government Effectiveness (GE)
- Regulatory Quality (RQ)
- Rule of Law (RoL)
- Voice and Accountability (VA)

Treatment Variable:
- The Establishment of Anti-Corruption Entity

Covariate:
- UN Convention
- Prevention
- Investigation
- Prosecution

Variables (1996-2019)

Outcome Variables	Short Definition
Control of Corruption	perceptions of the extent to which public power is exercised for private gain, including both petty and. grand forms of corruption, as well as "capture" of the state by elites and private interests.
Political Stability	specific kind of stability: the rule of law, strong institutions rather than powerful individuals, an efficient bureaucracy, low corruption and an investment enabling business climate.
Government Effectiveness	perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies"
Regulatory Quality	captures perceptions of the ability of the government to formulate and implement sound policies and regulations that. permit and promote private sector development.
Rule of Law	The rule of law refers to a situation in which the people in a society obey its laws and enable it to function properly.
Voice and Accountability	an umbrella term that covers a wide range of ideas about how citizens can express preferences, secure their rights, make demands on the state and ultimately achieve better development outcomes.
Treatment Variable	
The Establishment of Anti-Corruption	Anti-corruption entities are i.e., Anti-Corruption Commission, Department of Public Prosecutions, Agency for the Prevention of Corruption, Anti-Corruption Initiative etc.
Covariate	
UN Convention	UN Anti-Corruption Convention signature
Prevention	Functions of Anti-corruption entities
Investigation	Functions of Anti-corruption entities
Prosecution	Functions of Anti-corruption entities

Data & Estimation approaches

Data:

- We consider 46 developing countries as our treatment group
- While we consider 173 countries as control groups

Time: 1996 to 2019

Data Source:

- Anti Corruption Entities: The Anti-corruption Authorities (ACAs)
- Quality of Governance: Gothenburg University

Intuition and Applications

	Group that is affected by the policy change (treatment)	Group that is not affected by the policy change (control)
After the program start (T=1)	$Y_1(u_i) \mid D_i=1$	$Y_1(u_i) \mid D_i=0$
Before the program start (T=0)	$Y_0(u_i) \mid D_i=1$	$Y_0(u_i) \mid D_i=0$
	$\bar{Y}_1^{TG} - \bar{Y}_0^{TG}$	$\bar{Y}_1^{CG} - \bar{Y}_0^{CG}$

$$DiD = \left(\bar{Y}_1^{TG} - \bar{Y}_0^{TG}\right) - \left(\bar{Y}_1^{CG} - \bar{Y}_0^{CG}\right)$$

Definitions

- **Counterfactual** analysis enables evaluators to attribute cause and effect between interventions and outcomes. The 'counterfactual' measures what would have happened to beneficiaries in the absence of the intervention, and impact is estimated by comparing counterfactual outcomes to those observed under the intervention

- **Control group** is a population not enrolled in the program (policy, reform, treatment, etc.)

- **Treatment group** is a population enrolled in the program (policy, reform, treatment, etc.)

Graphical representation
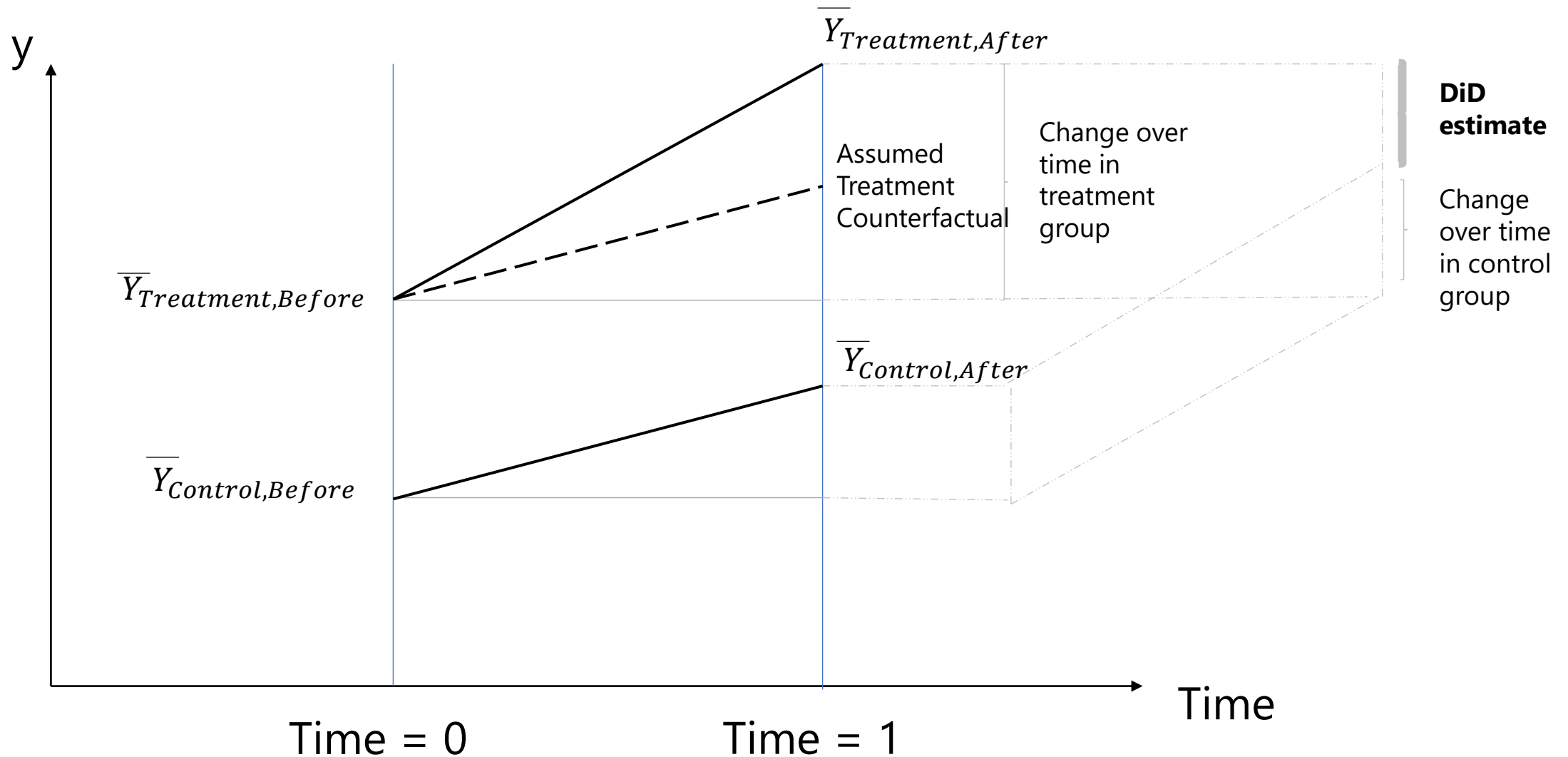
Empirical Model

- $Y_i = \alpha + \beta D_i + \gamma T_i + \delta(D_i T_i) + \varepsilon_i$
- $\delta = \left(\bar{Y}_1^{TG} - \bar{Y}_o^{TG}\right) - \left(\bar{Y}_1^{CG} - \bar{Y}_o^{CG}\right)$

Where, α= constant, β = treatment group specific effect (average permanent difference between participants and non-participants, marginal effect of D at T=0), γ = time trend common to both treatment and control groups (marginal effect of T at D=0), δ= true effect of the interventions (treatment effect), ε_i=error term.

Assumptions

- Parallel trends in pre-treatment period
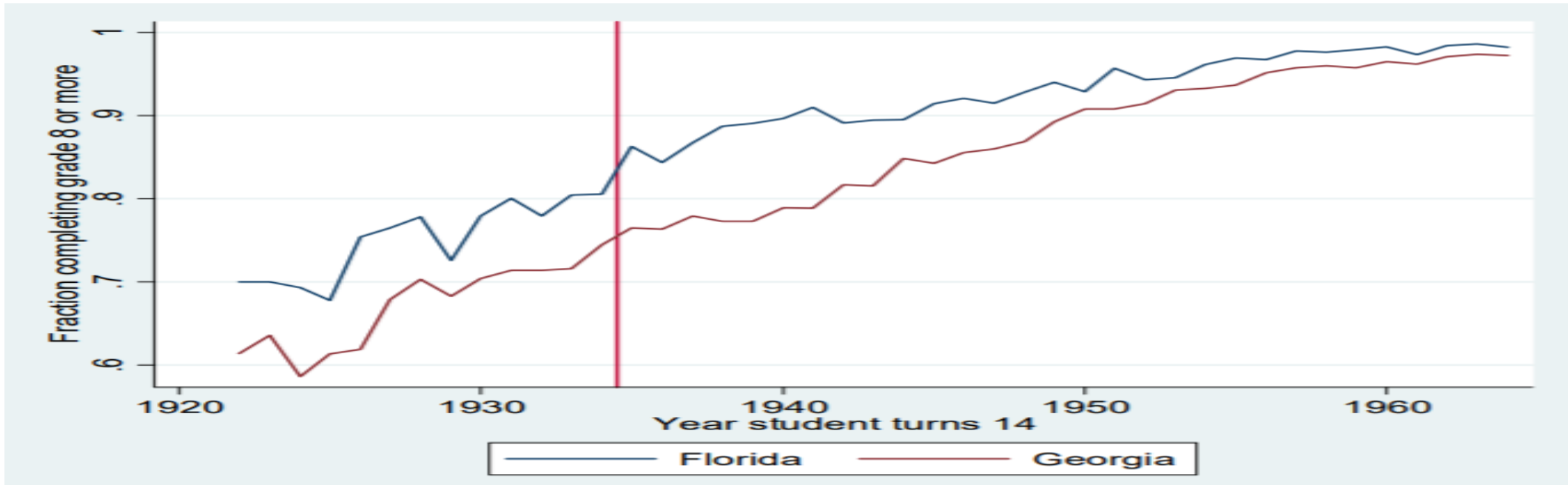
- Non-independent observations

Limitations

- Requires baseline data & a non-intervention group
- Cannot use if intervention allocation determined by baseline outcome
- Cannot use if comparison groups have different outcome trend
- Cannot use if composition of groups pre/post change are not stable

Data & Estimation approaches

Generalized Synthetic Control (GSC)

The year of establishment of the Anti-Corruption Commission varies from country to country; hence we apply GSC Approach considering time relative to treatment

- GSC estimator has less bias than the DID estimator in the presence of unobserved, decomposable time-varying confounders;

- It has less bias than the IFE estimator when the treatment effect is heterogeneous; and

- It is usually more efficient than the original synthetic matching estimator.

Methodology: The Feature of Generalized Synthetic Control

GSC estimator (Xu, 2017) follows three-step process.

- First, the GSC estimates the interactive fixed-effect model using only the control group.

- Second, the GSC estimates factor loadings for each treated unit by minimizing the mean squared error of the predicted treated outcome in pre-treatment periods.

- Third, the GSC estimates counterfactuals

- Xu (2017) developed a cross-validation procedure to select models before estimating the causal effect. It relies on the control group information as well as information from the treatment group in pre-treatment periods.

1. Treatment Effect of Anti-Corruption Commission on Control of Corruption

ATT of Anti-Corruption Comission on Control of Corruption
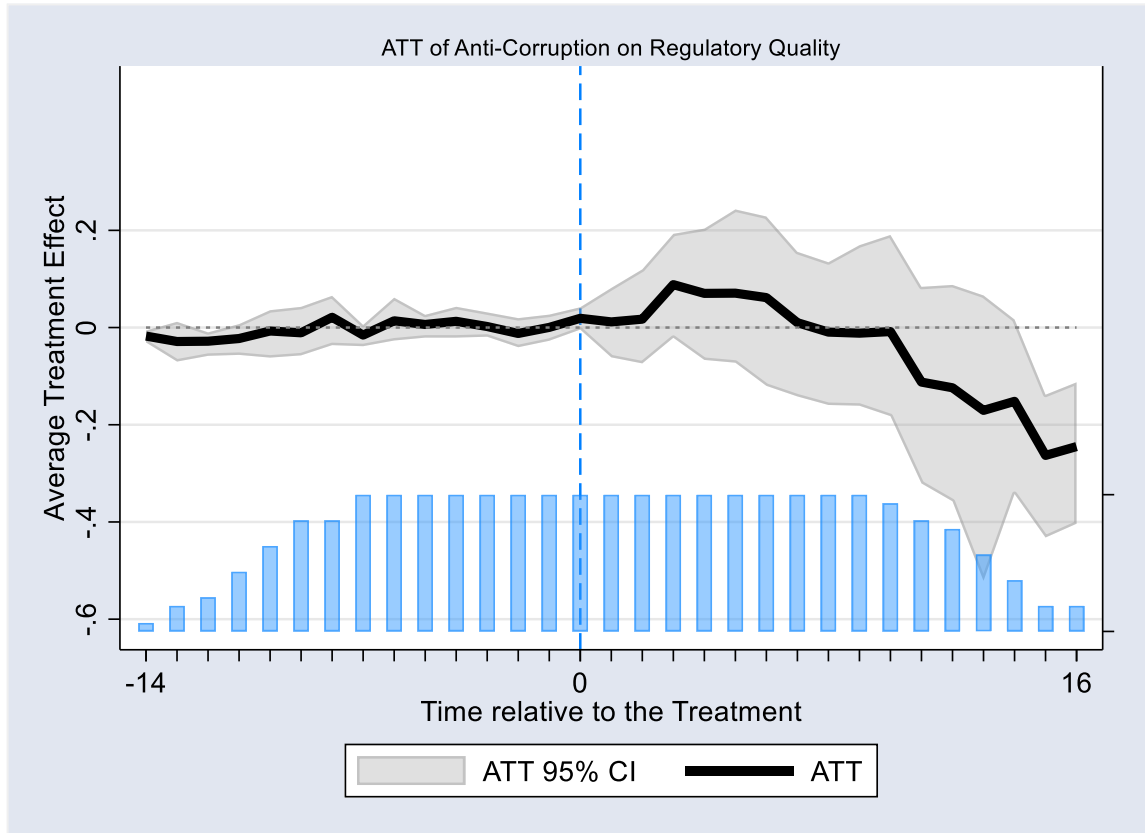
Equivalence Test (CoC)
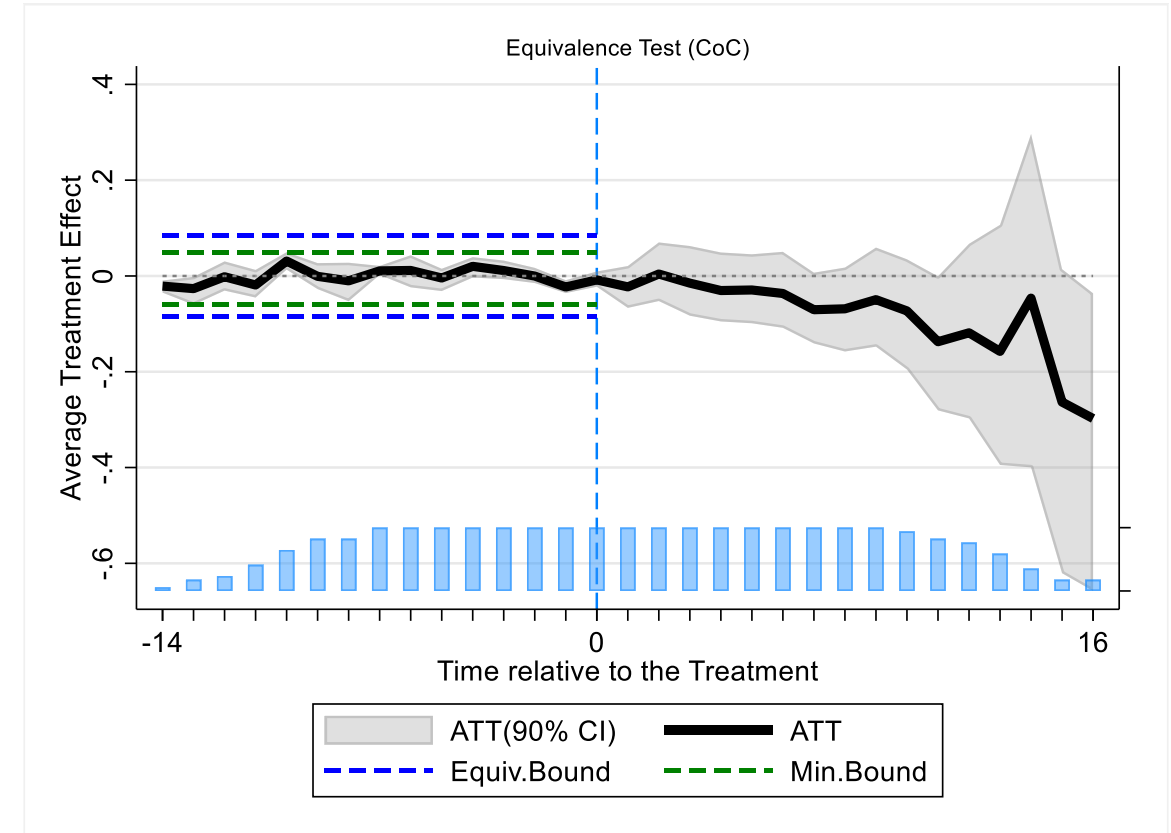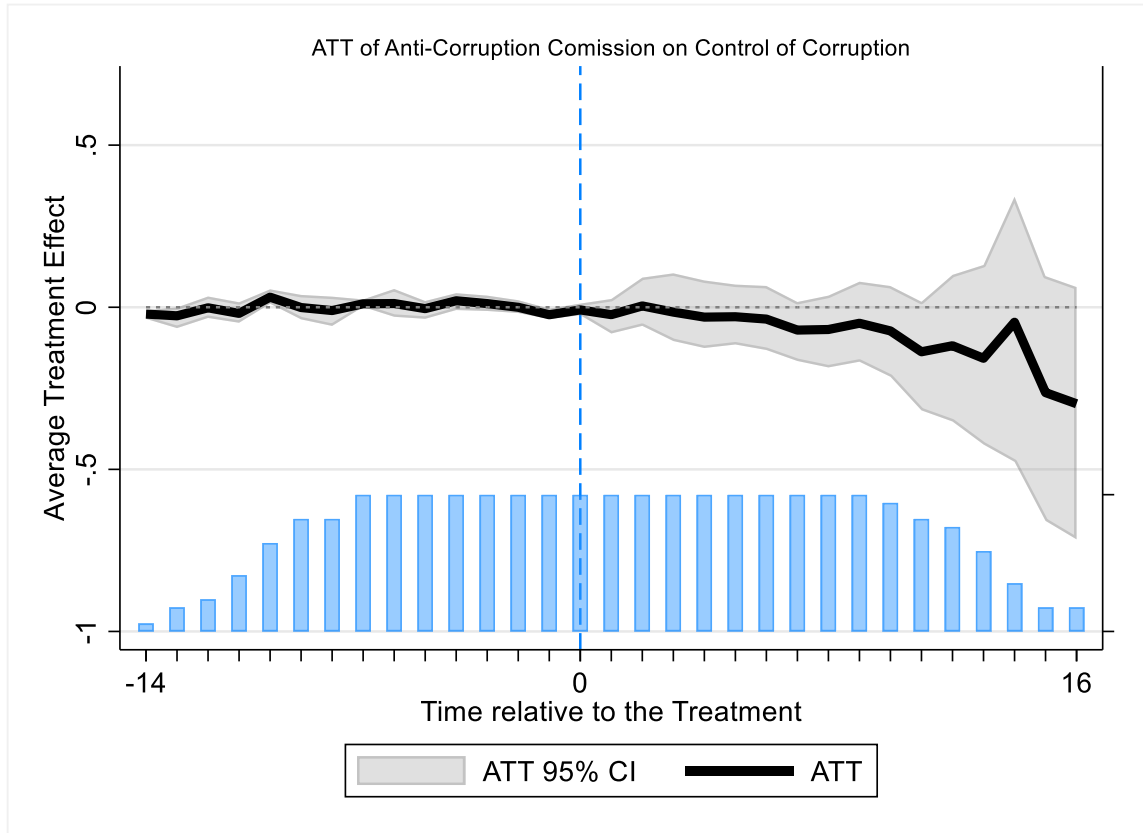
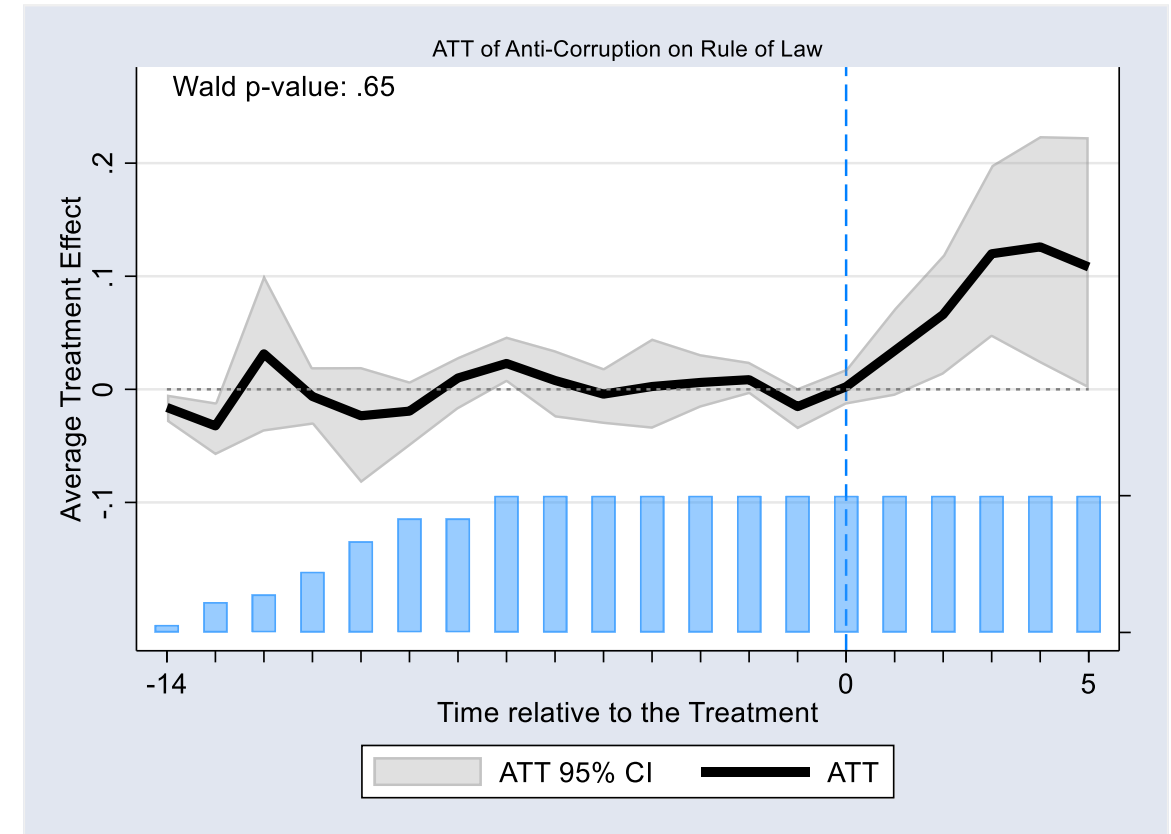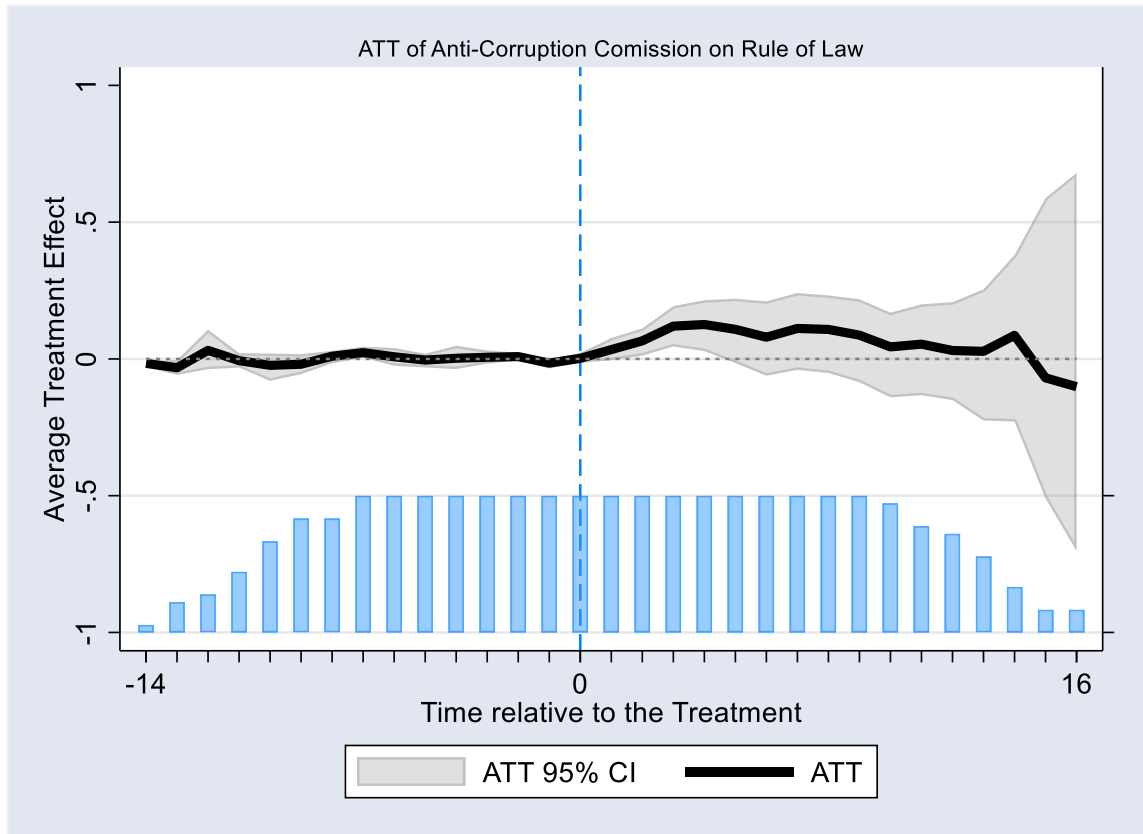# 2: Treatment Effect of Anti-Corruption Commission on Government Effectiveness

3. Treatment Effect of Anti-Corruption Commission on Gov. Stability
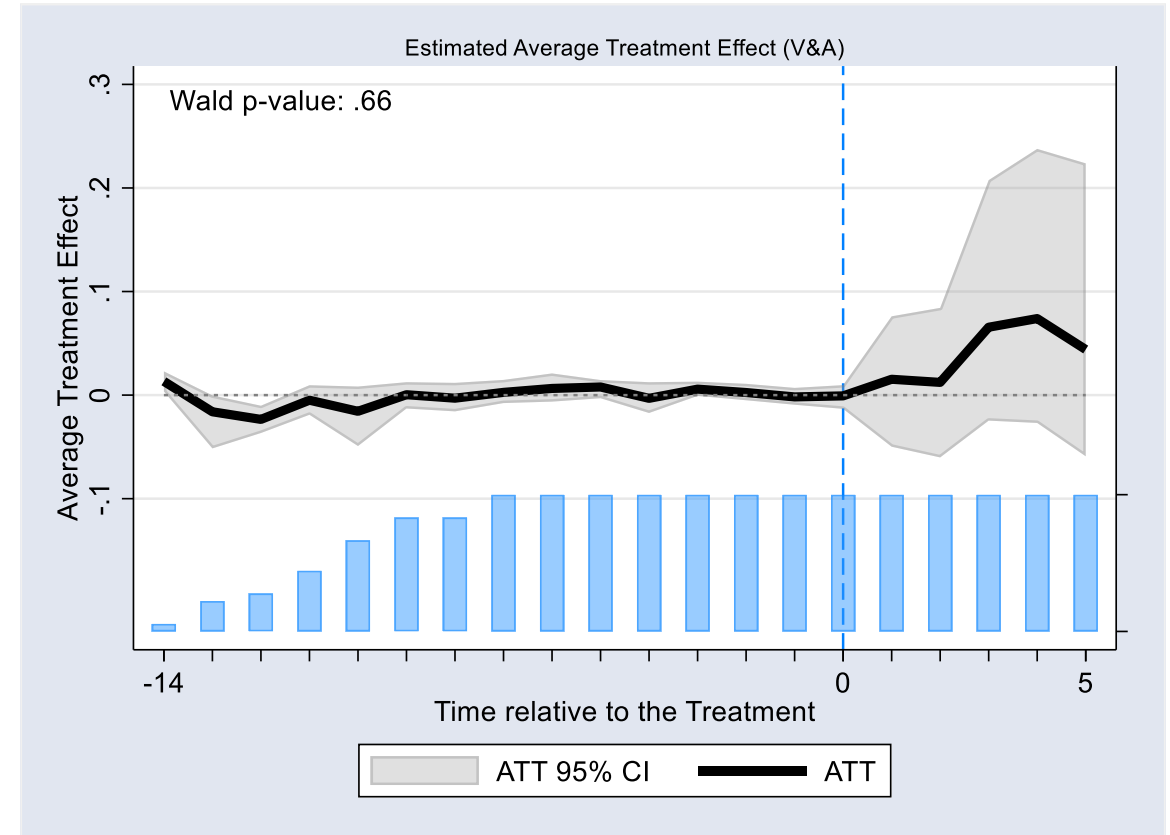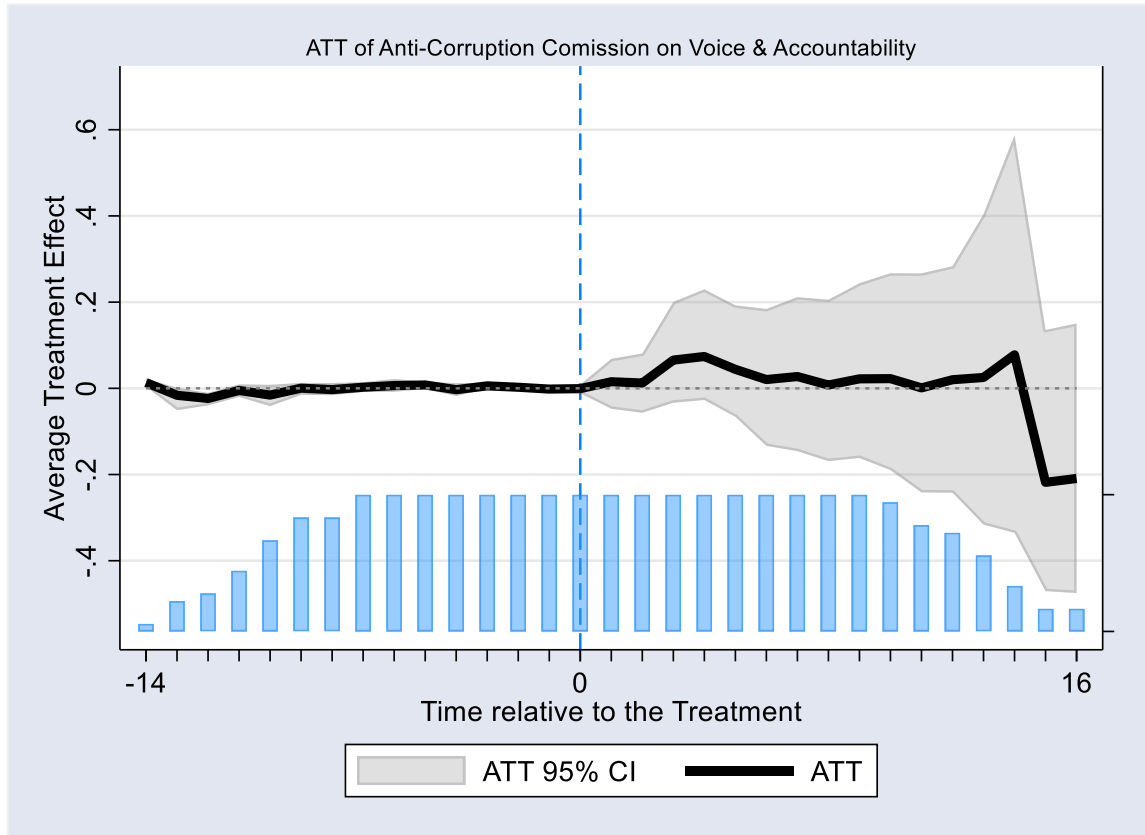

ATT of Anti-Corruption on Gov. Stability

ATT of Anti-Corruption Comission on Gov. Stability

Wald p-value: .22
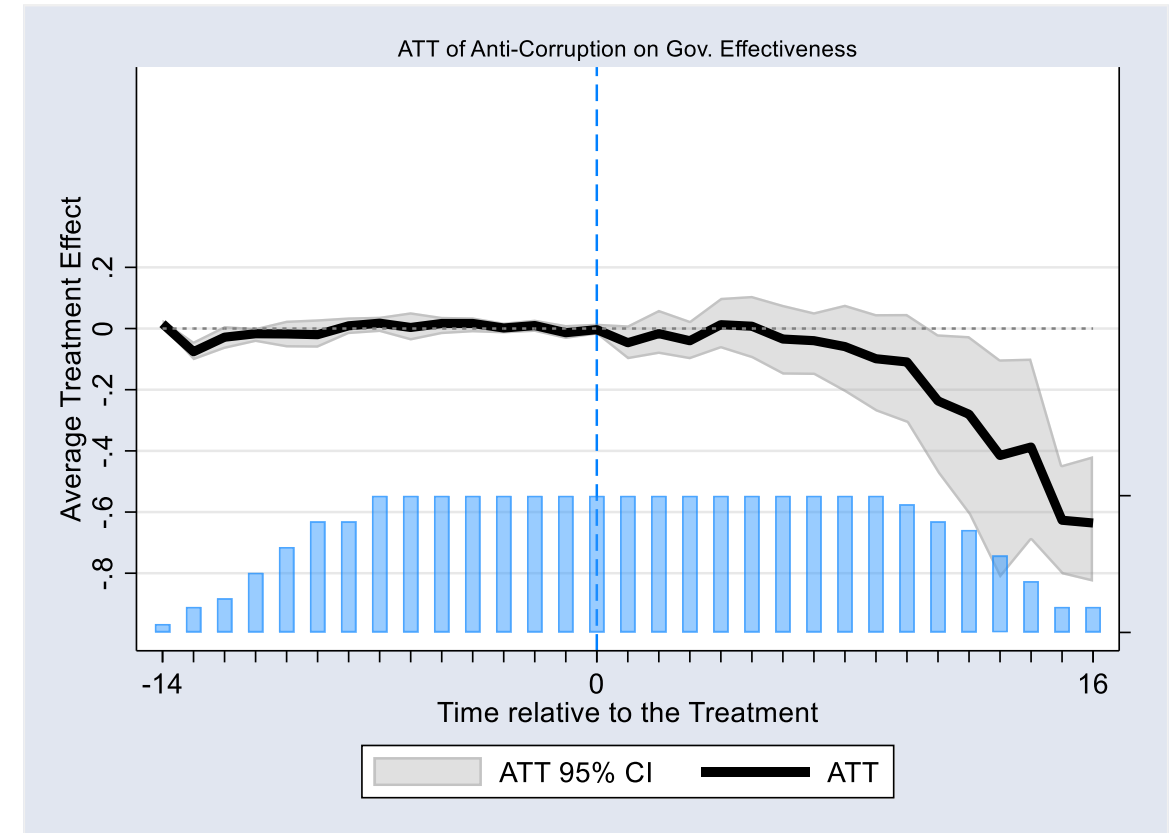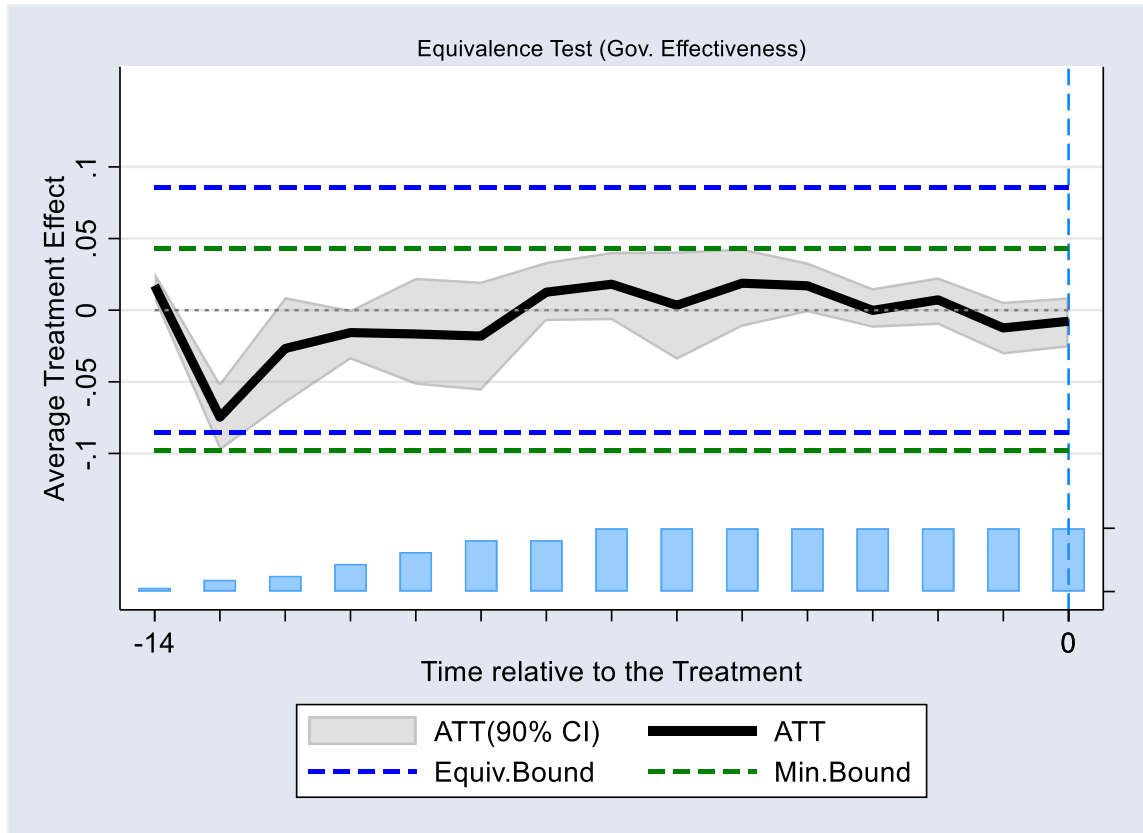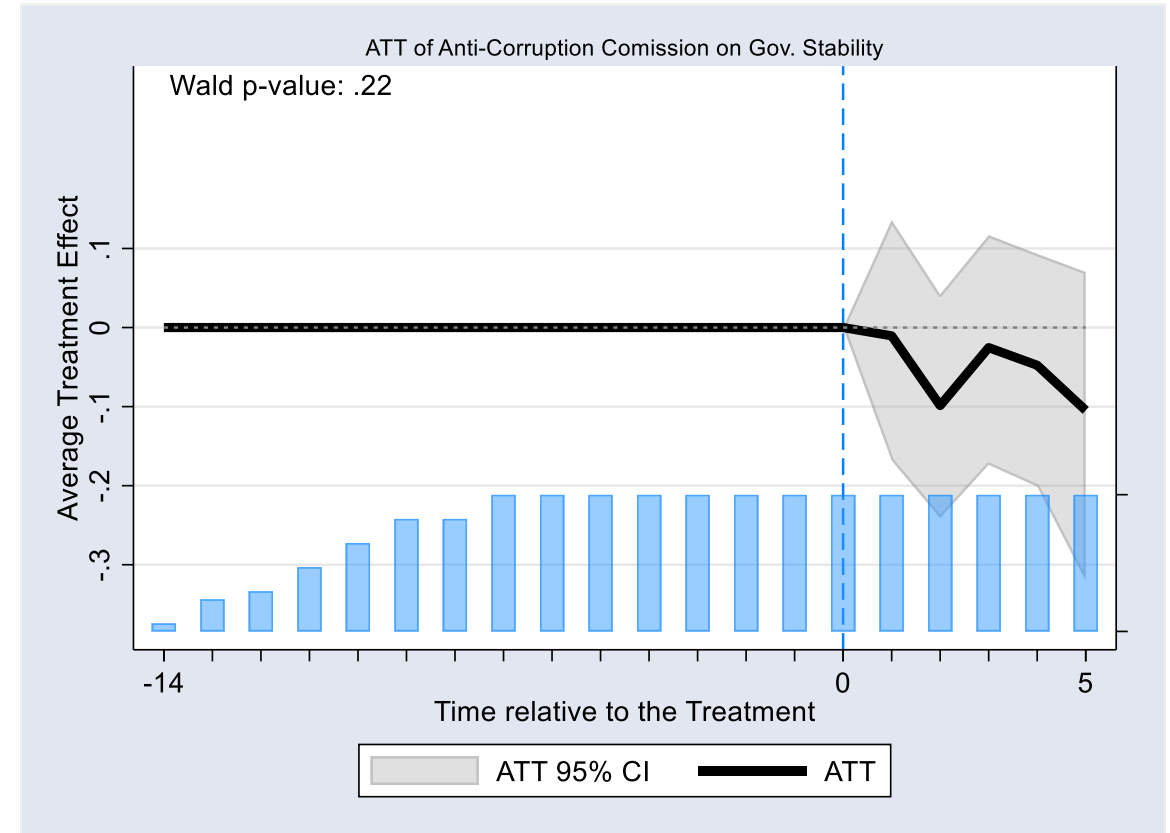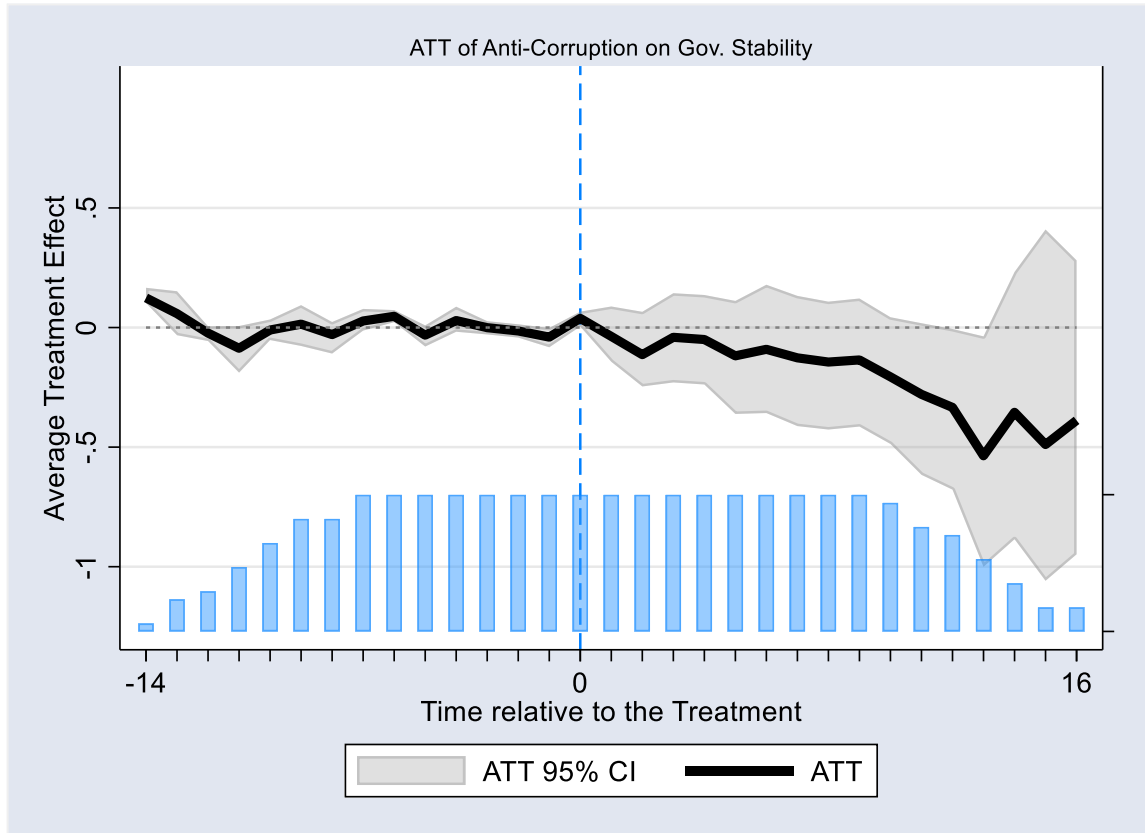
4: Treatment Effect of Anti-Corruption Commission on Regulatory Quality
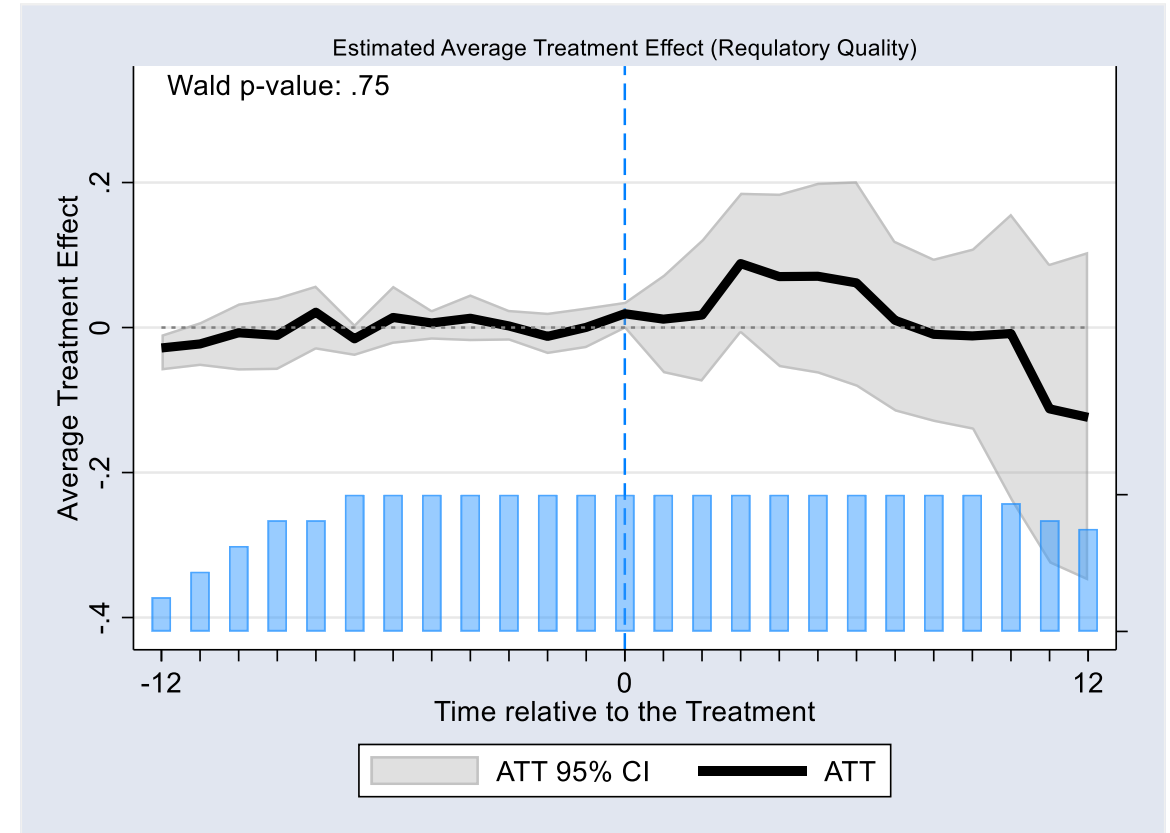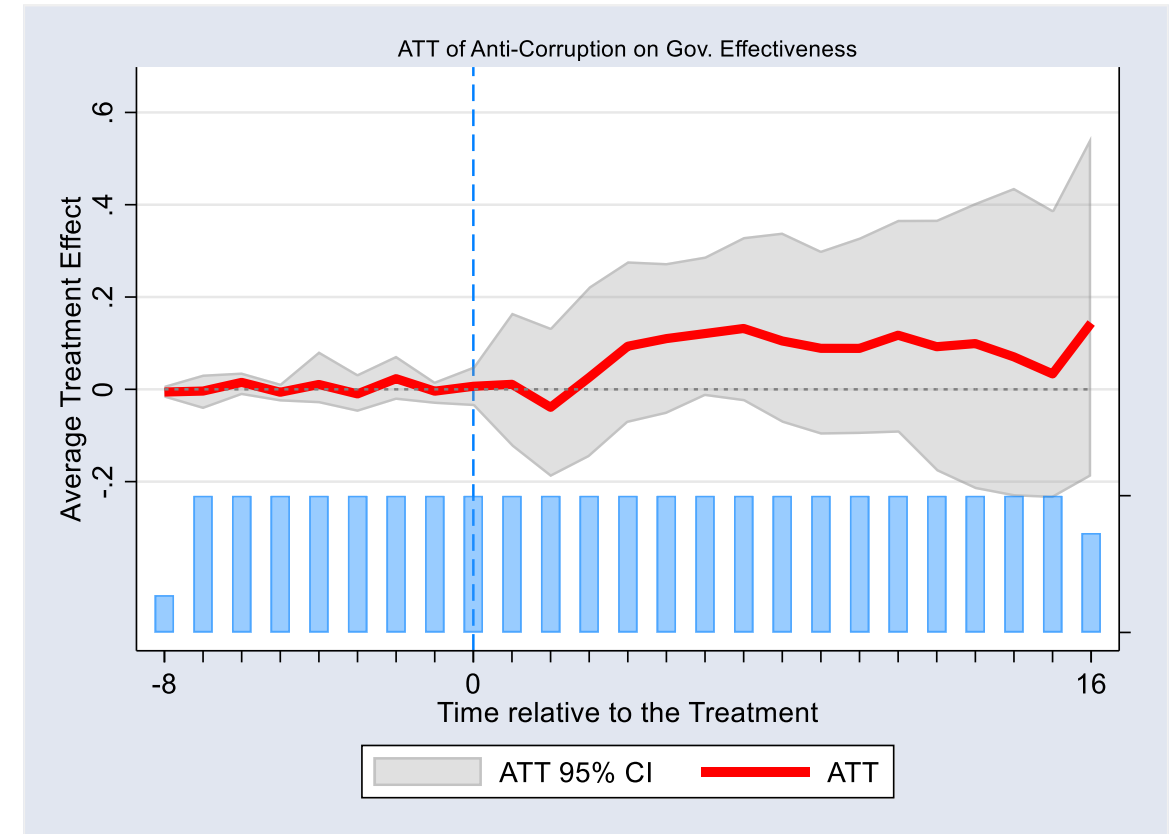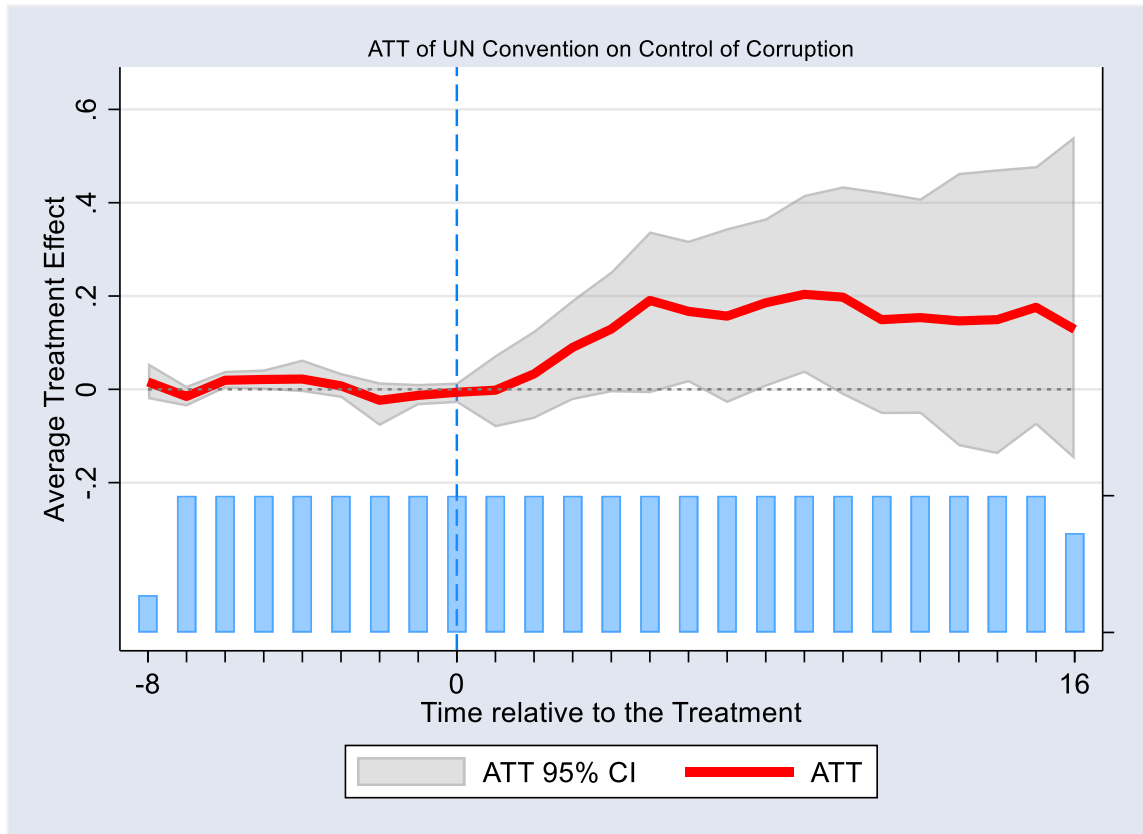
5: Treatment Effect of Anti-Corruption Commission on Rule of Law

6: Treatment Effect of Anti-Corruption Commission on Voice and Accountability

7: Treatment Effect of UN Convention

ATT of UN Convention on Control of Corruption

ATT of Anti-Corruption on Gov. Effectiveness

Conclusion

- Anti-Corruption Commissions are found to be ineffective to control corruptions in the context of Developing countries

- Anti-Corruption Commissions with adoption of UN convention appears to be somewhat effective

- Perhaps a harmony between moral framework and legal framework are required to improve overall governance

Thank you ?