Annex C: State Size and Democracy Analysis on Full Sample of Countries

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1 Introduction

In this annex, the sample used will be the full sample of 43 countries. As stated in Annex A, the full sample does not include the countries of Brunei, Timor-Leste, the Maldives, Taiwan, and Sao Tome and Principe since there is missingness in one or more covariates. Nonetheless, the full sample contains 43 out of the original 48 island countries. Running the regression models and mediation analyses on the full sample are also motivated by the omission of microstates from the Varieties of Democracy dataset. This also means that clientelism in these microstates have not been studied and coded in the eventual V-Dem dataset. On top of this, the usage of the full sample also requires that I substitute the original V-Dem Participatory Democracy index for the Freedom House 14-point index. However, as a matter of methodological and empirical robustness, I am motivated to study the 'sticks' mechanism even if data on the 'carrots' mechanism are not fully collected. The following results contain results from when only the 'sticks' mechanism is being accounted for for the full sample, which includes countries in the V-Dem dataset and microstates.

Important Note: Please look at Annex D for further information about microstates. Reversals in the results from the thesis reflected in this annex are driven by the presence of microstates, most of which are overwhelmingly democratic.

2 Empirical Strategy 1: Regression

Table C1: Relationship between Logged Population and Democracy (Freedom House Index)

| | fh_total_reversed | | | |
| | Exposure-Outcome, Pooled | Pooled (No Interaction) | Panel FE (No Interaction) | Pooled (Interaction) |
	Model 1	Model 2	Model 3	Model 4
Population (Logged)	−0.1129*	−0.0732	−0.3754	−0.0005
	(0.0458)	(0.0395)	(0.4469)	(0.1363)
	p = 0.0138	p = 0.0637	p = 0.4010	p = 0.9973
Military Participation Rate (MPR)		−0.2856***	−0.0737**	−0.1394
		(0.0268)	(0.0282)	(0.0877)
		p = 0.0000	p = 0.0091	p = 0.1118
Urbanisation (% of Population)	−2.6759***	−0.3681	6.0877***	2.0521
	(0.5875)	(0.5275)	(1.2229)	(2.6546)
	p = 0.00001	p = 0.4853	p = 0.000001	p = 0.4395
Per Capita GDP (Logged)	1.4193***	1.3660***	0.6011*	1.4147***
	(0.1376)	(0.1363)	(0.2934)	(0.1600)
	p = 0.0000	p = 0.0000	p = 0.0406	p = 0.0000
Government Expenditure (% of GDP)	3.3132***	2.5572**	0.7114	2.3889**
	(1.0639)	(0.9529)	(0.9539)	(0.9191)
	p = 0.0019	p = 0.0073	p = 0.4558	p = 0.0094
Foreign Aid Received (% of GNI)	2.8880*	2.3932*	−1.7624***	2.8662*
	(1.2901)	(1.1691)	(0.6177)	(1.2421)
	p = 0.0252	p = 0.0407	p = 0.0044	p = 0.0211
Resource Dependence	0.0040	0.0042	−0.0355	0.0037
	(0.0169)	(0.0138)	(0.0253)	(0.0145)
	p = 0.8151	p = 0.7616	p = 0.1609	p = 0.8006
Ethnic Fractionalization	−2.1935***	−1.5639***		−1.6402***
	(0.5398)	(0.5161)		(0.5685)
	p = 0.00005	p = 0.0025		p = 0.0040
Islamic	−3.4659***	−3.3426***		−3.3077***
	(0.6792)	(0.5653)		(0.5702)
	p = 0.0000004	p = 0.0000		p = 0.0000
Population × Urbanization				−0.1452
				(0.2177)
				p = 0.5049
MPR × Urbanization				−0.1999
				(0.1057)
				p = 0.0586
Constant	−0.1249	−0.5310	0.4419	−2.1812
	(1.5818)	(1.4744)	(0.5184)	(2.6315)
	p = 0.9371	p = 0.7188	p = 0.3940	p = 0.4072
Year FE	Yes	Yes	Yes	Yes
Country FE	No	Yes	No	Yes
N	1750	1750	1750	1750
R-squared	0.3950	0.5213	0.2091	0.5265
Adj. R-squared	0.3754	0.5055	0.1631	0.5103
Residual Std. Error	2.5713 (df = 1694)	2.2879 (df = 1693)	1.2567 (df = 1653)	2.2767 (df = 1691)
F Statistic	20.1113*** (df = 55; 1694)	32.9238*** (df = 56; 1693)	4.5516*** (df = 96; 1653)	32.4251*** (df = 58; 1691)

***p < .005; **p < .01; *p < .05

Table C2: Relationship between Logged Population and Military Participation Rate

| | milrate | | |
| | Pooled (No Interaction) | Panel FE (No Interaction) | Pooled (Interaction) |
	Model 1	Model 2	Model 3
Population (Logged)	0.1388*	−0.4411	−0.3525
	(0.0704)	(1.0404)	(0.2277)
	p = 0.0486	p = 0.6717	p = 0.1216
Urbanisation (% of Population)	8.0810***	−1.5494	−2.6201
	(1.0220)	(2.0852)	(4.5097)
	p = 0.0000	p = 0.4575	p = 0.5613
Per Capita GDP (Logged)	−0.1865	−0.1777	−0.4573*
	(0.1552)	(0.7534)	(0.2174)
	p = 0.2295	p = 0.8136	p = 0.0354
Government Expenditure (% of GDP)	−2.6472	−2.0006	−3.0256*
	(1.4895)	(1.2127)	(1.4278)
	p = 0.0756	p = 0.0991	p = 0.0341
Foreign Aid Received (% of GNI)	−1.7328	0.3082	−2.5663
	(1.5869)	(0.9015)	(1.6360)
	p = 0.2749	p = 0.7325	p = 0.1168
Resource Dependence	0.0008	−0.0174	0.0055
	(0.0182)	(0.0317)	(0.0179)
	p = 0.9645	p = 0.5835	p = 0.7589
Ethnic Fractionalization	2.2048**		2.5733***
	(0.8124)		(0.8717)
	p = 0.0067		p = 0.0032
Islamic	0.4315		0.6435
	(0.7122)		(0.6832)
	p = 0.5446		p = 0.3463
Population × Urbanization			0.8195*
			(0.3720)
			p = 0.0277
Constant	−1.4221	−0.3963	7.4083
	(1.9126)	(0.8126)	(4.2948)
	p = 0.4572	p = 0.6258	p = 0.0846
Year FE	Yes	Yes	Yes
Country FE	No	Yes	No
N	1750	1750	1750
R-squared	0.2555	0.1075	0.2623
Adj. R-squared	0.2313	0.0563	0.2379
Residual Std. Error	4.1137 (df = 1694)	2.5174 (df = 1654)	4.0961 (df = 1693)
F Statistic	10.5707*** (df = 55; 1694)	2.0977*** (df = 95; 1654)	10.7499*** (df = 56; 1693)

***$p < .005$; **$p < .01$; *$p < .05$

3 Empirical Strategy 2: Causal Mediation Analysis

The following subsections show the mediation analyses based on the hypotheses set out in the thesis. We recall that:

- H_3: Larger states are more democratic than smaller states because the former possesses smaller coercive apparatuses relative to their population size, reducing the capacity of such instruments to coerce and repress.

- H_{3a}: Across time, there should be no evidence of an effect between state size and democracy through coercive capacity.

- H_{3b}: The effect of state size on democracy through coercive capacity is likely to increase with increasing levels of urbanisation.

The issue with this analysis is that while smaller states in the V-Dem sample tend to have larger militaries, as a reversal of earlier expectations (Dahl & Tufte, 1973), microstates tend not to have a

standing military. As such, this study on the full sample is not particularly useful. The models below show the operation of the effect of state size on democracy through coercive capacity in the full sample, but I highly recommend reading through Annex D instead to get a more useful glimpse of the causal mechanism in microstates.

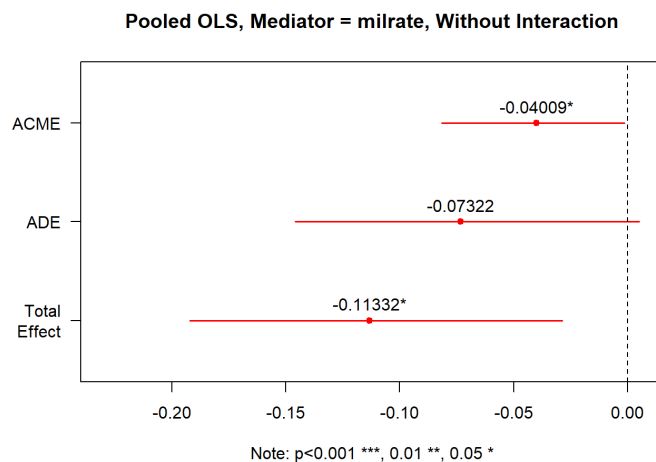## 3.1 H_3: The long-term operation of coercive capacity

Pooled OLS, Mediator = milrate, Without Interaction

Figure C1: Long-term operation of coercive capacity.

3.2 H_{3a}: The short-term operation of coercive capacity

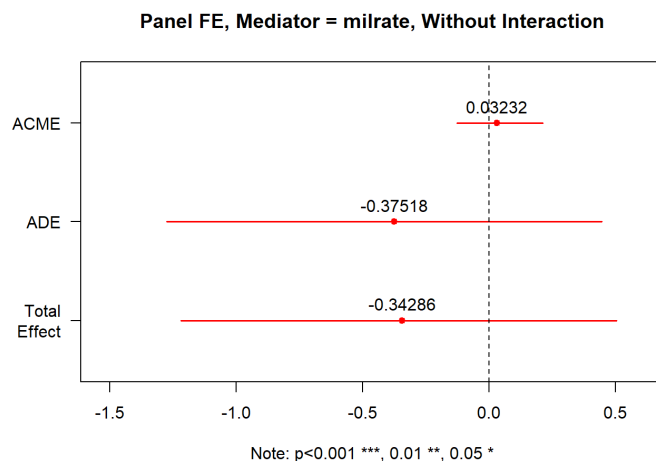**Panel FE, Mediator = milrate, Without Interaction**

Figure C2: Short-term operation of coercive capacity.

3.3 H_{3b}: The conditional operation of coercive capacity

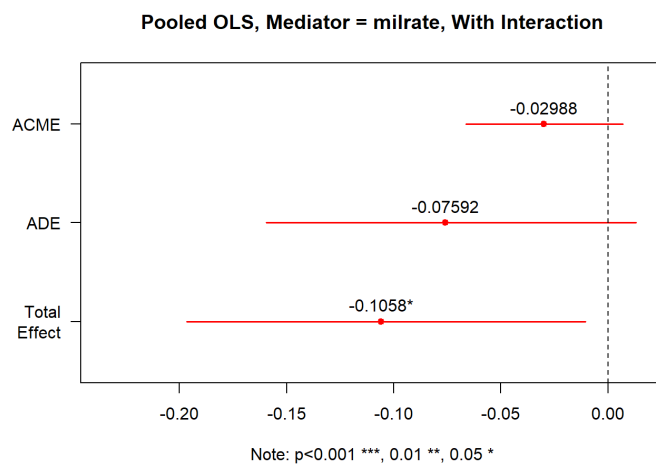**Pooled OLS, Mediator = milrate, With Interaction**

Note: p<0.001 ***, 0.01 **, 0.05 *

Figure C3: Conditional operation of coercive capacity.

Pooled OLS, Mediator = milrate, With Interaction (Less Urban)

Note: p<0.001 ***, 0.01 **, 0.05 *
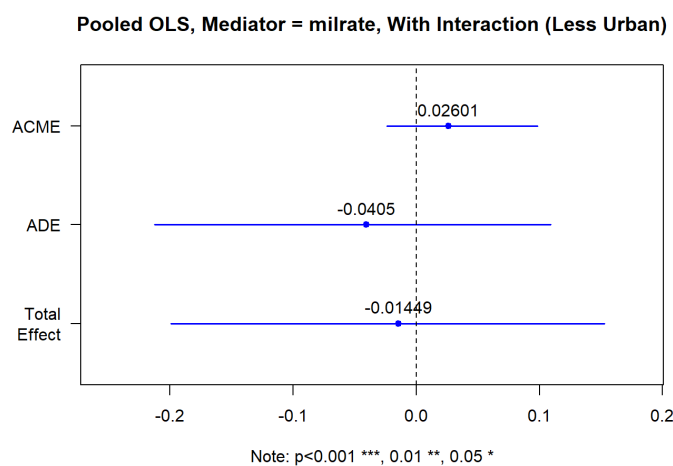
Figure C4: Conditional operation of coercive capacity in less urban states.

Pooled OLS, Mediator = milrate, With Interaction (More Urban)

ACME   -0.08444**

ADE   -0.11183*

Total
Effect   -0.19627**

-0.4   -0.3   -0.2   -0.1   0.0
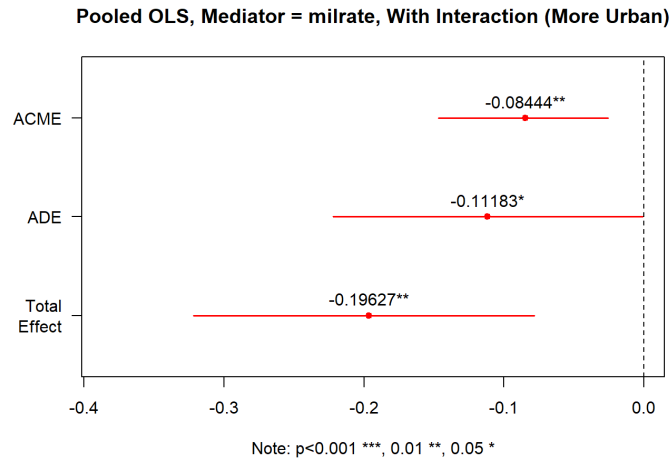
Note: p<0.001 ***, 0.01 **, 0.05 *

Figure C5: Conditional operation of coercive capacity in more urban states.

References

Dahl, R., & Tufte, E. (1973). *Size and Democracy*. Stanford University Press.