

Harmony or Cacophony?

A Disaggregated Analysis of Aid Fragmentation

ONLINE APPENDIX

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1 Measuring Aid Fragmentation

Our main measure of aid fragmentation is the number of donors present within a unit of observation. To count donors and measure aid by sector, we draw on data provided by AidData (Tierney et al., 2011). AidData builds largely on the OECD’s Creditor Reporting System (CRS) and on national Aid Information Management Systems (AIMS) and also attempts to fill gaps and include additional information (such as data on previous recipients that is deleted from the CRS). AidData only documents aid commitments, not disbursements, as the former are much more reliably reported.¹ To identify the sectors, we use the “coalesced purpose codes” that employ original AidData coding where available but fill gaps with CRS coding (where available). For basic and general health aid, the range of codes is 12000-12999. For governance aid, the range is 15000-15999.

¹Furthermore, Berthélemy (2006) notes that commitments better reflect donor decisions.

2 Descriptive statistics

Table A1: Summary statistics for the country-level dataset with three-year time periods

	N	Mean	Std. dev.	Median	Minimum	Maximum
Number of health donors	993	5.98	5.29	4.00	0.00	23.00
Number of GCS donors	993	11.19	7.40	10.00	0.00	34.00
Health aid per capita (USD)	993	21.67	67.05	7.34	0.00	888.01
GCS aid per capita (USD)	993	45.81	151.99	12.67	0.00	2496.55
Child mortality (per 1,000 live births)	997	59.00	50.67	39.37	4.35	266.10
WGI government effectiveness	984	-0.41	0.67	-0.49	-2.16	1.99
Population (mio.)	997	37.62	146.28	7.27	0.01	1360.83
GDP per capita (thousand USD)	997	4.31	5.17	2.66	0.16	62.76
Civil war*	997	0.23	0.38	0.00	0.00	1.00

GCS: Government and civil society

WGI: Worldwide Governance Indicators; *) 1 if > 25 battle deaths

Table A2: Summary statistics, subnational data from districts of Sierra Leone, 2004-2013

	N	Mean	Std. dev.	Median	Minimum	Maximum
Number of health donors*	14	12.93	3.02	12.00	8.00	18.00
Number of GCS donors*	14	10.86	3.11	10.00	8.00	20.00
Health aid*	14	381.27	291.91	233.09	53.21	747.54
GCS aid*	14	108.47	33.99	111.31	46.54	173.32
Change in child mortality**	14	-19.49	4.36	-17.68	-30.02	-14.26
Change in uncollected revenue***	14	-6.36	40.51	-12.50	-72.00	72.00
Gross national income per capita (1,000 USD)	14	1.62	0.76	1.37	1.17	4.07
Urban population (%)	14	21.55	9.61	18.32	14.45	49.90
Total population (mio.)	14	0.47	0.20	0.39	0.22	0.88
Number of violent events	14	3.64	6.22	2.00	0.00	24.00

GCS: Government and civil society

*) averages, 2004-2013; **) change from 2008-2012 averages to 2013-2017 averages;

***) actual vs. budgetted state revenue, percent change from 2013 to 2018.

Table A3: Summary statistics, subnational data from Nigerian states, , 2004-2013

	N	Mean	Std. dev.	Median	Minimum	Maximum
Number of health donors*	37	5.14	1.42	5.00	2.00	8.00
Number of GCS donors*	37	2.22	1.34	2.00	1.00	5.00
Health aid*	37	73.50	75.00	42.84	0.00	248.17
GCS aid*	37	2.73	13.16	0.00	0.00	78.44
Change in child mortality**	37	-17.51	6.41	-18.11	-28.13	-5.54
Change in financial sustainability index***	36	1.00	2.22	0.65	-3.84	8.84
Gross national income per capita (1,000 USD)	37	5.08	2.09	4.92	2.62	10.85
Urban population (%)	37	37.75	10.76	38.85	22.20	62.10
Total population (mio.)	37	4.35	2.12	3.84	1.47	12.60
Number of violent events	37	153.70	211.62	74.00	16.00	1158.00
CSS No control over organization	29	60.60	11.12	63.17	22.95	73.28
CSS No control over department	29	34.66	9.14	34.15	12.50	55.39
CSS No engagement with communities	29	38.76	10.23	40.48	11.84	65.12
CSS Dissatisfied with job	29	8.46	4.80	8.92	0.00	18.23
CSS Not enough funds	29	41.16	6.99	41.81	20.56	55.86
CSS No quality contractors	29	23.91	4.80	22.53	16.27	34.00
CSS Had to go around rules	29	32.60	4.61	32.10	27.43	46.86
CSS Others broke rules	29	39.60	6.43	39.92	26.43	50.87
CSS Pressured to change location	29	22.07	5.98	21.84	11.68	33.32
CSS Pressured to change project	29	22.18	6.87	21.46	10.86	36.98
CSS Pressured to choose contractor	29	25.77	5.80	25.06	13.84	38.73
CSS Pressured to divert funds	29	20.06	5.77	20.75	11.48	31.86
CSS Had to use own funds	29	19.87	6.93	20.10	5.23	31.71

GCS: Government and civil society; CCS: civil servants' survey 2010 (Rogger, 2017; Rasul and Rogger, 2018);

*) averages, 2004-2013; **) change from 2008-2012 averages to 2013-2017 averages;

***) change from 2015 to 2018.

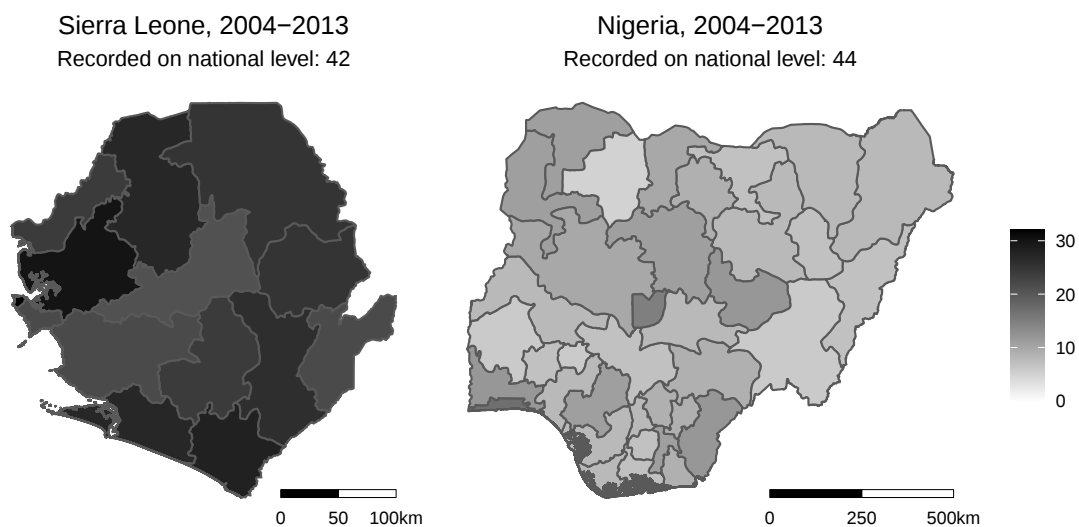


Figure A1: Number of general aid donors by subnational administrative units

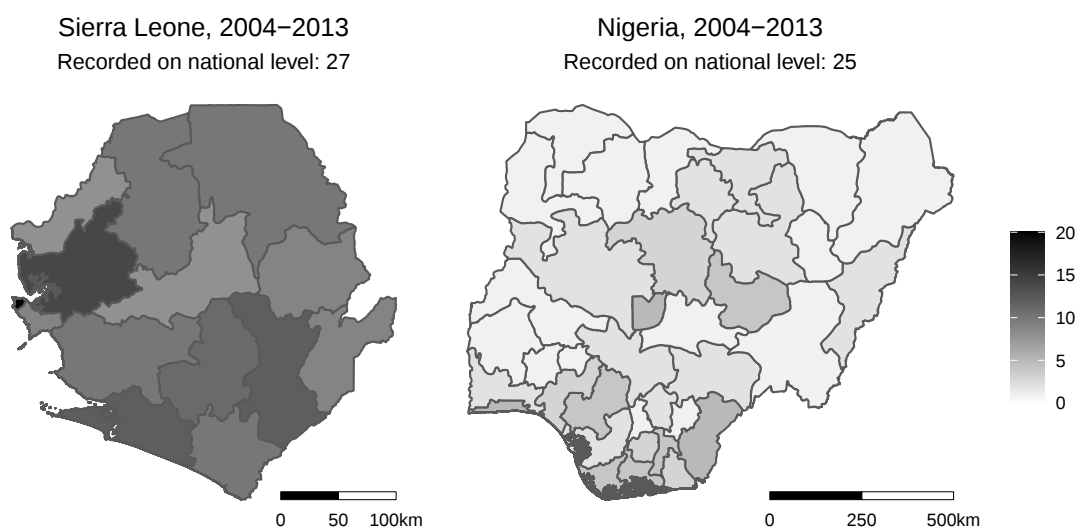


Figure A2: Number of government and civil society aid donors by subnational administrative units

3 Results tables for the cross-country analysis

Table A4: The number of donors and outcomes on the country level, full table

Dependent variable:	Child mortality	Government effectiveness [†]
Aid sector:	Health (general and basic)	Government and civil society
Intended effect of aid:	Decrease	Increase
<i>Panel A: Number of donors (amount of aid not included)</i>		
Number of donors	−1.86* [−2.51; −1.22]	0.94* [0.15; 1.73]
GDP per capita (ln)	−1.26 [−11.03; 8.51]	24.72* [7.64; 41.80]
Civil war dummy	10.18* [4.55; 15.81]	4.46 [−3.53; 12.44]
Adj. R ²	0.94	0.93
<i>Panel B: Number of donors, controlling for the amount of aid</i>		
Number of donors	−1.81* [−2.46; −1.16]	0.85* [0.02; 1.68]
Aid p.c. (ln)	−1.49 [−3.67; 0.68]	2.08 [−2.89; 7.06]
GDP per capita (ln)	−1.30 [−11.02; 8.42]	24.70* [7.42; 41.97]
Civil war dummy	10.16* [4.50; 15.81]	4.40 [−3.52; 12.32]
Adj. R ²	0.94	0.93
<i>Panel C: Number of donors interacted with the amount of aid</i>		
Number of donors	−1.54* [−2.05; −1.04]	0.52* [0.15; 0.89]
* aid p.c. (log)	−2.19 [−11.25; 6.88]	25.68* [8.62; 42.74]
GDP per capita (ln)	9.90* [4.15; 15.65]	4.21 [−3.40; 11.82]
Civil war dummy	0.94	0.93
Adj. R ²	0.94	0.93
<i>All panels:</i>		
Number of observations	836	833
Number of countries	152	152

* 0 outside the 95% confidence interval; calculated from standard errors clustered at the country level.

[†] Dependent variable rescaled by factor 100 to display significant digits.

All models include country and year fixed effects. The temporal unit is three-year periods.

4 Results tables for the subnational analysis

The following tables present the multivariate regression results from the subnational level. As explained in the main article, we employ a cross-section of the time period 2004 to 2013. Data limitations do not allow us to tap into temporal variation. Tables A5 and A6 show the relationship between health aid and under-5 mortality in Sierra Leone and Nigeria, respectively. Results are very similar in both countries. As the number of cases (i.e., regions) is very low at 14 for Sierra Leone and 37 for Nigeria, we include all control variables one-by-one. Model 1 (in both tables) shows the same bivariate, positive and significant relationship between the number of donors providing health aid and under-5 mortality that is shown by the scatterplot in the main article. Model 2 adds aid amounts, making the number donors insignificant. As aid and the number of donors are highly interdependent, we replace the individual terms by an interaction term without constitutive elements (model 3). This is justified as both aid and the number of zeros are always and only zero when both terms are zero (cp. Ziaja, 2020: 441). The interaction term, representing the presence of many donors with high aid flows, is again significant in the expected positive direction. Models 4 to 6 add wealth, urbanisation, and violence, respectively. The last model includes all sensible control variables. This model is presumably severely underpowered given the low number of observations. Nonetheless, the number of donors maintains a significant relationship with our outcome variable in both countries. As for the country-level analysis, adding control variables does not change the main message of the bivariate relationship between health aid and under-5 mortality.

Table A5: Multivariate regression results for the relationship between the number of donors in health aid and under-5 mortality in districts of Sierra Leone, 2004-2013

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	-30.29*	-118.06*	-29.02*	-13.51*	-19.51*	-26.13*	-34.64
	(4.50)	(38.52)	(3.76)	(3.78)	(2.98)	(3.45)	(24.43)
# of donors	0.84*	-0.82		0.56*	0.56*	0.63*	0.55*
	(0.34)	(0.78)		(0.19)	(0.18)	(0.25)	(0.20)
Aid (ln)		5.63*					
		(2.46)					
# of donors * aid			0.04*				
			(0.01)				
GNI (ln)				-14.12*			32.67
				(2.48)			(53.66)
Urban pop.					-0.33*		-1.02
					(0.06)		(1.18)
Violent events						-42.58*	-15.17
						(12.19)	(22.10)
R ²	0.34	0.55	0.36	0.83	0.84	0.69	0.84
Adj. R ²	0.28	0.47	0.31	0.80	0.81	0.63	0.78
Num. obs.	14	14	14	14	14	14	14

* $p < 0.1$

Table A6: Multivariate regression results for the relationship between the number of donors in health aid and under-5 mortality in states of Nigeria, 2004-2013

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	-24.14*	-34.25*	-25.08*	-6.56	-12.53*	-24.81*	-28.06
	(3.90)	(5.65)	(3.04)	(6.07)	(4.68)	(4.02)	(24.69)
# of donors	1.29*	0.55		1.19*	1.22*	1.31*	1.32*
	(0.73)	(0.76)		(0.64)	(0.63)	(0.74)	(0.66)
Aid (ln)		1.87*					
		(0.80)					
# of donors * aid			0.19*				
			(0.07)				
GNI (ln)				-9.73*			23.49
				(2.79)			(38.18)
Urban pop.					-0.30*		-1.00
					(0.08)		(1.15)
Violent events						0.38	0.25
						(0.49)	(0.44)
R ²	0.08	0.21	0.16	0.32	0.33	0.10	0.35
Adj. R ²	0.06	0.16	0.14	0.28	0.29	0.04	0.27
Num. obs.	37	37	37	37	37	37	37

* $p < 0.1$

Tables A7 and A8 repeat the same exercise for government and civil society (GCS) aid. The dependent variables are uncollected budget for Sierra Leone and a financial stability index (FSI) for Nigeria. (The latter is missing for one state, reducing the number of observations to 36.) Results are less telling than for health aid: All but one models suggest an insignificant relationship between the number of donors in GCS aid and governance outcomes. Also note the negative adjusted R-squared in some models and the extremely large coefficients in Model 8 for Sierra Leone, indicating problems with these specifications. But the coefficients of interest mostly retain the expected direction, the number of donors being related to less uncollected revenue and higher FSI scores. Model 2 stands out for Sierra Leone, where the negative coefficient for the number of donors turns significant, but positive and significant for aid amounts. This would imply that more donors in governance correlate with better outcomes, while more aid in governance correlates with worse outcomes. Given the interdependent relationship between the number of donors and aid amounts, and given the low power of our models, we do not put too much weight on this finding. In sum, we find non-significant relationships between the number of GCS donors and governance outcomes in the expected directions.

Table A7: Multivariate regression results for the relationship between the number of donors in GCS aid and uncollected revenue in districts of Sierra Leone, 2004-2013

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	28.77 (41.03)	-1204.79* (639.89)	23.83 (39.43)	17.49 (50.73)	29.80 (42.47)	41.38 (70.37)	523.55 (526.02)
# of donors	-3.24 (3.64)	-7.59* (3.99)		-4.79 (5.37)	-4.91 (5.14)	-4.68 (7.44)	-2.55 (8.05)
Aid (ln)		69.42* (35.95)					
# of donors * aid			-0.15 (0.19)				
GNI (ln)				30.18 (74.00)			-1147.55 (1195.78)
Urban pop.					0.80 (1.67)		26.05 (26.31)
Violent events						83.86 (371.74)	215.07 (545.71)
R ²	0.06	0.30	0.05	0.08	0.08	0.07	0.17
Adj. R ²	-0.02	0.17	-0.03	-0.09	-0.09	-0.10	-0.20
Num. obs.	14	14	14	14	14	14	14

* $p < 0.1$

Table A8: Multivariate regression results for the relationship between the number of donors in GCS aid and the financial stability index in states of Nigeria, 2004-2013

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	0.59 (0.74)	0.49 (0.81)	1.00* (0.41)	-2.22 (2.16)	-1.17 (1.40)	0.27 (0.73)	9.28 (9.06)
# of donors	0.19 (0.30)	0.27 (0.39)		0.00 (0.33)	-0.02 (0.33)	0.11 (0.29)	-0.24 (0.32)
Aid (ln)		-0.07 (0.22)					
# of donors * aid			0.00 (0.04)				
GNI (ln)				1.86 (1.34)			-18.09 (14.52)
Urban pop.					0.06 (0.04)		0.62 (0.44)
Violent events						0.32* (0.17)	0.40* (0.17)
R ²	0.01	0.01	0.00	0.07	0.07	0.11	0.23
Adj. R ²	-0.02	-0.04	-0.03	0.01	0.02	0.05	0.13
Num. obs.	36	36	36	36	36	36	36

* $p < 0.1$

5 Multivariate regression results for civil servant organizations

In the main manuscript, we analyze bivariate correlations between the number of donors with perceptions of civil servants in organizations based in the same state. As these correlations may be affected by omitted variable bias, we here report correlations when adding other control variables. We add control variables one by one, as in the subnational analysis, because the number of observations is very low. Nonetheless, we also report a full model (Model 7) that shows what happens when all sensible controls are added at once.

For health aid, we find that the correlation of the number of health donors with perceptions that there are “No quality contractors” and having “No control over organisation” remain stable when adding control variables. Being “Pressured to change location” also remains significant in several specifications (except when adding aid or violent events).

For GCS aid, we find that correlations remain largely significant for claims to be “Dissatisfied with job” (except when adding aid), feelings that “Others broke rules”, and being “Pressured to choose contractor” (except for adding income or urbanization to the latter). Being “Pressured to change location”, “Pressured to change project”, and “Pressured to divert funds” are not robust to adding controls.

5.1 Health donors and civil servant perceptions in health centers

Table A9: Perceptions of civil servants in federal medical centers: No control over organisation

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	84.12*	74.88*	82.32*	95.62*	90.16*	81.15*	104.93*
	(6.66)	(26.11)	(6.52)	(10.36)	(7.72)	(7.80)	(36.08)
# of donors	-2.99*	-3.15*		-2.72*	-2.69*	-2.64*	-2.20
	(1.28)	(1.40)		(1.25)	(1.25)	(1.38)	(1.38)
Aid (ln)		1.37					
		(3.72)					
# x aid			-0.35*				
			(0.17)				
GNI (ln)				-7.24			-24.50
				(5.12)			(47.84)
Urban pop.					-0.20		0.45
					(0.14)		(1.33)
Violent events						1.51	2.36
						(1.96)	(2.09)
R ²	0.29	0.30	0.25	0.40	0.39	0.33	0.46
Adj. R ²	0.24	0.19	0.20	0.29	0.29	0.22	0.25
Num. obs.	15	15	15	15	15	15	15

* $p < 0.1$

Table A10: Perceptions of civil servants in federal medical centers: No quality contractors

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	11.00*	−12.05	10.60*	15.30*	13.48*	13.26*	−6.49
	(4.81)	(17.66)	(4.36)	(7.93)	(5.88)	(5.62)	(27.73)
# of donors	2.34*	1.94*		2.44*	2.46*	2.07*	2.20*
	(0.93)	(0.94)		(0.96)	(0.95)	(0.99)	(1.06)
Aid (ln)		3.41					
		(2.52)					
# x aid			0.33*				
			(0.11)				
GNI (ln)				−2.71			29.46
				(3.92)			(36.77)
Urban pop.					−0.08		−0.89
					(0.11)		(1.02)
Violent events						−1.15	−1.47
						(1.41)	(1.61)
R ²	0.33	0.42	0.39	0.35	0.36	0.36	0.42
Adj. R ²	0.28	0.32	0.35	0.25	0.25	0.26	0.19
Num. obs.	15	15	15	15	15	15	15

* $p < 0.1$

Table A11: Perceptions of civil servants in federal medical centers: Pressured to change location

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	8.91	−32.97	7.05	19.20*	13.84*	15.40*	34.57
	(5.96)	(19.87)	(5.25)	(9.27)	(7.00)	(6.07)	(29.44)
# of donors	2.18*	1.45		2.41*	2.42*	1.42	1.68
	(1.15)	(1.06)		(1.12)	(1.14)	(1.07)	(1.12)
Aid (ln)		6.19*					
		(2.83)					
# x aid			0.34*				
			(0.14)				
GNI (ln)				−6.48			−21.64
				(4.58)			(39.03)
Urban pop.					−0.17		0.47
					(0.13)		(1.09)
Violent events						−3.30*	−2.69
						(1.53)	(1.70)
R ²	0.22	0.44	0.33	0.33	0.31	0.44	0.51
Adj. R ²	0.16	0.35	0.28	0.22	0.19	0.34	0.31
Num. obs.	15	15	15	15	15	15	15

* $p < 0.1$

5.2 GCS donors and civil servant perceptions in all organizations

Table A12: Perceptions of civil servants in all organizations surveyed: Dissatisfied with job

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	5.51*	5.63*	7.71*	12.15*	8.82*	5.57*	11.86
	(1.66)	(1.90)	(0.97)	(4.81)	(2.82)	(1.69)	(14.62)
# of donors	1.40*	1.30		2.04*	2.02*	1.52*	2.17*
	(0.68)	(1.02)		(0.80)	(0.79)	(0.74)	(0.87)
Aid (ln)		0.06					
		(0.46)					
# x aid			0.13				
			(0.08)				
GNI (ln)				-4.58			-4.06
				(3.13)			(19.78)
Urban pop.					-0.13		-0.02
					(0.09)		(0.56)
Violent events						-0.41	-0.43
						(0.91)	(0.91)
R ²	0.14	0.14	0.09	0.20	0.20	0.14	0.21
Adj. R ²	0.10	0.07	0.06	0.14	0.14	0.08	0.08
Num. obs.	29	29	29	29	29	29	29

* $p < 0.1$

Table A13: Perceptions of civil servants in all organizations surveyed: Others broke rules

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	44.66*	45.23*	40.76*	54.91*	49.27*	44.43*	75.51*
	(2.11)	(2.40)	(1.28)	(6.00)	(3.55)	(2.06)	(16.84)
# of donors	-2.40*	-2.89*		-1.41	-1.55	-2.90*	-1.90*
	(0.86)	(1.29)		(0.99)	(1.00)	(0.90)	(1.00)
Aid (ln)		0.31					
		(0.59)					
# x aid			-0.20*				
			(0.11)				
GNI (ln)				-7.08*			-36.73
				(3.90)			(22.78)
Urban pop.					-0.18		0.86
					(0.11)		(0.65)
Violent events						1.71	1.83*
						(1.11)	(1.05)
R ²	0.22	0.23	0.12	0.31	0.29	0.29	0.42
Adj. R ²	0.19	0.17	0.09	0.26	0.24	0.23	0.32
Num. obs.	29	29	29	29	29	29	29

* $p < 0.1$

Table A14: Perceptions of civil servants in all organizations surveyed: Pressured to change location

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	25.53*	24.91*	23.21*	35.71*	30.30*	25.61*	45.71*
	(2.09)	(2.38)	(1.18)	(5.94)	(3.50)	(2.12)	(17.87)
# of donors	-1.64*	-1.12		-0.66	-0.76	-1.46	-0.46
	(0.85)	(1.27)		(0.98)	(0.98)	(0.93)	(1.06)
Aid (ln)		-0.33					
		(0.58)					
# x aid			-0.20*				
			(0.10)				
GNI (ln)				-7.02*			-21.07
				(3.86)			(24.18)
Urban pop.					-0.18		0.40
					(0.11)		(0.69)
Violent events						-0.62	-0.57
						(1.14)	(1.12)
R ²	0.12	0.13	0.14	0.22	0.21	0.13	0.24
Adj. R ²	0.09	0.06	0.11	0.16	0.14	0.06	0.11
Num. obs.	29	29	29	29	29	29	29

* $p < 0.1$

Table A15: Perceptions of civil servants in all organizations surveyed: Pressured to change project

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	27.04* (2.31)	26.85* (2.65)	23.49* (1.36)	36.62* (6.70)	31.72* (3.92)	27.04* (2.36)	40.28* (20.42)
# of donors	-2.31* (0.95)	-2.15 (1.42)		-1.39 (1.11)	-1.44 (1.10)	-2.31* (1.03)	-1.37 (1.21)
Aid (ln)		-0.10 (0.65)					
# x aid			-0.23* (0.11)				
GNI (ln)				-6.61 (4.35)			-11.79 (27.61)
Urban pop.					-0.18 (0.12)		0.15 (0.79)
Violent events						-0.01 (1.27)	-0.01 (1.27)
R ²	0.18	0.18	0.14	0.25	0.24	0.18	0.25
Adj. R ²	0.15	0.12	0.11	0.19	0.18	0.12	0.12
Num. obs.	29	29	29	29	29	29	29

* $p < 0.1$

Table A16: Perceptions of civil servants in all organizations surveyed: Pressured to choose contractor

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	30.84* (1.84)	30.46* (2.10)	27.11* (1.10)	43.43* (4.89)	37.14* (2.87)	30.89* (1.87)	42.51* (14.87)
# of donors	-2.41* (0.75)	-2.08* (1.12)		-1.20 (0.81)	-1.25 (0.81)	-2.31* (0.82)	-1.08 (0.88)
Aid (ln)		-0.21 (0.51)					
# x aid			-0.24* (0.09)				
GNI (ln)				-8.68* (3.18)			-7.29 (20.12)
Urban pop.					-0.24* (0.09)		-0.04 (0.57)
Violent events						-0.37 (1.01)	-0.41 (0.93)
R ²	0.28	0.28	0.20	0.44	0.43	0.28	0.44
Adj. R ²	0.25	0.22	0.17	0.39	0.39	0.22	0.35
Num. obs.	29	29	29	29	29	29	29

* $p < 0.1$

Table A17: Perceptions of civil servants in all organizations surveyed: Pressured to divert funds

	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
(Intercept)	23.73*	23.85*	21.05*	38.59*	30.99*	23.61*	45.85*
	(1.98)	(2.27)	(1.16)	(5.13)	(3.03)	(2.00)	(15.28)
# of donors	-1.74*	-1.85		-0.31	-0.40	-2.02*	-0.57
	(0.81)	(1.22)		(0.85)	(0.85)	(0.87)	(0.91)
Aid (ln)		0.07					
		(0.56)					
# x aid			-0.17*				
			(0.09)				
GNI (ln)				-10.25*			-20.77
				(3.33)			(20.67)
Urban pop.					-0.28*		0.30
					(0.10)		(0.59)
Violent events						0.93	0.94
						(1.07)	(0.95)
R ²	0.15	0.15	0.11	0.37	0.36	0.17	0.40
Adj. R ²	0.11	0.08	0.08	0.33	0.31	0.11	0.30
Num. obs.	29	29	29	29	29	29	29

* $p < 0.1$

6 Robustness checks

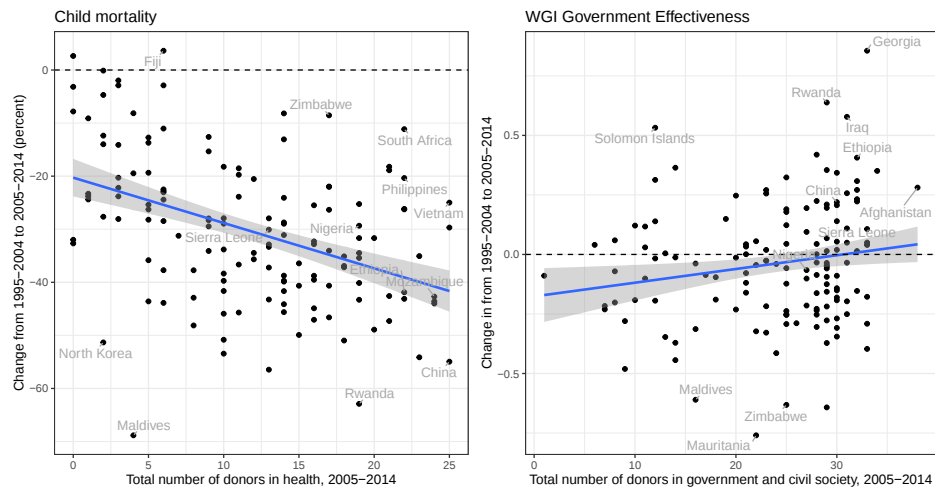


Figure A3: Relationships between the contemporaneous number of donors and changes in outcomes at the national level

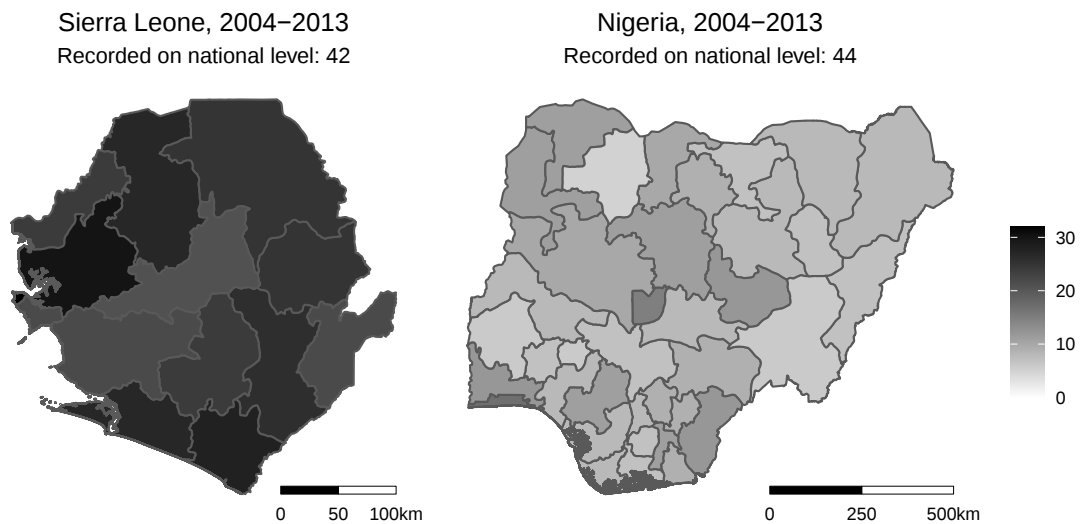


Figure A4: Number of general aid donors by subnational administrative units

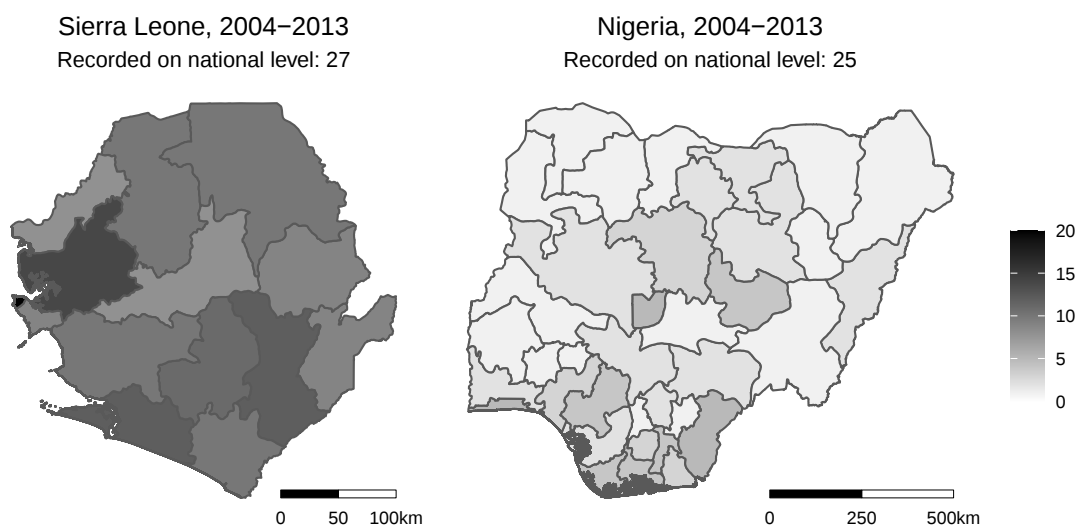


Figure A5: Number of government and civil society aid donors by subnational administrative units

7 Results tables for the cross-country analysis

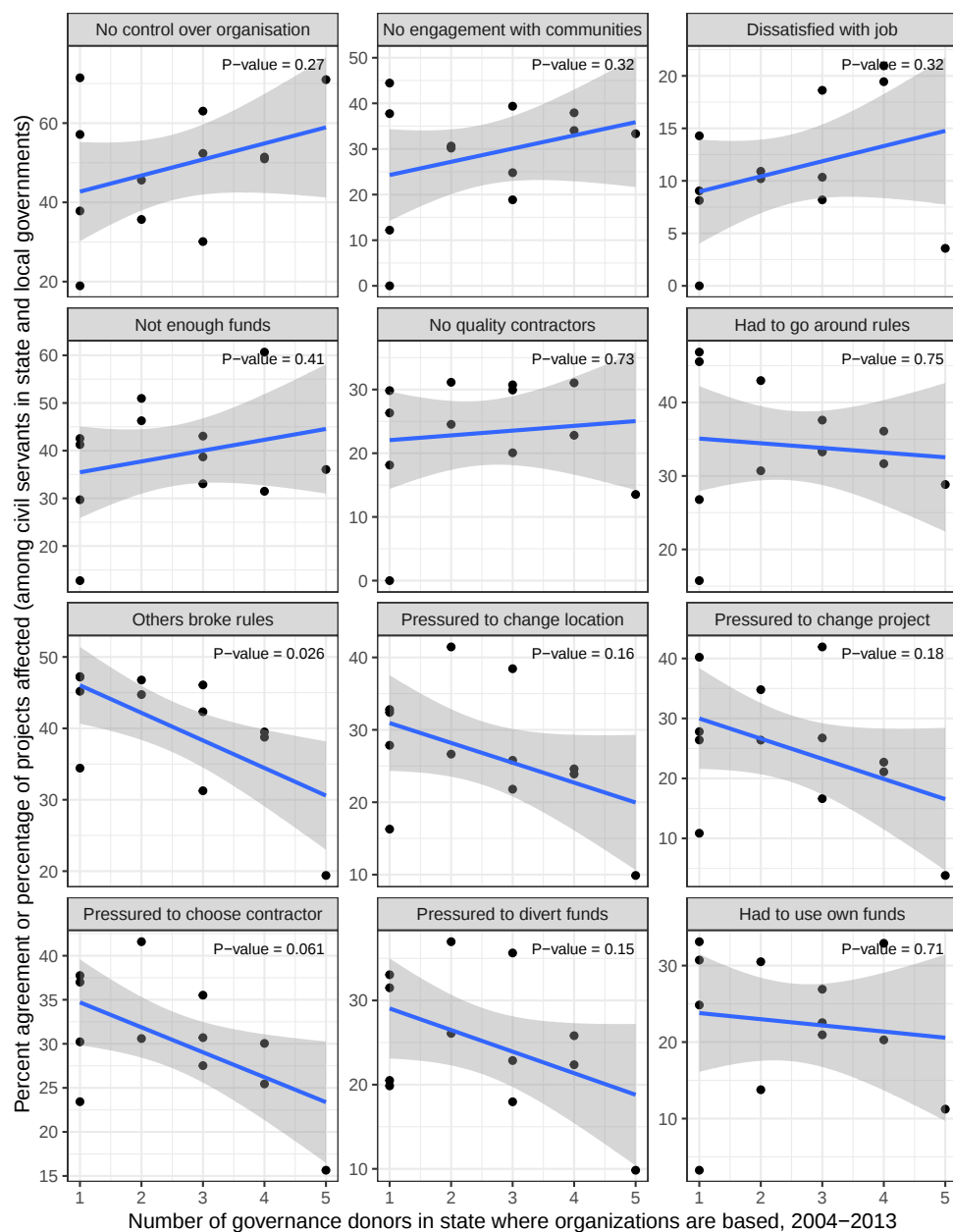


Figure A6: Donor proliferation in governance aid and civil servant satisfaction in 29 randomly selected state and local governments in Nigeria

Table A18: The number of donors and outcomes on the country level, including population as a control variable

Dependent variable:	Child mortality	Government effectiveness [†]
Aid sector:	Health (general and basic)	Government and civil society
Intended effect of aid:	Decrease	Increase
<i>Panel A: Number of donors (amount of aid not included)</i>		
Number of donors	−0.99* [−1.55; −0.43]	1.11* [0.33; 1.90]
GDP per capita (ln)	−12.69* [−25.00; −0.39]	20.44* [5.89; 34.99]
Civil war dummy	6.95* [2.25; 11.66]	3.16 [−4.62; 10.94]
Population (ln)	−128.31* [−163.17; −93.46]	−50.04* [−95.75; −4.32]
Adj. R ²	0.96	0.93
<i>Panel B: Number of donors, controlling for the amount of aid</i>		
Number of donors	−0.90* [−1.48; −0.32]	1.02* [0.21; 1.84]
GDP per capita (ln)	−12.81* [−25.49; −0.13]	20.43* [5.71; 35.15]
Civil war dummy	6.91* [2.18; 11.63]	3.11 [−4.59; 10.81]
Population (ln)	−128.98* [−163.89; −94.07]	−49.91* [−95.62; −4.20]
Aid p.c. (ln)	−2.30* [−4.46; −0.15]	1.98 [−2.87; 6.83]
Adj. R ²	0.96	0.93
<i>Panel C: Number of donors interacted with the amount of aid</i>		
Number of donors	−0.86* [−1.24; −0.48]	0.56* [0.20; 0.92]
* aid p.c. (log)	−12.78* [−24.73; −0.83]	21.94* [7.01; 36.88]
GDP per capita (ln)	6.90* [2.27; 11.53]	2.92 [−4.55; 10.39]
Civil war dummy	−123.99* [−157.65; −90.34]	−47.36* [−91.65; −3.08]
Population (ln)	0.94	0.93
Adj. R ²		
<i>All panels:</i>		
Number of observations	836	833
Number of countries	152	152

* 0 outside the 95% confidence interval; calculated from standard errors clustered at the country level.

[†] Dependent variable rescaled by factor 100 to display significant digits.

All models include country and year fixed effects. The temporal unit is three-year periods.

Table A19: Regression results using yearly data

Dependent variable:	Child mortality	Government effectiveness [†]
Aid sector:	Health (general and basic)	Government and civil society
Intended effect of aid:	Decrease	Increase
<i>Panel A: Number of donors (amount of aid not included)</i>		
Number of donors	−2.43* [−3.16; −1.69]	0.84* [0.12; 1.57]
GDP per capita (ln)	−3.29 [−12.60; 6.02]	27.09* [6.28; 47.90]
Civil war dummy	4.76* [1.12; 8.41]	1.31 [−2.99; 5.61]
Adj. R ²	0.94	0.92
<i>Panel B: Number of donors, controlling for the amount of aid</i>		
Number of donors	−2.39* [−3.13; −1.66]	0.66 [−0.07; 1.39]
GDP per capita (ln)	−3.32 [−12.61; 5.97]	27.26* [6.22; 48.30]
Civil war dummy	4.74* [1.09; 8.39]	1.31 [−2.96; 5.58]
Aid p.c. (ln)	−1.26 [−3.13; 0.61]	3.51 [−0.06; 7.08]
Adj. R ²	0.94	0.92
<i>Panel C: Number of donors interacted with the amount of aid</i>		
Number of donors	−2.71* [−3.52; −1.91]	0.51* [0.03; 0.98]
* aid p.c. (log)		
GDP per capita (ln)	−5.00 [−13.66; 3.67]	28.01* [7.25; 48.76]
Civil war dummy	4.94* [1.28; 8.59]	1.25 [−2.96; 5.45]
Adj. R ²	0.94	0.92
<i>All panels:</i>		
Number of observations	2, 645	2, 192
Number of countries	159	159

* 0 outside the 95% confidence interval; calculated from standard errors clustered at the country level.

[†] Dependent variable rescaled by factor 100 to display significant digits.

All models include country and year fixed effects. The temporal unit is years.

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