

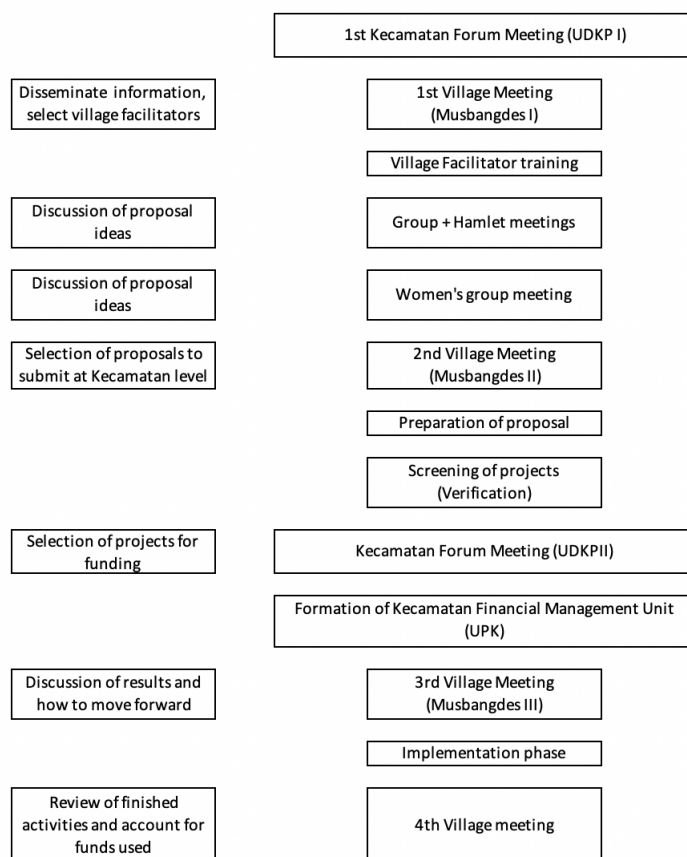
APPENDIX FOR ONLINE PUBLICATION

Fostering Cooperation: The Conflict-Reducing Effects of Inter-Village Competition for Government Transfers

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A.1 Descriptive statistics and additional information on the KDP

Figure A.1: KDP activity cycle



Notes: The figure is based on the official report by the [Ministry of Home Affairs \(2002\)](#). A kecamatan is a sub-district.

Table A.1: Descriptive statistics by sub-districts

	All		In KDP		Out of KDP		Difference
	Mean	SD	Mean	SD	Mean	SD	
Total conflict	0.0719	0.198	0.0581	0.106	0.0763	0.219	-0.018
Within-village conflict	0.0505	0.161	0.0412	0.077	0.0534	0.179	-0.012
Across-village conflict	0.0214	0.080	0.0169	0.064	0.0228	0.085	-0.006
Number of villages	14.6	6.33	17.3	6.31	13.7	6.09	3.62***
Population (sub-district)	58,284	35,336	54,858	24,426	59,360	38,068	-4,502
Population (village)	4,763	4,699	3,398	1,577	5,192	5,241	-1,793***
Segregation (sub-district)	0.3816	0.119	0.3963	0.115	0.3769	0.120	0.019*
Segregation (village)	0.0067	0.010	0.0054	0.009	0.0072	0.010	-0.002*
Ethnic fractionalization (sub-district)	0.1370	0.211	0.1025	0.153	0.1478	0.226	-0.045*
Ethnic fractionalization (village)	0.1130	0.178	0.0750	0.103	0.1249	0.194	-0.050**
Poverty index	0.3268	0.152	0.4138	0.149	0.2995	0.143	0.114***
Rural = 1	0.8178	0.293	0.9393	0.110	0.7797	0.321	0.160***
Number of sub-districts	1774		424		1350		

Notes: Tests of differences in means between in KDP and Out of KDP are reported in the last column with significance * 0.1%, ** 0.05% and *** 0.01% .

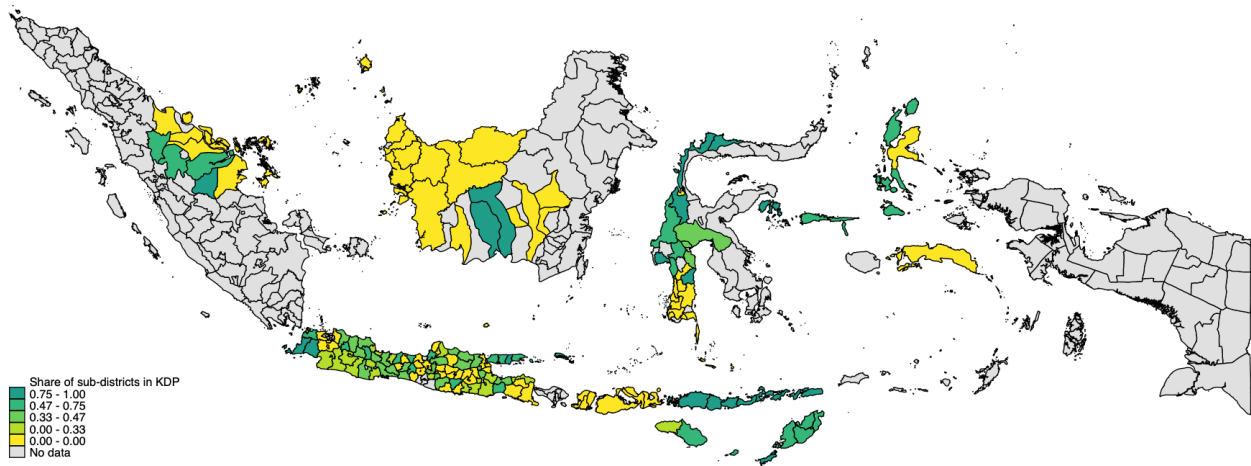


Figure A.2: District map with share of KDP sub-districts with available conflict data (Q2-Q3 sub-districts only)

Notes: The map show the share of sub-districts in each district that are part of the KDP. Only districts in provinces are shown for which conflict data is available, and the map only shows sub-districts that are within the two middle quartiles (Q2-Q3) of the distribution of number of villages.

Table A.2: Correlation between number of villages and sub-district characteristics

	All Q (1)	Q1 (2)	Q2-Q3 (3)	Q4 (4)
Population (log)	3.370 (0.702)	0.0942 (0.325)	0.925 (0.224)	0.747 (0.854)
Village population (log)	-4.805 (0.765)	-0.744 (0.360)	-1.028 (0.171)	-4.170 (1.352)
Hamlets	-0.266 (0.152)	0.0846 (0.073)	-0.0322 (0.043)	-0.343 (0.157)
Poverty	6.125 (2.419)	2.702 (0.922)	-0.470 (0.711)	3.627 (1.918)
Rural	5.142 (1.014)	1.742 (0.398)	0.662 (0.338)	2.678 (1.023)
Ethnic fractionalization (sub-district)	-8.081 (1.534)	-2.468 (0.459)	-1.729 (0.448)	0.536 (1.984)
Ethnic fractionalization (village)	-10.29 (1.796)	-2.869 (0.522)	-2.223 (0.539)	-0.223 (2.674)
Ethnic fractionalization (above avg)	-6.252 (1.094)	-1.843 (0.320)	-1.363 (0.340)	-0.116 (1.449)
Segregation (sub-district)	10.94 (3.169)	2.081 (1.419)	1.379 (0.718)	6.767 (3.462)
Segregation (village)	-121.6 (30.961)	-8.947 (8.155)	-28.48 (9.089)	-29.06 (71.812)
Segregation (above avg)	-7.977 (0.917)	-1.293 (0.355)	-1.810 (0.457)	0.417 (2.267)
Observations	1774	513	845	416

Notes: Each cell is a separate regression. Column 3 considers only the middle two quartiles of the distribution of villages, 11 to 18 villages. Population is sub-district population, Village population average village population, Hamlets the average number of hamlets within villages, Poverty is poverty (SMERU, 2004), Rural is the share of rural villages in sub-district, Ethnic fractionalization (sub-district) ethnic fractionalization within sub-districts, Ethnic fractionalization (village) average within-village ethnic fractionalization, Ethnic fractionalization (above avg) the share of villages within sub-district above overall average village level ethnic fractionalization, Segregation (sub-district) ethnic segregation within sub-districts, Segregation (village) average within-village ethnic segregation, and Segregation (above avg) the share of villages within sub-district above overall average village level ethnic segregation. Standard errors in parentheses are clustered at the district level.

A.2 Additional equilibrium outcomes in the Tullock model

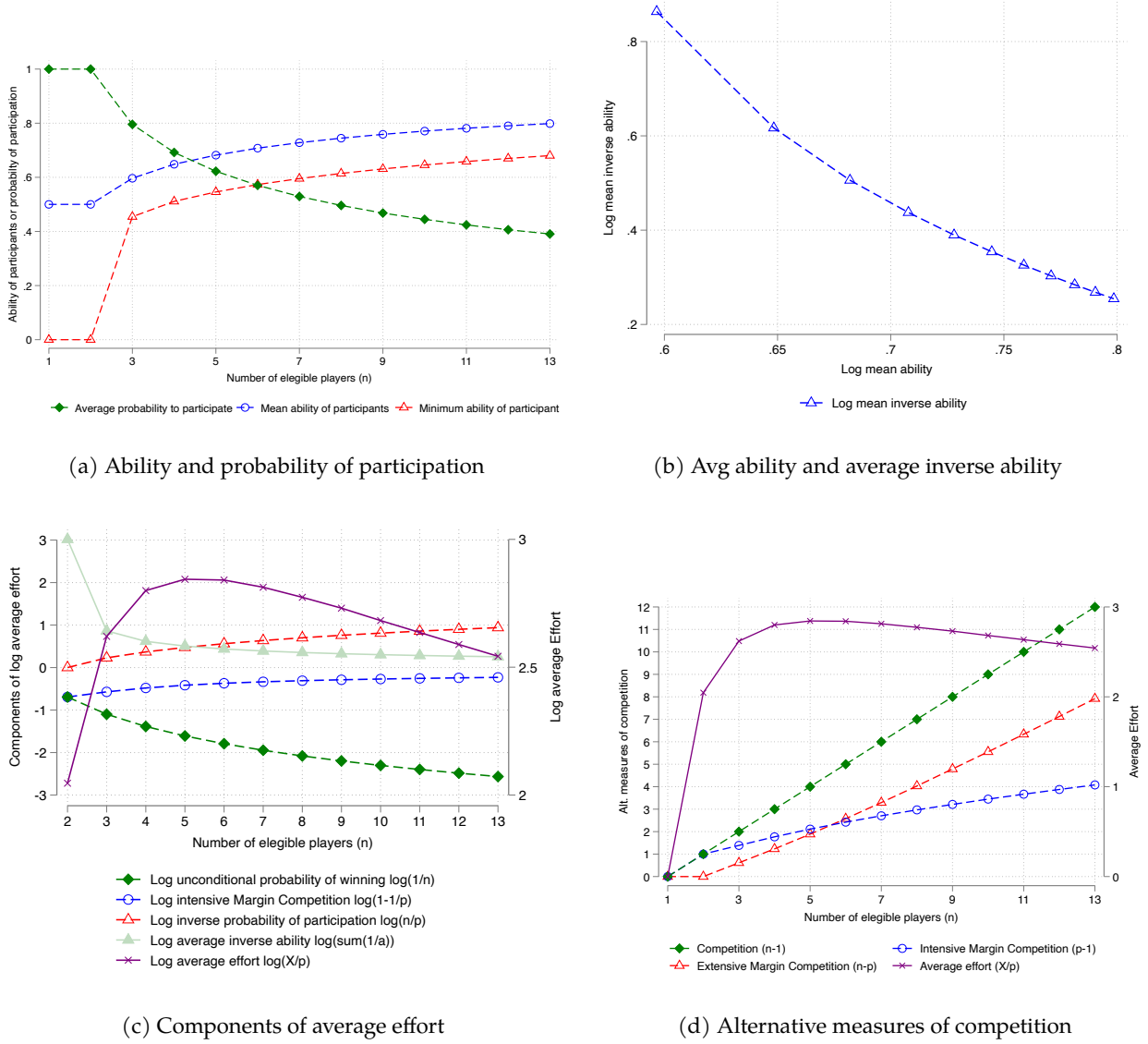


Figure A.3: Ability and alternative measures of competition

Notes: The figures plot equilibrium outcomes in the model. Abilities a_i are drawn from a standard uniform distribution for all n eligible players with V fixed at 20. We average over 100,000 sets of simulations for each endogenously varied number of total players n . Average effort is plotted on the right vertical axis.

Table A.3: Regressions explaining equilibrium average effort

Panel (a): $n \in [1, 13]$				
	(1)	(2)	(3)	(4)
Competition ($1 - 1/n$)	2.772 (0.413)	0.911 (0.170)	-1.797 (0.170)	
Intensive Margin Competition ($1 - 1/p$)				4.821 (0.702)
Extensive Margin Competition ($1 - p/n$)				-1.749 (0.985)
Observations	13	6	6	13

Panel (b): $n \in [1, 30]$				
	(1)	(2)	(3)	(4)
Competition ($1 - 1/n$)	1.689 (0.746)	2.605 (0.462)	-14.77 (0.503)	
Intensive Margin Competition ($1 - 1/p$)				5.761 (1.113)
Extensive Margin Competition ($1 - p/n$)				-3.759 (1.304)
Observations	30	15	15	30

Notes: The table shows OLS regressions where the dependent variable is equilibrium average effort (X/p) from our Tullock model in Section 4.2. Each observation corresponds to the model outcomes for a particular number of villages n . In Columns 1 and 4 we use the full sample, and in Columns 2 and 3 we split the sample at the median n to show that positive effects of competition are driven entirely by the initial part. Standard errors in parentheses are heteroskedasticity-robust.

A.3 Competition in the KDP and conflict: triple-differences robustness

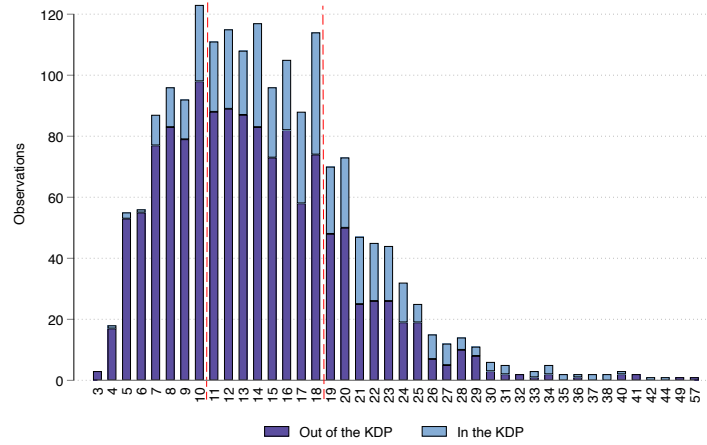


Figure A.4: Distribution of the number of villages by quartiles

Notes: The graph shows the frequency of sub-districts by the number of villages within a sub-district. The dashed lines separates the bottom and the top quartiles from the two middle quartiles. The bottom quartile includes sub-districts with up to 10 villages, the middle quartiles include sub-districts with 11 to 18 villages and the top quartile includes sub-districts with 19 and more villages.

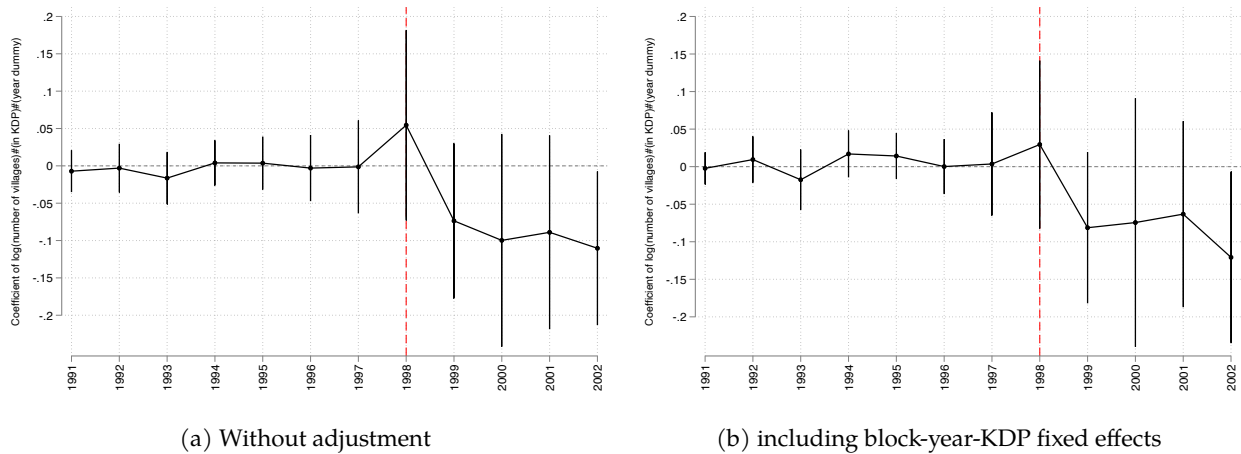


Figure A.5: Event study (triple-differences): no adjustment to number of villages

Notes: These plots are based on a linear regression of the number of within-village conflicts by sub-district on a full set of event time indicators (with 1990 as omitted year) interacted with a dummy indicating the participation in KDP controlling for sub-district and year fixed effects. In the left panel, results are based on a difference-in-differences without adjusting the number of village for differences in block size. In the right panel, we also use unadjusted number of villages but also include block-by-year-by-KDP fixed effects. The lines indicate 95% confidence interval, based on standard errors clustered at the district level.

Table A.4: The effect of competition on conflict: triple-differences (robustness)

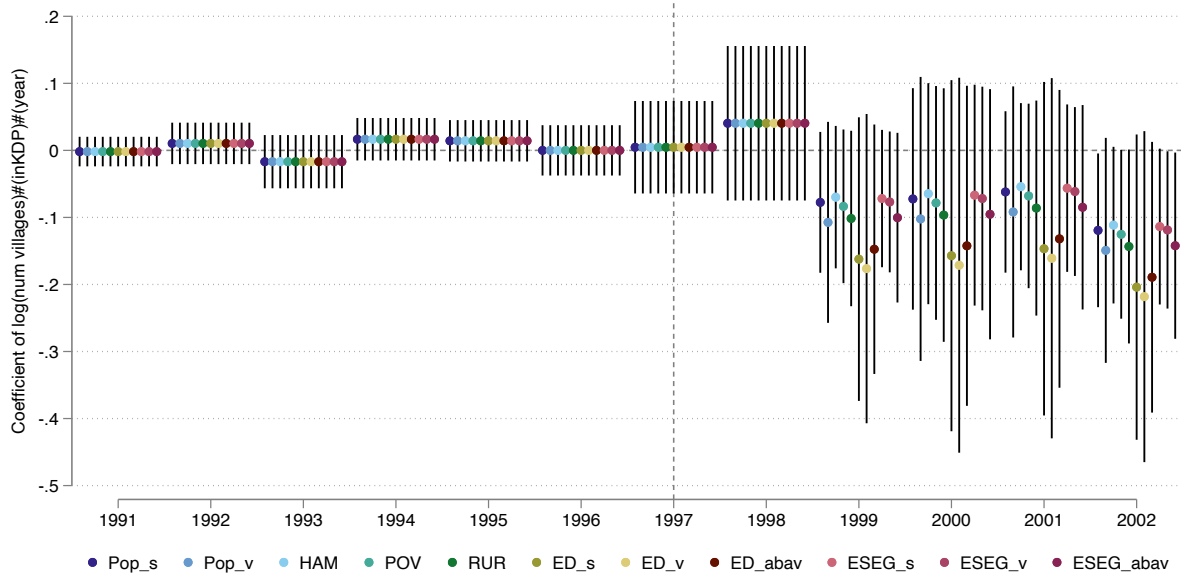
	Total		Within		Across	
	OLS	PPML	OLS	PPML	OLS	PPML
Panel A: Including splits and unadjusted NV						
	(1)	(2)	(3)	(4)	(5)	(6)
$Post \times KDP \times \log(NV)$	-0.0873 (0.050)	-0.765 (0.358)	-0.0830 (0.039)	-0.994 (0.428)	-0.00429 (0.018)	-0.331 (0.501)
Observations	30524	13078	30524	10426	30524	5512
Sub-district FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean outcome	0.0745	0.174	0.0502	0.147	0.0242	0.134
Sub-districts	2348	1006	2348	802	2348	424
Sub-districts w/conflict	1006	1006	802	802	424	424
Share of sub-districts in KDP	0.247	0.228	0.247	0.233	0.247	0.210
Panel B: Restricted control group						
	(1)	(2)	(3)	(4)	(5)	(6)
$Post \times KDP \times \log(NV)$	-0.0879 (0.053)	-1.146 (0.555)	-0.0869 (0.043)	-1.364 (0.627)	-0.00103 (0.017)	-0.422 (0.699)
Observations	21632	9256	21632	7462	21632	3458
Sub-district FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean outcome	0.0693	0.162	0.0478	0.139	0.0214	0.134
Sub-districts	1664	712	1664	574	1664	266
Sub-districts w/conflict	712	712	574	574	266	266
Share of sub-districts in KDP	0.255	0.243	0.255	0.247	0.255	0.229

Notes: The dependent variable is as indicated the total number of conflicts within a sub-districts, the number of within-village conflicts, or the number of across-village conflicts. Regressions include all lower order interaction terms. In Panel A, compared to the main Table (3) Panel A, the number of villages are *not* adjusted as outlined in Section 4.3, and districts with splitting sub-districts over the sample period are included, and the number of splits is included as control variable. In Panel B, compared to the main Table (3), we only include provinces that contain sub-districts in and out of the KDP. Standard errors in parentheses are clustered at the district level. The number of observations is lower in the PPML regressions because sub-districts with zero conflict in every time periods are necessarily dropped as they are separated by fixed effects.

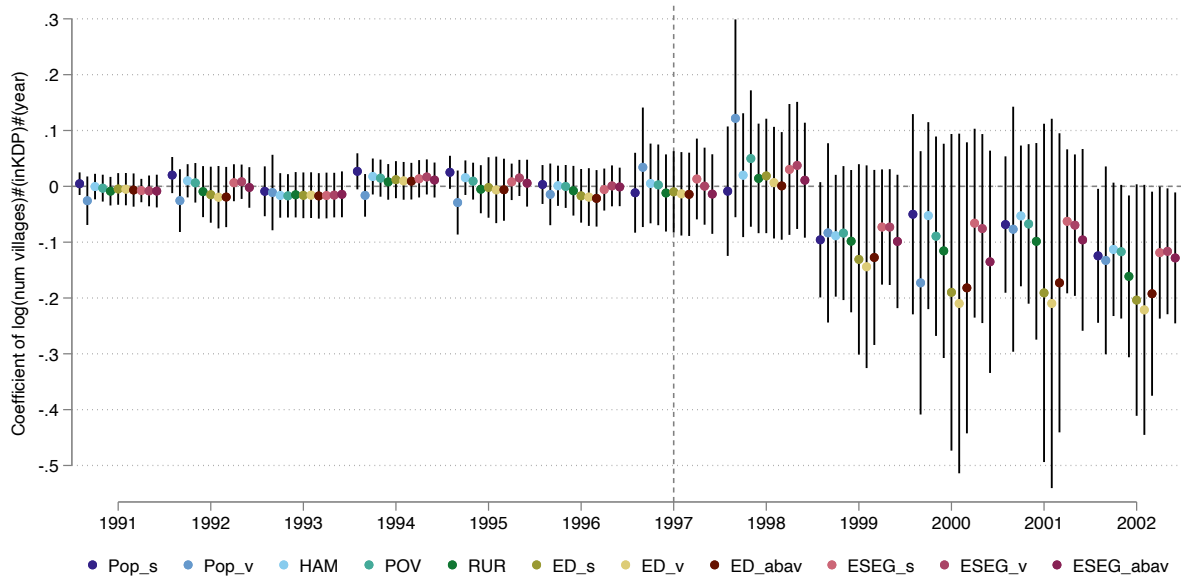
Table A.5: The effect of competition on conflict: triple-differences (*further controls*)

Panel A: Total conflicts											
Controls:	POP_s (1)	POP_v (2)	HAM (3)	POV (4)	RUR (5)	ED_s (6)	ED_v (7)	ED_{abav} (8)	$ESEG_s$ (9)	$ESEG_v$ (10)	$ESEG_{abav}$ (11)
$Post \times KDP$	-0.975 (0.546)	-1.299 (0.657)	-1.005 (0.556)	-1.113 (0.557)	-1.056 (0.594)	-1.174 (0.595)	-1.139 (0.617)	-1.101 (0.636)	-1.095 (0.548)	-1.048 (0.583)	-1.113 (0.607)
$\times \log(NV)$											
$Post \times KDP$	-0.501 (0.364)	-0.321 (0.363)	0.176 (0.090)	1.322 (1.698)	2.109 (0.894)	-0.264 (1.579)	0.380 (2.367)	0.290 (1.230)	-1.162 (1.191)	12.19 (23.466)	-0.0971 (1.089)
$\times CONTROL$											
Observations	9867	9867	9867	9867	9867	9867	9867	9867	9867	9867	9867
Panel B: Within-village conflicts											
Controls:	POP_s (1)	POP_v (2)	HAM (3)	POV (4)	RUR (5)	ED_s (6)	ED_v (7)	ED_{abav} (8)	$ESEG_s$ (9)	$ESEG_v$ (10)	$ESEG_{abav}$ (11)
$Post \times KDP$	-1.349 (0.632)	-1.725 (0.810)	-1.190 (0.632)	-1.476 (0.651)	-1.503 (0.708)	-1.522 (0.664)	-1.485 (0.693)	-1.472 (0.715)	-1.421 (0.641)	-1.428 (0.716)	-1.507 (0.746)
$\times \log(NV)$											
$Post \times KDP$	-0.421 (0.455)	-0.409 (0.474)	0.249 (0.094)	3.671 (1.964)	3.147 (1.128)	-0.758 (1.731)	-0.251 (2.885)	0.0955 (1.488)	-0.410 (1.634)	5.054 (44.681)	-0.458 (1.290)
$\times CONTROL$											
Observations	7891	7891	7891	7891	7891	7891	7891	7891	7891	7891	7891
Panel C: Across-village conflicts											
Controls:	POP_s (1)	POP_v (2)	HAM (3)	POV (4)	RUR (5)	ED_s (6)	ED_v (7)	ED_{abav} (8)	$ESEG_s$ (9)	$ESEG_v$ (10)	$ESEG_{abav}$ (11)
$Post \times KDP$	0.0207 (0.705)	-0.454 (0.742)	-0.192 (0.645)	-0.318 (0.708)	-0.0349 (0.661)	-0.108 (0.788)	-0.141 (0.781)	-0.109 (0.762)	-0.199 (0.688)	-0.139 (0.771)	-0.189 (0.785)
$\times \log(NV)$											
$Post \times KDP$	-0.860 (0.551)	-0.193 (0.689)	-0.00299 (0.181)	-4.070 (2.114)	0.417 (1.309)	1.215 (1.874)	1.833 (2.444)	0.826 (1.243)	-2.061 (1.761)	10.30 (31.782)	0.601 (1.345)
$\times CONTROL$											
Observations	3692	3692	3692	3692	3692	3692	3692	3692	3692	3692	3692

Notes: The control variable included in each specification is indicated in the header. Shown are estimates from PPML regressions including all lower order interaction terms. The number of villages NV are adjusted as described in Section 4.3. POP_s is log of sub-district population, POP_v log of average village population, HAM the average number of hamlets within villages, POV is poverty (SMERU, 2004), RUR is the share of rural villages in sub-district, ED_s ethnic fractionalization within sub-districts, ED_v average within-village ethnic fractionalization, ED_{abav} the share of villages within sub-district above overall average village level ethnic fractionalization, $ESEG_s$ ethnic segregation within sub-districts, $ESEG_v$ average within-village ethnic segregation, and $ESEG_{abav}$ the share of villages within sub-district above overall average village level ethnic segregation. All regressions include sub-district and year fixed effects and standard errors in parentheses are clustered at the district level.



(a) Interacted with post and KDP



(b) Interacted with year dummies and KDP

Figure A.6: Within-village conflict event study with fully interacted controls

Notes: The graphs shows separate event studies were we include control variables fully interacted with KDP and post (in Panel a) and or fully interacted with KDP and year dummies (in Panel b), with 1990 as omitted year. POP_s is log of sub-district population, POP_v log of average village population, HAM the average number of hamlets within villages, POV is poverty (SMERU, 2004), RUR is the share of rural villages in sub-district, ED_s ethnic fractionalization within sub-districts, ED_v average within-village ethnic fractionalization, ED_{abav} the share of villages within sub-district above overall average village level ethnic fractionalization, $ESEG_s$ ethnic segregation within sub-districts, $ESEG_v$ average within-village ethnic segregation, and $ESEG_{abav}$ the share of villages within sub-district above overall average village level ethnic segregation.

Table A.6: Placebo effect of competition in the KDP on conflict: triple-differences

	Total		Within		Across	
	OLS (1)	PPML (2)	OLS (3)	PPML (4)	OLS (5)	PPML (6)
<i>Placebo – Post × KDP × log(NV)</i>	0.0315 (0.032)	0.565 (1.041)	0.0199 (0.026)	0.480 (1.115)	0.0116 (0.014)	1.159 (1.466)
Observations	15966	3555	15966	2673	15966	1278
Sub-district FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Mean outcome	0.0397	0.178	0.0267	0.160	0.0130	0.162
Sub-districts	1774	395	1774	297	1774	142
Sub-districts w/conflict	395	395	297	297	142	142
Share of sub-districts in KDP	0.239	0.215	0.239	0.222	0.239	0.197

Notes: For a placebo check we define the post treatment period here as after 1995, and drop all years after 1998. The dependent variable is the total number of conflicts within a sub-districts, the number of within-village conflicts, or the number of across-village conflicts. Regressions include all lower order interaction terms. The number of villages are adjusted as outlined in Section 4.3 in all columns. Districts with splitting sub-districts over the sample period are dropped. Standard errors in parentheses are clustered at the district level. The number of observations is lower in the PPML regressions because sub-districts with zero conflict in every time periods are necessarily dropped as they are separated by fixed effects.

A.4 Nonlinear effects of competition in the KDP and conflict: triple-differences robustness

Table A.7: The non-linear effects of competition: triple-differences (*unadjusted NV* and *including splits*)

	OLS				PPML			
	All Q (1)	Q1 (2)	Q2-Q3 (3)	Q4 (4)	All Q (5)	Q1 (6)	Q2-Q3 (7)	Q4 (8)
$Post \times KDP$ $\times \log(NV)$	-0.0760 (0.026)	0.0772 (0.144)	-0.272 (0.111)	0.00246 (0.078)	-0.755 (0.291)	0.646 (1.840)	-2.887 (1.256)	0.0655 (0.867)
Observations	18551	3913	8268	6370	18551	3913	8268	6370
Village FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
P-value Δ to Q1	-	-	0.057	-	-	-	0.114	-
P-value Δ to Q4	-	-	0.073	-	-	-	0.062	-
Mean outcome	0.0881	0.0917	0.0871	0.0873	0.0881	0.0917	0.0871	0.0873
Villages	1427	301	636	490	1427	301	636	490
Villages w/conflict	1427	301	636	490	1427	301	636	490
Share of villages in KDP	0.243	0.120	0.223	0.345	0.243	0.120	0.223	0.345

Notes: The regressions are at the village level and the dependent variable is the number of within-village conflicts. We drop villages that have zero conflict in every time period as they are separated by fixed effects. The regressions are run for the whole sample (All Q), for the bottom quartile Q1 (≤ 10 villages), the two middle quartiles Q2-Q3 (11 to 18 villages), or the top quartile (≥ 19 villages). Regressions include all lower order interaction terms. Compared to the main Table (5), the number of villages are *not* adjusted as outlined in Section 4.3, and districts with splitting sub-districts over the sample period are included, and the number of splits is included as control variable. The number of villages are adjusted as described in Section 4.3, and the quartiles are redefined accordingly. Standard errors in parentheses are clustered at the district level. P-value Δ indicates the p-value for the difference in the coefficients between the Q2-Q3 Column and the Q1 or Q4 Column. This is the p-value associated with a quadruple interaction of our triple interaction term with a dummy for Q2-Q3 in a stacked regression of Q2-Q3 villages and either Q1 or Q4 villages, with all variables (and fixed effects) interacted with a dummy for Q2-Q3 villages.

Table A.8: The non-linear effects of competition: triple-differences (*sub-district level*)

	Within				Across			
	All Q (1)	Q1 (2)	Q2-Q3 (3)	Q4 (4)	All Q (5)	Q1 (6)	Q2-Q3 (7)	Q4 (8)
$Post \times KDP \times \log(NV)$	-1.451 (0.631)	-5.864 (13.048)	-4.336 (1.487)	4.309 (2.390)	-0.306 (0.693)	7.611 (16.642)	-3.238 (1.761)	-0.583 (3.926)
Observations	7891	1677	4186	2028	3692	984	1794	704
Sub-district FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean outcome	0.148	0.135	0.169	0.114	0.134	0.153	0.141	0.128
Sub-districts	607	129	322	156	284	82	138	64
Sub-districts w/conflict	607	129	322	156	284	82	138	64
Share of sub-districts in KDP	0.234	0.0930	0.224	0.372	0.215	0.0854	0.225	0.359

Notes: These PPML regressions are at the sub-district level and the dependent variable is the number of within-village or across-village conflicts as indicated. The regressions are run for the whole sample (All Q), for the bottom quartile Q1 (≤ 10 villages), the two middle quartiles Q2-Q3 (11 to 18 villages), or the top quartile (≥ 19 villages). Regressions include all lower order interaction terms. The number of villages are adjusted as described in Section 4.3, and the quartiles are redefined accordingly. Districts with splitting sub-districts over the sample period are dropped. Standard errors in parentheses are clustered at the district level.

A.5 Competition and meeting attendance

Table A.9: The association between competition in the KDP and meeting attendance

	(1)	(2)	(3)	(4)
Panel A: Musbangdes I				
log(NV)	2.369 (0.160)	2.880 (0.170)	1.115 (0.200)	0.925 (0.228)
Population of sub-district	No	Yes	Yes	Yes
Population of village	No	No	No	Yes
Province FE	No	No	Yes	Yes
Observations	9231	9231	9231	9231
Mean	2.962	2.962	2.962	2.962
Panel B: Musbangdus I (Hamlets)				
log(NV)	0.159 (0.0616)	0.321 (0.0673)	0.397 (0.0917)	0.312 (0.100)
Population of sub-district	No	Yes	Yes	Yes
Population of village	No	No	No	Yes
Province FE	No	No	Yes	Yes
Observations	9156	9156	9156	9156
Mean	1.141	1.141	1.141	1.141
Panel C: Musbangdes II				
log(NV)	3.516 (0.339)	4.155 (0.353)	2.687 (0.448)	2.221 (0.537)
Population of sub-district	No	Yes	Yes	Yes
Population of village	No	No	No	Yes
Province FE	No	No	Yes	Yes
Observations	9154	9154	9154	9154
Mean	9.633	9.633	9.633	9.633

Notes: Each panel refers to a different type of meetings (in chronological order). Musbangdes I and II are village-level meetings, while Musbangdus refers to the hamlet level, which takes place between the two village level meetings (see Section 2 and Figure A.1 for an overview of meetings timing). The dependent variable is attendance at the meeting measured as percentage of villagers attending. Robust standard errors are reported in parenthesis. Source: Data on KDP from [Chavis \(2010b\)](#) and cover the first 2 years of the first phase of KDP.

A.6 Ethnic fractionalization, polarization and segregation

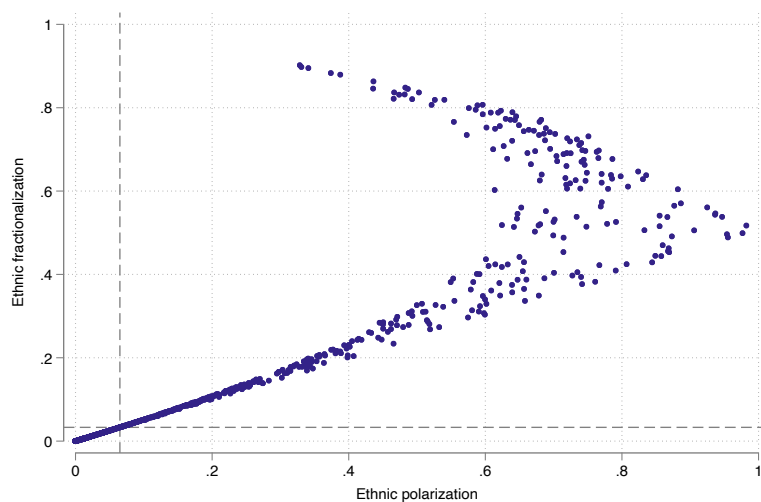
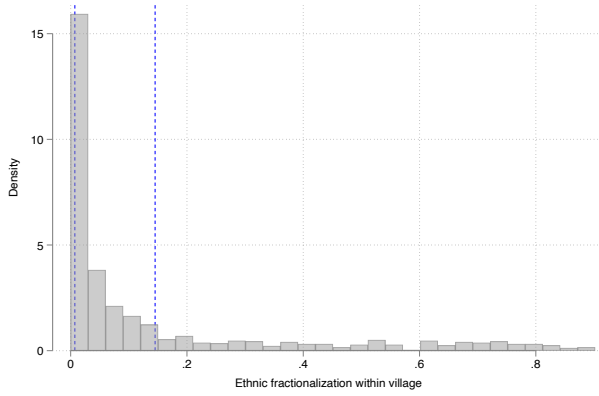
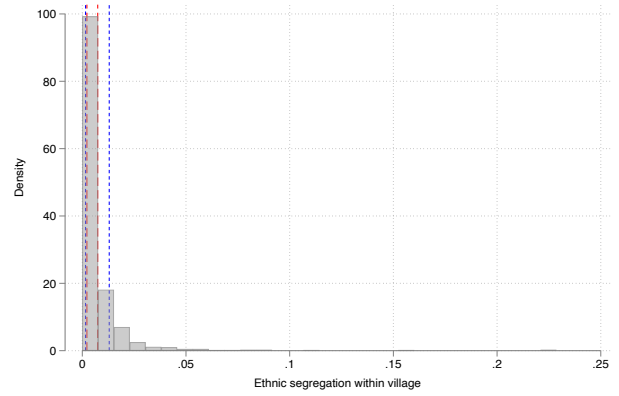


Figure A.7: The relationship between ethnic fractionalization and polarization

Notes: The graph plots within-village ethnic fractionalization and polarization in the sample used for estimation. The dashed lines indicate the median on each dimension.



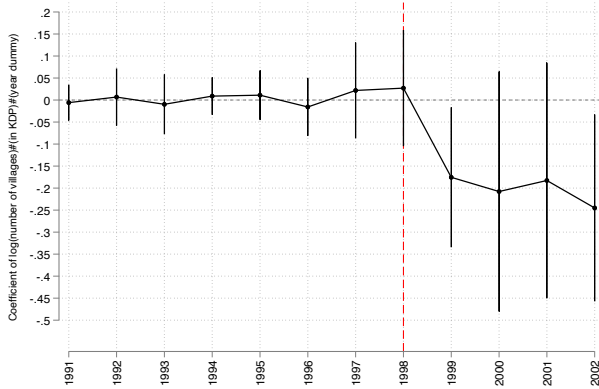
(a) Ethnic fractionalization within-village



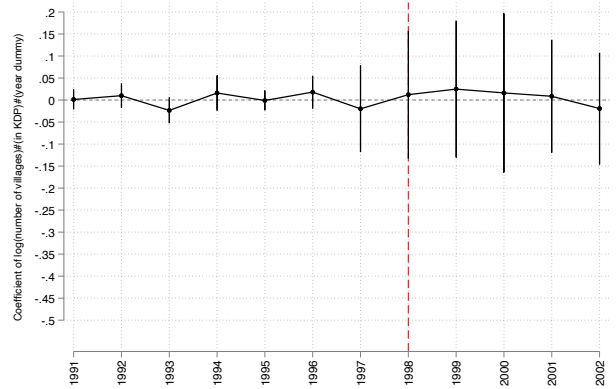
(b) Ethnic segregation within-village

Figure A.8: Distribution of within-village ethnic fractionalization and segregation

Notes: Panel (a) shows the histogram of within-village ethnic fractionalization for all villages in the sample used for estimation. The two blue vertical lines mark the median of the bottom half and the median of the top half villages. Panel (b) shows the histogram of within-village ethnic segregation for all villages in the sample used for estimation. The two blue vertical lines mark the median of the bottom quarter and the median of the top quarter of villages. The red dotted lines mark the median of the bottom half and the top half of villages. This shows that using a median sample split for fractionalization provides reasonable heterogeneity across groups, but for ethnic segregation a median sample split generates two groups where most of the villages are similar in terms of segregation. This is why we use the bottom and top quartile in terms of segregation for heterogeneity analysis.



(a) High ethnic fractionalization



(b) Low ethnic fractionalization

Figure A.9: Event study (triple-differences): the impact of competition in KDP on conflict within villages by average village level ethnic fractionalization

Notes: The plots are created by a linear regression of the number of conflicts by sub-district on a full set of event time indicators (with 1990 as omitted year) interacted with a dummy indicating the participation in KDP and the log of the number of villages. The graph plots the coefficients of these triple interaction terms. We control for sub-district and year fixed effects. High ethnic fractionalization is defined as sub-districts with an above median level of the (weighted) average of within-village fractionalization. The lines indicate 95% confidence interval, based on standard errors clustered at the district level. Results exclude districts were sub-districts split over the sample period.

A.7 Using alternative conflict data

Table A.10: Competition and conflict: Using NVMS data

	All (1)	Ethnic fract.		PPML (Q2-Q3) Winners/losers/non-participants		
		Low (2)	High (3)	Winners (4)	Losers (5)	Non-par. (6)
$KDP \times \log(NV)$	-1.693 (2.256)	0.109 (1.920)	-3.129 (2.443)	-2.702 (2.271)	-1.870 (2.869)	2.482 (2.597)
Observations	15180	4358	7996	13695	12545	13140
Province X Year FE						
Mean outcome	0.0521	0.0289	0.0760	0.0552	0.0553	0.0543
Villages	3036	1129	1681	2739	2509	2628
Villages w/conflict	369	87	245	342	313	324
Share of villages in KDP	0.203	0.315	0.183	0.116	0.0355	0.0791

Notes: The regressions are at the village level and the dependent variable is the number of within-village conflicts from [World Bank \(2016\)](#). There is no pre-period in this data. We drop villages that have zero conflict in every time period as they are separated by fixed effects. The regressions are run for the the two middle quartiles Q2-Q3 (11 to 18 villages). Regressions include all lower order terms. All regressions include the out of KDP control group and province by year fixed effects. In Columns (2) and (3), the regressions are run separately for high (top half) and low (bottom half) ethnic fractionalization. In Columns (4) to (6), regressions are run separately to include only the KDP villages that also won funding (4), the winners, to include only KDP villages that submitted a proposal but were not awarded funding (5), the losers, or to include only KDP villages that did not put forward a proposal (6), the non-participants (“Non-par.”) as “treated” villages. The number of villages are adjusted as described in Section 4.3. Districts with splitting sub-districts over the sample period are dropped. Standard errors in parentheses are clustered at the district level.

A.8 KDP and conflict: difference-in-differences robustness

Table A.11: Propensity of sub-districts to participate in the KDP

	(1)	(2)
Poverty index (SMERU)	4.313 (0.835)	3.063 (0.746)
Share of rural villages	2.556 (0.572)	2.880 (0.523)
Conflict pre-treatment	0.0597 (0.100)	0.0266 (0.095)
Number of villages (log)	1.450 (0.343)	1.476 (0.244)
Sub-district population (log)	0.423 (0.223)	0.313 (0.178)
Ethnic fragmentation	0.954 (1.061)	0.401 (0.647)
Observations	1774	2348

Notes: The dependent variable is a dummy of sub-district participation in the KDP. The logit regression serves to estimate the propensity score used for matching. In the first column, districts with splitting sub-districts over the sample period are dropped, while they are kept in the second column. Standard errors in parentheses are clustered at the district level.

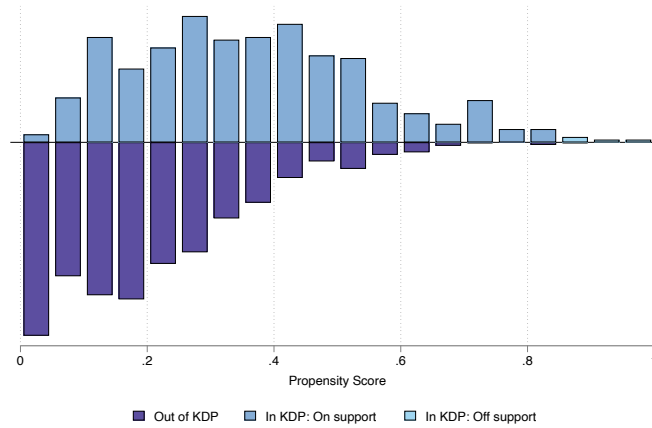


Figure A.10: Distribution of propensity scores

Notes: The graph plots the relative frequencies of the estimated propensity score for sub-districts in the KDP and outside the KDP. We also plot the four sub-district in the KDP that are off support at the far right tail.

Table A.12: The Effect of KDP on Conflict: Matched Difference-in-Differences Estimates

	All		Q2-Q3	
	OLS (1)	PPML (2)	OLS (3)	PPML (4)
<i>Post</i> × <i>KDP</i>	-0.0362 (0.028)	-0.274 (0.206)	-0.0622 (0.044)	-0.483 (0.284)
Observations	23010	9867	12038	5057
Sub-district FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Mean outcome	0.0721	0.168	0.0798	0.190
Sub-districts	1770	759	926	389
Sub-districts w/conflict	759	759	389	389
Share of sub-districts in KDP	0.237	0.228	0.245	0.224

Notes: The dependent variable is the total number of conflicts within a sub-districts. The results are based on a matching and difference-in-differences hybrid. The regressions are weighted with weights based on the estimated propensity scores as detailed in Section 6. Due to dropping sub-districts off the common support the number of sub-districts is 1770 compared to 1774 in Table A.1. Standard errors are block bootstrapped to account for the two-step matching and difference-in-difference procedure. Districts with splitting sub-districts over the sample period are dropped. The number of observations is lower in the PPML regressions because sub-districts with zero conflict in every time periods are necessarily dropped as they are separated by fixed effects.

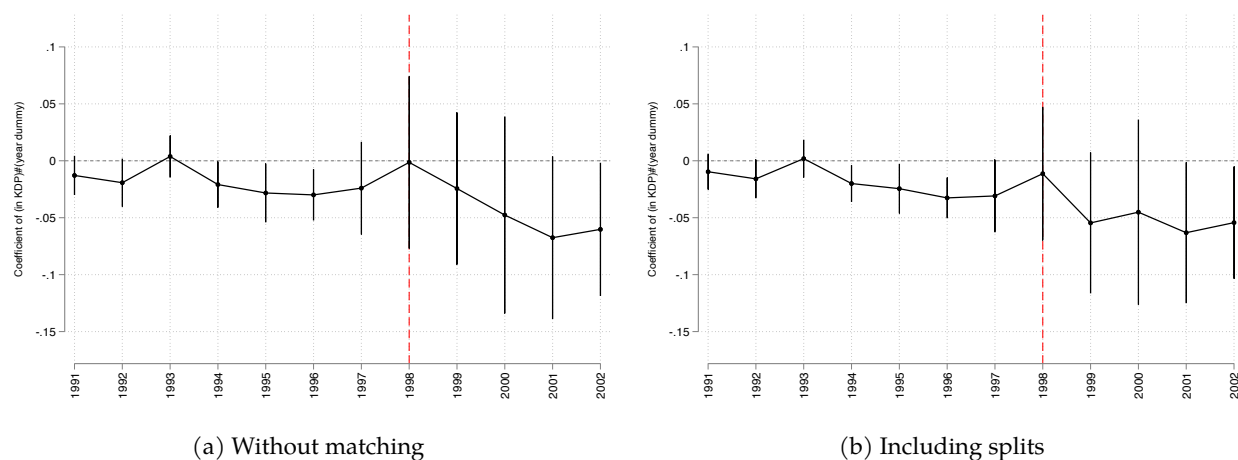


Figure A.11: Event study: the impact of the KDP on conflict

Notes: These plots are based on a linear regression of the total number of conflicts by sub-district on a full set of event time indicators (with 1990 as omitted year) interacted with a dummy indicating the participation in KDP controlling for sub-district and year fixed effects. In the left panel, results are based on a difference-in-differences without matching. In the right panel results additionally include districts were sub-districts split over the sample period. The lines indicate 95% confidence interval, based on standard errors clustered at the district level.