Appendix to "Do Ethnic Dominoes Fall? Evaluating Domino Effects of Granting Territorial Concessions to Separatist Groups"

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This web appendix contains supporting information to the results presented in "Do Ethnic Dominoes Fall? Evaluating Domino Effects of Granting Territorial Concessions to Separatist Groups." This includes summary statistics and a set of alternative specifications and other robustness tests. Use attached do-file and dataset to reproduce all estimations described in this appendix.

Summary Statistics

Variable	Min (%)	Max (%)	Mean	Std. Dev.
Onset of ethnic conflict	0 (99)	1 (1)	0.012	0.108
Onset territory or government	0	2	0.019	0.181
Territorial concession*	0	1	0.213	0.328
Implemented concession*	0	1	0.067	0.208
Territorial concession (same country)*	0	1	0.036	0.155
Implemented concession (same country)*	0	1	0.031	0.143
Conflict same country*	0	1	0.322	0.439
Kin in conflict*	0	1	0.055	0.210
Neighborhood civil war	0	9	3.388	2.168
Number of EPR groups	1	57	12.752	14.577
Ln(Number of EPR groups)	0	4.043	2.078	0.899
Discrimination	0 (89)	1 (11)	0.115	0.319
Powerless	0 (75)	1 (25)	0.246	0.431
Regional autonomy	0 (77)	1 (23)	0.234	0.424
Group proportion	0.00002	0.95	0.110	0.168
Polity^{t-1}	-10	10	0.751	6.605
Polity, sq^{t-1}	0	100	44.189	29.468

The descriptive statistics are based on the sample used in the full models (*N*: 7,716).
*Modeled as decay functions

Robustness tests

1. Alternative specifications of territorial concessions

In all models reported in Tables 1 and 2, the signing or implementation of a territorial pact are modeled as decay functions with a half-life of three years. I have tested a battery of other specifications, including other half-lives (one year, five years) and constructing a set of variables following the technique Carter and Signorino (2010)

propose for dealing with temporal autocorrelation. Out of twenty-four regressions, concessions are significant once (at the 90% level).

Reported models that assess the impact of implementation of territorial concessions include both partially and fully implemented pacts. In alternative analyses, where implementation is restricted to only fully implemented pacts, none of the results change; the models either support the main findings or are not possible to estimate due to the low number of fully implemented deals.

In the models reported in the article, ethnic groups that never experience a concession being granted to a nearby group are coded "0" for all years included. Estimating the effect of concessions only for those ethnic groups that see nearby concessions at some point, or using a fixed effects model, does not change the results: concessions are significant in a few models, but more often negative than positive.

2. Alternative operationalizations of the dependent variable

All models have been re-estimated using alternative specifications of the dependent variable. In the paper, two dependent variables are used. The first codes all onsets involving ethnic groups, i.e. both the demands for greater territorial control and demands concerning the government of the country, as (1), other observations (0). Since the idea is to investigate whether territorial concessions prompt other groups into violently pursuing similar demands, i.e. regarding territory, one should ideally specify the dependent variable to single out territorial onsets. There are two alternatives for doing so. First, one could adapt a multinomial model, distinguishing between observations of no onset, onsets regarding government power, and onsets concerning territory. Such models are reported in the paper (Models 3-6 in Tables 1 and 2). Second, one could use a binary logit model where territorial onsets are coded (1) and all other observations (0). The results are in substance the same as those reported; concessions are not significant. There are both technical and substantial reasons for not including these results in the article. One is the difficulty in interpreting the coefficients considering that the zeros in actual case contain both observations of no onset and observations of onset of governmental conflict. There is also a more substantial reason,

which originates in the way UCDP categorizes conflicts based on the declared incompatibility of the warring parties. Many of the ethnic rebellions coded as being over government power involves groups with a strong attachment to homeland territory, who may have territorial self-determination as their foremost goal. Sometimes, however, the aims and the claims do not correspond and the group may choose to pursue issues relating to gaining minority rights, seats in the government, etc. For instance, most of the rebel groups in Southern Sudan and some of the Tuareg-based movements in Niger are categorized as involved in conflict over government, although they clearly also have goals relating to territorial self-determination. One can also notice in the IMPACT data that several groups involved in conflicts over government were granted – and sometimes appeased – by territorial pacts. Excluding these cases would mean a risk of excluding cases of potential demonstration effects.

3. Additional control variables

Controlling for group concentration

A factor that may relate to the capacity of an ethnic group is its regional concentration (see, e.g., Toft, 2003). Unfortunately, the EPR does not include information on this variable. In robustness tests, all models have been re-estimated using those EPR groups that also appear in the Minorities at Risk dataset, which codes these groups' settlement patterns. Group concentration is significantly related to the probability of territorial conflict, but the theoretically relevant results remain (territorial concessions are not significant). It is also plausible that the domino effects only operate for groups that have a strong territorial base, i.e. that are regionally concentrated. I have thus re-estimated all models for the sample of groups that have such a base. Again, the theoretically relevant results remain: concessions are either not significant or negatively related to conflict. Due to the inherent biases that follow from restricting the sample to MAR groups, I have less confidence in these results than in those reported in tables 1 and 2.

Controlling for years with strong demonstration effects

All statistical models were re-estimated with the addition of a set of dummy variables representing years where ethnic groups gained independence for their homelands and years when countries disintegrated. These dummies control for events which may be

associated with particularly strong demonstration effects with the potential of having a global reach. The dummies take into account the possibility that ethnic groups may respond to concessions granted to groups outside of their primary strategic environment. It is unlikely, however, that groups will care much about concessions to ethnic groups in remote locations if the concessions granted are small. Therefore, years of events considered to have strong potential for inspiration, both because of their magnitude and for being widely reported, are included in the set of dummy variables. The dummies include *1991* (representing the dissolution of the Soviet Union and the independence of Slovenia and Croatia); *1992* (the independence of Bosnia and Herzegovina); *1993* (the independence of Eritrea, devolution of Czechoslovakia, and the formal acceptance of the independence of FYR Macedonia); *1999* (East Timor voted for independence); and *2002* (East Timor is formally independent); all variables are lagged one year. Neither of these dummies is significant; nor does their inclusion in the models alter the results in any substantially meaningful way. Including one dummy, coded (1) for all of these years, yields the same result.

4. Alternative estimators

The number of onsets is relatively small compared to observations of no onset (approximately 1.2%, or 91 observations, in the full models). As a robustness test, all logit models were re-estimated using rare events logit (King and Zeng, 2001). When using rare events logit, the results remain the same with the exception of model 2 in table 2; the implementation of territorial concession to other groups in the same country is now significant at the 90% level. Logit is preferred over probit mainly because of the available post-estimation techniques based on odds and odds ratios (Long and Freese, 2003).

5. Alternatives for dealing with spatial and temporal autocorrelation

The decay function employed in the paper follows the recommendation of Raknerud and Hegre (1997). The function equals 2^(-y/5) where y is the number of years since the last onset of ethnic conflict involving the ethnic group (or since the first observation of the ethnic group) and 5 is the selected half-life. Other half-lives (one year, three years) do not alter the results; five years is chosen since those models performed better in terms of

log-likelihood. An alternative technique for dealing with temporal autocorrelation is the one suggested by Beck, Katz and Tucker (1998), i.e. adding a peace year variable along with fitting three cubic splines. Doing so does not change the substantial interpretations of the results. I chose to report the decay function since it is more parsimonious.

Regarding spatial autocorrelation, in the results reported the standard errors were adjusted for clustering on each ethnic group. In alternative tests, the standard errors were clustered on each country. This did not change the results.

6. Other robustness tests referred to in text

Trimmed models

All models reported in the paper includes a number of control variables that are never or rarely significant. In robustness tests, I have re-estimated all models including only territorial concessions and the significant predictors. Those variables that were significant in the full models largely remain so, while territorial concessions continue to lack significance.

Concessions to ethnic kin groups

The involvement in armed conflict of kin members nearby is a significant predictor of conflict involving an ethnic group in all models reported (and also in alternative tests not reported). Perhaps it is the case that territorial concessions matter only if they are given to kin members involved in conflict Thus, as an alternative test, a variable coded (1) only for years when territorial concessions are granted to nearby kin groups is analyzed. This measure is not significant in any of the models. The same is the case if concessions to kin groups are modeled as a function that decays over time.

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