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Ethnicity and the spread of civil war ☆

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ABSTRACT

Civil wars tend to cluster in particular areas of the world. We provide empirical evidence that cross-border conflict spillovers are an important factor in explaining this pattern. Moreover, we show that ethnicity plays a key role in conditioning the spread of civil wars. Only ethnic wars tend to spill over, and ethnic wars are more likely to spill over along ethnic lines. The latter result is robust to the inclusion of a host of (other) cross-border characteristics, such as geographical factors and trade intensity. We estimate that a neighboring ethnic civil war increases the risk of an outbreak of ethnic civil war on the home territory by 4–6% points.

1. Introduction

Civil wars are detrimental to a country's development prospects. Understanding the causes and consequences of civil war is therefore of vital importance. Blattman and Miguel (2010) forcefully argue that "civil war ought to be central in the study of international economic development". Recent empirical contributions in the economic development literature have identified several important causes of civil war that are internal to a country itself.[1] Against this background we focus attention on a cause of civil war that lies beyond a country's own borders.

In the aftermath of the 1994 Rwanda genocide Hutu militias fled Rwanda into the refugee camps in the neighboring Democratic Republic of Congo (DRC). The Rwandese militias eventually teamed up with the Congolese FAZ to fight the Tutsi's in the Eastern parts of the DRC. Examples of these, so-called, conflict spillovers can be found all over the world, as conflict spread from Liberia to Sierra Leone, from Croatia to Bosnia to Kosovo, from Afghanistan to Pakistan, and from Sudan to Chad. Some empirical studies in the political science literature have provided evidence for a role of spillovers in civil war [for examples, Hegre and Sambanis (2006), Sambanis (2001), Hegre et al. (2001), Fearon and Laitin (2003) or Buhaug and Gleditsch (2008)]. This literature however has not provided answers to the two following research questions: 1. how large is the risk of a civil war spillover? and 2. in which circumstances are conflict spillovers more (or less) likely to occur? These questions are central to this research.

To answer our first research question we improve over the existing empirical literature and exploit the longitudinal nature of most available data sets on civil war. In particular, we show that controlling for fixed effects matters a lot when establishing the importance of conflict spillovers. In a country fixed effects model we find sizable and statistically significant spillover effects. A neighboring civil war increases the likelihood of an outbreak of civil war on the home territory by around 3% points. These effects are notably much larger than those obtained from pooled models, or from continent fixed effects models, which are the specifications used in the above-mentioned earlier contributions. In Section (4.1) we discuss the potential origins of this finding in detail.

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[1] Some of the notable economically-related causes of civil war that have been identified are shocks to income (Miguel et al. (2004), Dube and Vargas (2009)), dependence on natural resource income (Bruckner and Ciccone (2010)), dependence on foreign aid (De Ree and Nillesen (2009)), openness to international trade (Martin et al. (2008)), and the presence of high-value (contestable) natural resources (Angrist and Kugler (2008)). Moreover, a country's political situation (Collier and Rohner (2008)) and ethnic composition (Montalvo and Reynal-Querol (2005)) have also been shown to affect the likelihood of civil war.

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The second contribution is the explicit modeling of heterogeneity in the spillover effect. Virtually all existing empirical studies on conflict spillovers make the (implicit) assumption that spillovers are independent of the type of war, the strength of the government army, or the types of linkages to the warring neighbor.[2] A range of earlier, mainly narrative contributions in the international relations literature strongly contradicts this a priori supposition [see Lake and Rothchild (1998a) and Brown (1996) for examples]. This literature considers "ethnicity" as one of the main factors in the spread of civil war, by defining the nature of war (ethnic civil wars) or by facilitating the spread across international borders (via ethnic links). Ethnicity also plays the central role in our paper, but we also allow the spillover effect to depend on characteristics of the country at risk, and the existence and nature of other transnational ties between a country and its conflict neighbor (e.g. the geographic nature of the border or cross-border trade intensity).

We find that the data consequently points to ethnicity as the crucial factor in conditioning the spread of civil war. Only ethnic wars tend to spill over, and they are more likely to spread along ethnic lines. We do not find evidence for nonethnic civil wars to spill over. These results are generally robust to the use of different classifications of ethnic links between countries, the classification of (ethnic) civil war, and to the inclusion of a host of other neighbor and cross-border characteristics. Depending on the data or the specification we use, we find that a neighbor at ethnic civil war increases the probability of an onset of ethnic civil war at home by 4–6% points. The size of the estimated effects is substantial, especially given the fact that over the past 40 years the unconditional worldwide frequency of war onset has been 1.7%.

A caveat worth noting is that we apply straightforward panel data techniques to real world data. If a neighbor at war is associated with the onset of civil war on the home territory we attribute this to spillovers. In an attempt to rule out other factors which could also explain this association we control for a variety of other covariates in a country fixed effects model. But without (pseudo) experimental variation in having neighbors at war, one can never be certain whether these control strategies were completely successful. There are however two indications that, in our view, weigh heavily in favor of the spillover interpretation of our results. We find that the effects are confined to ethnic civil wars only, and second, we find that ethnic links are effective conflict transmitters whereas cross-border trade relationships are not. Both results are less supportive of alternative hypotheses, such as spatially clustered economic shocks. We return to this issue of interpretation in the conclusion, where we also discuss a useful alternative (nonspillover) interpretation of our findings.

2. The spread of conflict: insights from the international relations literature

The onset of civil war is clustered in particular regions of the world. Fig. 1 shows that in the second half of the 20th century civil war mainly broke out in parts of Africa, Asia, and Central and South America. This empirical fact has not gone unnoticed. Based on an abundance of anecdotal evidence, conflict spillovers are one of the prominent explanations for this pattern posed in the international relations literature [see e.g. Hill and Rothchild (1986), Brown (1993), Brown (1996), Lake and Rothchild (1998a)].[3]

Conflict in one nation can induce conflict in the next in different ways.[4] The most obvious type of a conflict spillover occurs when the fighting itself, or its immediate consequences, crosses international boundaries. Refugee flows or armed rebel groups seeking refuge and/or wreaking havoc in neighboring states, alliances between transnational kin groups, irredentist demands that involve territory in two nations, or even active action of a state to internationalize its own domestic conflict.

Conflict abroad may also induce conflict at home in more indirect, less visible ways. Most notably, it can change people's beliefs about the likelihood of conflict at home [see Kuran (1998) for a good overview]. The neighboring conflict may trigger previously dormant grievances between domestic groups, inspire domestic groups to start making more extreme demands, or, as Fearon (1998) puts it, people may simply start to believe that "if it can happen there, why couldn't it happen here?" (p.112), which in turn could become a self-fulfilling prophecy.

The fact that spillovers can occur in both direct and indirect ways poses a challenge for empirical research. Through careful observation it may be possible to measure when direct spillovers occur. But measurement is much harder – if not impossible – for indirect spillovers. How can one be sure whether a rebel group in one nation is, or was, inspired by their warring colleagues on the other side of the border? The empirical literature gets around this problem by using an indirect, regression-based approach. The approach is based notably an early work by Sambanis (2001), and specifies an empirical civil war onset model with a so-called "neighbor at war" variable as its main regressor of interest:

$$P(c_{it}=1|c_{it-1}=0,X_{it},nw_{it-1})=F\left(\gamma+\rho nw_{it-1}+X_{it}^{'}\beta\right) \quad (1)$$

where the binary indicator $c_{i\tau}=1$ if country i is at civil war in period $\tau = t, t-1$. The probability of an onset of civil war may depend on both (observable) domestic conditions X_{it}, and on nw_{it-1}, a dummy variable indicating whether one of a country's neighbors was at civil war in the previous year. F typically denotes the CDF of the logistic or the standard normal distribution, or the identity function, and determines whether logit, probit or linear probability techniques are used to estimate the parameters of Eq. (1).

A statistically significant and positive estimate of ρ is interpreted as evidence for the existence of conflict spillovers, i.e. a neighbor at civil war increases the likelihood of civil war onset at home. The approach clearly circumvents the need for coding incidences of spillovers directly in the data. But the benefit comes at a cost. First, it is not possible to distinguish direct and indirect spillovers as ρ captures both. But more importantly, one needs to rely on assumptions on the exogeneity of the neighbor at war indicator, conditional on X_{it}. It is clear that this assumption needs careful attention, since, as noted by Lake and Rothchild (1998b) "events abroad may appear to cause the outbreak of civil war […] but conditions at home are the real driving forces." The empirical identification strategy of this paper aims to disentangle both of these possible causes.

2.1. Conflict spillovers or clustering of the domestic drivers of civil war?

It is a priori unlikely that one fully captures the crucial causes of conflict ignition by including a limited set of regressors in a pooled

[2] Two exceptions are Buhaug and Gleditsch (2008) and De Groot (2011). Their respective empirical approaches however are not applicable to fully answer the two central questions of this paper. We refer to Appendix A for a more detailed, technical discussion.

[3] In this literature there exists a long history of looking beyond international borders for the causes of a country's internal political or social circumstances [see e.g. early contributions by Putnam (1967), Midlarsky (1970), Morrison and Stevenson (1972), Li and Thompson (1975) or Collier and Messick (1975), but also more recently Simmons and Elkins (2004), Murdoch and Sandler (2004), or Gleditsch and Ward (2006)].

[4] Our discussion is aimed to set out the main mechanisms behind conflict spillovers that have been stressed in the international relations literature. We do not provide an exhaustive discussion of all possible kinds of conflict spillovers. The literature for example, discriminates "diffusion", "escalation", "demonstration", or "contagion" effects [see Brown (1996) or Lake and Rothchild (1998a) for a much more thorough overview]. All these different types of conflict spillovers however can be modeled/captured by including some kind of neighbor at war variable in an empirical onset model.