Inter-Rebel Alliances in the Shadow of Foreign Sponsors

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Abstract

From the Patriotic Front struggle against the minority rule in Rhodesia to the seven-party mujaheddin alliance in Afghanistan, inter-rebel alliances make the armed opposition more resilient and successful in the face of government repression. Why then do some rebel groups cooperate with each other while others do not? Drawing on principal-agent theory, I argue that the presence of foreign sponsors is likely to encourage alliance formation in civil wars especially when two rebel outfits share a state sponsor than if only one of them receives foreign support. Shared sponsors may demand cooperation between their agents and credibly threaten to punish them for non-compliance. They may also insist on the establishment of umbrella institutions to improve their monitoring and sanctioning capacity, and to increase the legitimacy of their agents. I test this argument using the UCDP Actor dataset with new data on alliances between rebel groups. I find strong evidence that shared sponsors increase the probability of inter-rebel alliance.

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Numerous Western appeals to Syrian rebels to rally against the government and ISIS rest on an idea that coordination, shared resources, and joint efforts should increase the odds of rebel victory. Indeed, the ZANU-ZAPU (Patriotic Front) alliance toppled down the white minority government in Rhodesia, the TPLF's web of alliances with other Ethiopian groups brought down the Mengistu regime, and the seven-party mujahideen alliance ushered in the Soviet withdrawal from Afghanistan. Confronted with a unified opponent, governments must invest more in military operations than if the rebels were divided. Yet, among 1,000 rebel groups fighting in today's Syria some form alliances on their own (e.g. former Jabhat al-Nusra and Free Syrian Army in 2014/2015 against Assad and Hezbollah) or in the shadow of foreign sponsors (e.g. US-sponsored Syrian Democratic Forces or Iran-backed Shiite groups) while others like Al-Qaeda or Jaysh al-Islam foster few or no alliances.

If inter-rebel alliances empower rebel groups and increase their odds of victory, why do some make them while others do not? Akcinaroglu (2012) finds that less than a half of all civil conflicts since World War II featured cooperation among government opponents. What factors encourage alliances between rebel groups? Why does foreign support in some conflicts foster rebel cooperation, while in other conflicts leads to belligerent rebels?

Analyzing these questions is crucial for explaining how external governments can affect civil war dynamics, an issue that has only recently incited more scholarly interest in conflict studies. Previous research on civil war dynamics mostly focuses on how interactions among multiple armed actors affect conflict duration (Cunningham 2011), violence and civilian casualties (Asal and Rethemeyer 2008; Metelits 2009; Bakke et al. 2012; Horowitz and Potter 2013) and various war outcomes (Cunningham 2011; Nilsson 2008; Cunningham et al. 2009; Akcinaroglu 2012; Phillips 2014). An emerging stream of conflict literature shifts the focus to interactions themselves, showing that rebel groups may cooperate or fight each other (Furtado 2007; Bond 2010; Bapat and Bond 2012; Fjelde and Nilsson 2012; Christia 2012; Nygård and Weintraub 2014). This research has focused extensively on

internal factors, including rebel objectives (Furtado 2007), balance of power and winning coalitions (Christia 2012), shared identity (Bond 2010), and rebel capabilities (Bapat and Bond 2012). Although we know more about the impact of balance of power on rebel interactions, little empirical research exists on how different configurations of foreign sponsors influence rebel propensity for cooperation and conflict. This is a serious omission given that previous studies show that foreign sponsors can decisively affect the organization, effectiveness and survival of rebel groups (Sinno 2008; Salehyan 2010; Fjelde and Nilsson 2012; Salehyan et al. 2014).

By introducing foreign sponsorship into the study of inter-rebel dynamics, I expand current theoretical insights with the focus on how different configurations of sponsors can influence cooperation among rebel groups. This approach contributes to an emerging work on state sponsorship of rebel groups (Salehyan 2009; Salehyan et al. 2011, 2014; Popovic 2015a,b; Szekely 2016) as well as to the rich scholarship on interstate rivalry (e.g. Akcinaroglu and Radziszewski 2005; Colaresi 2005; Maoz and San-Akca 2012) by linking incentives of external states to the actual use of rebel groups to shape and shove civil war dynamics. In doing so, I depart from more prominent studies on inter-rebel alliances, including Bapat and Bond (2012) who argue that rebel capabilities take precedence over international factors in explaining alliance-making. In contrast, I break new ground in this emerging literature by arguing that sponsors make the first move by providing support for the alliance between two rebel groups, irrespective of their individual strength.

I use principal-agent framework to show that when one or more sponsors act as common "principals" of both partners ("agents") in any given dyad, the alliance will be buttressed through the use of selection, monitoring, and sanctioning mechanisms. Shared principals enjoy the monitoring and sanctioning capability greater than that of single principals because they can credibly threaten to deny resources to both agents for underperformance or transgression. If one agent underperforms relative to the other, it gets punished by the

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principal. An agent may disapprove of this system, but it may lack alternatives particularly when the other partner is rewarded for good performance. Shared sponsors are likely to demand cooperation between their agents, and devote considerable resources to this goal because alliance may allow them to buttress their control over the rebellion, and more efficiently navigate a dyad rather than multiple groups. Unless sponsors are poised to stir chaos, an alliance, therefore, decreases transaction costs associated with the monitoring, control and sanctioning of separate groups.

I borrow the measure for rebel alliance from Bapat and Bond to show that type of foreign sponsors matters more than other predictors,[1] but I arrive at different results due to our differences in time-frame for analysis (starting from 1975 instead of 1946, and ending in 2009 rather than 2001), proxies for foreign support and statistical model.

The findings in this article offer novel and promising avenues for conflict resolution, especially in relation to the Syrian war where multiple rebel groups are fighting the government. Foreign sponsors can play a decisive role in bringing rebel groups together or deepening divisions between them. Given the previous findings that rebel alliances may prolong civil wars or lead to rebel victory this article suggests that dealing with rebel alliances in multiparty civil wars such as the Syrian conflict requires third parties to devote attention to external governments who often foster inter-rebel cooperation. Third parties and mediators sometimes assume that rebel groups operate either independently from each other or from foreign governments. This article indicates that understanding civil conflicts requires understanding the international dimension of intrastate wars. Understanding the connection between state sponsors and militants provides important directions for conflict resolution; the failure to account for these ties may lead policy makers to unintentionally prolong the civilian suffering.

This article is divided into four parts. First, I use principal-agent framework to shape my theory of rebel alliance and offer hypotheses on the relationship between state sponsors

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and inter-rebel cooperation. Second, I discuss my data and methods. In particular, I focus on a rebel dyad as a unit of analysis rather than on a group or conflict as a whole. After this, I present my statistical results, including those from 10-fold cross-validation, indicating that the model with shared sponsors has the strongest explanatory and forecasting power. I conclude by exploring the implications of this study for future research and policy.

Rebel Alliances in Civil Conflicts

Civil wars are increasingly characterized by a web of inter-dependencies between multiple armed actors. Multiparty conflicts last longer (Cunningham 2011), increase the number of civilian casualties (Metelits 2009; Bakke et al. 2012) and produce various war outcomes (Nilsson 2008; Cunningham et al. 2009). While armed confrontation between the host government and rebels is often the most visible aspect of civil wars, rebel groups also form violent or cooperative relationships with each other. Rebel groups clash over access to recruits, resources and territory (Fjelde and Nilsson 2012; Nygård and Weintraub 2014), but they sometimes cooperate. Rebel alliances[2] improve the chances of opposition survival and victory (Akcinaroglu 2012; Phillips 2014), increase the lethality of rebel attacks (Asal and Rethemeyer 2008; Horowitz and Potter 2013), and hamper conflict resolution (Cunningham 2011).

Despite such important effects, the phenomenon of inter-rebel alliances remains an understudied topic. There is a handful of studies exploring the existence of inter-rebel alliance. For example, Furtado (2007) develops a typology of rebel groups based on their goals and available resources to argue that alliance formation depends on the ability of groups to credibly commit to cooperation, and on the magnitude of counterinsurgency. Similarly, Bond (2010) argues that shared identity facilitates cooperation between armed groups, while power considerations drive the outlook of alliances. In another study, Christia (2012) draws on realist theory in IR to suggest that rebel groups are attempting to simultaneously

be on the winning side of a war while also gaining the greatest possible benefits in doing so (the "minimum winning coalition"). This means that a driving factor in alliance formation is the relative strength of the different alliance partners vis-a-vis one another and vis-a-vis other alliances. Due to frequent shifts in relative strength, Christia concludes that alliances may be preserved if there is an external party capable of enforcing cooperation. Following this conclusion, Bapat and Bond (2012) argue that alliance formation is more likely in conflicts where the militants are weaker than the government. To overcome distrust and form an alliance, weaker groups need a foreign sponsor that can use material supplies to enforce cooperation and deter defection. (Ibid, 11). Bapat and Bond find that foreign support has an impact on alliance only in interaction with relative rebel strength.

While empirical results on rebel alliance shed light on how balance of power is associated with inter-rebel cooperation, present studies are limited in examining the influence of external actors. External actors serve as a supporting factor to relative capabilities in understanding alliance-formation. The assumption is that balance of power considerations dictate the search for foreign support even though foreign sponsors may approach rebel groups beforehand.

Looking at foreign sponsors offers a new way to address rebel alliances. This approach acknowledges that sponsors play a decisive role in rebel behavior, organization and survival (Sinno 2008; Salehyan et al. 2014). As Salehyan et al. (2014) show, foreign support from multiple government encourages rebel groups to be more violent toward civilians because no single state can effectively restrain the organization. Foreign support is critical for both weak and strong rebels because it increases their military power and cohesiveness (Staniland 2014). The more sources of support, the more likely rebels are to survive government repression (Sinno 2008, 290). While weaker rebels should be more easily induced to cooperation, both weak and strong groups may need an external enforcer because anarchy stimulates concerns about relative gains (Grieco 1988, 498). Because a

prospective partner may grow stronger from cooperation, rebel groups may choose to rely on their own capabilities. Therefore, foreign support is likely to have an effect on alliance making irrespective of rebel relative strength.

Accordingly, Chandler (1983) writes that the disdain for Vietnam's occupation of Cambodia in the 1970s brought together Maoist Khmer Rouge and royalist FUNCINPEC even though the latter was much weaker militarily than its ally. There is likewise a number of alliances between two capable groups receiving external support such as, for example, the Tigrayan People's Liberation Front (TPLF) and The Eritrean People's Liberation Front (EPLF), Somali National Movement (SNM) and Somali Patriotic Movement (SPM) or FAP and GUNT in Chad or Hamas and Hezbollah in Israel. During the civil war in Croatia and Bosnia, respectively, the government in Belgrade was instrumental in forging ties between the Serbian statelets and irregular forces even though these rebel groups had a parity with the host government.

Alliance-Making and Principal-Agent Theory in Civil Wars

Conventional wisdom suggests that anarchy is a distinguishing feature of international politics (Waltz 2010). Under anarchy, the lack of central authority to oversee and enforce prospective deals encourages suspicion and hampers alliance-making (Snyder 1984). Not only do states incur costs from negotiating and maintaining the alliance, but they also face the possibility of unilateral defection from the agreement. Partners could minimize defection using formalized treaties with protective clauses and mechanisms under international law (Leeds et al. 2009) even though opportunistic abrogation seems inevitable when there is a shift in threat perception, power, values and institutions of alliance members (Walt 1990; Leeds and Savun 2007). Maintaining alliances requires each party to credibly commit to not cheat the other (Walter 2002). But when actors expect benefits from defection, prospective partners cannot commit credibly to fulfill agreements. A credible outside actor

with superior strength and abundant resources might bring them together by offering rewards and punishments or by establishing institutions (Axelrod and Keohane 1985).

The need for outside arbiters is even more pressing in civil conflicts where rebel groups cannot rely on international law to safeguard inked deals. One way to understand the role of external arbiters in rebel alliance-making is through principal-agent framework.[3] At a minimum, principal-agent framework includes a principal who delegates authority to an agent in order to solve collective decision-making problems, profit from agent expertise or credibly commit to certain policies. The principal can select, monitor, and punish its agent by manipulating the provision of resources (McCubbins and Kiewiet 1991, 27–34). In conflict studies, this usually translates into a government providing money, sanctuary, weapons or other tangible resources to rebel groups in return for their cooperation over goals, organization and tactics (Byman and Kreps 2010; Salehyan 2010; Salehyan et al. 2011, 2014; Szekely 2016). The threat to withdraw support allows the sponsor to deter disobedience or pressure problematic rebel groups into submission (Salehyan 2010; Popovic 2015a,b). If this logic holds, then the principal could also induce its agent to cooperate with other agents. Existing evidence shows that sponsors have pursued this path, including the efforts to unite the Afghan mujaheddin, Kashmir insurgents, and, recently, the Syrian opposition in order to increase their effectiveness against the incumbent government.

However, single principals may have interests that do not necessarily favor effectiveness. One common interest is to inflict damage on enduring rivals without necessarily committing to forging inter-rebel ties (Maoz and San-Akca 2012; Salehyan et al. 2011). Rivals can, for example, exploit ethnic and ideological connections with rebels for domestic purposes (Saideman 2002; Byman and Kreps 2010), or provide support for weakly organized rebels to stir instability (Salehyan et al. 2011). Ultimately, sponsors may funnel resources to their agents to fight other groups whose interests are seen as hostile to the sponsor's political goals (Fjelde and Nilsson 2012). Hafiz Assad's Syria, for instance, supported Palestinian

organizations such as Popular Democratic Front for the Liberation of Palestine (PDFLP), al-Saiqa, and the PFLP-GC against Fatah to check Arafat's influence (Byman and Kreps 2010, 11). Pakistan supervised the rise and fall of the Kashmir insurgency, pitting Hizbul Mujahideen against the Jammu and Kashmir Liberation Front (JKLF), and later Lashkar-e-Taiba against Hizbul fearing that a dominant Kashmiri organization could take on a life of its own and make a compromise with India (Haqqani 2010, 290). Therefore, single principals, especially those involved in enduring rivalry, may not necessarily be inclined to unconditionally support alliance formation but rather fuel instability that can ultimately lead to international war and recurring conflict (Salehyan 2009; Colaresi 2014).

While single principals may lack interest in forging ties among rebels, the presence of two agents serving different principals generates collective action problems at the top of the delegation chain. Frequently multiple sponsors have widely different agendas (for instance, Sudan and France in the Chadian civil war), which may have detrimental effect on the ability of groups to cooperate.[4] Sponsors must agree that the cooperation between their agents is desirable, find a mutually acceptable framework, and work together toward the alliance formation. Assuming that sponsors agree on the goals and means of prospective alliance, they are faced with the division of labor problem—who should incur greater costs of monitoring, supplying and sanctioning the agents. This lack of unity is particularly exacerbated with the increase in the number of principals who can veto coordination efforts. As a consequence, disunited principals can send contradictory signals to their respective agents, which in turn hampers agents' alliance proclivity.

If the lack of common supervision fuels uncertainty between the prospective partners, and sows the division between the principals, then alliance formation might benefit from two agents sharing a principal. Shared principals may come into being in two ways. In the ideal case, shared sponsors offer assistance simultaneously to both groups under the condition that they cooperate against a third-party (e.g. U.S. support for the Syrian

Democratic Forces composed of Kurdish and Syriac groups). This implies that a sponsor appears for the first time in a conflict without much history of interference in the target country. Yet, this seems implausible because civil conflicts frequently attract neighbors who either seek to exploit the turmoil or prevent war diffusion across their own borders (Salehyan 2009; Kathman 2010). Another, more plausible, possibility is that a sponsor aims to transform its role from single or different to shared principal. In this case, the sponsor may seek to increase the effectiveness of its proxy forces and legitimize the opposition struggle in the eyes of the international community. To do so, the sponsor must first rein in its protege prior to soliciting other rebel groups. One approach is to grant a sanctuary to potential partners as Sudan did with the Chadian rebels in 2000s. This leaves rebels without much choice but to comply with the sponsor's demands. Another possibility is that the sponsor systematically appoints loyal cadres to the protege's leadership. For example, Pakistan solicited cooperation between Lashkar-e-Taiba and Hizbul Mujahideen in the 1990s by appointing "Pakistani militants and foreign mercenaries as commanders of [...] the Hizbul Mujahideen" (Tribune 1998).

Once in control of the partners, shared principals enjoy leverage greater than that of single principals because they can credibly threaten to deny resources to both agents for underperformance or transgression.[5] When the sponsor supports one rebel group, the insurgents have considerable leverage in the relationship, and can ignore the demands of the principal. But when the support simultaneously flows to another rebel group, the leverage of the first protege is weakened. Foreign sponsors benefit from finding an additional protege so as to increase their leverage over their agents. If one rebel group is disobedient relative to the other, the sponsor may divert resources to the more loyal rebel group, thereby reducing the relative strength of the problematic agent. For example, if one rebel group fights more often against its partner than the government, it is likely to lose the sponsor's favor. Yousaf and Adkin (1992, 150) demonstrate this mechanism in the case of the Afghan mujahedeen

who received arms and supplies from Pakistan only if they attacked Soviet troops; passive alliance members were temporarily denied support if they failed to spend ammunition in combat. If sponsors offer support sequentially, then it may behoove them to reduce the moral hazard of offering support to only one rebel group through finding an additional dissident organization to support. Once the patron is sponsoring two rebel groups, the principle has the leverage to push both rebel groups to enter into an alliance. An agent may dislike this scheme, but it often lacks viable alternatives, especially in the case where the other partner reaps the rewards for good performance. Thus, this relative performance evaluation should mitigate the fear of exploitation that would otherwise exist in schemes with single and different principals.

There are also pitfalls for alliance formation even in the shadow of shared sponsors. Shared sponsors may unknowingly incite competition between their agents. Cooperation with foreign sponsors in Chad, Eritrea, or Lebanon generated significant divisions within rebel groups. In particular, Libyan willingness to support FAN and FAP against the government led to serious disagreements and ultimately spelled the end of the Second Liberation Front in Chad.[6] Even worse, once external support helps rebels ascend to power, ties to shared sponsors may compromise externally-backed groups in the post-conflict environment in which the public may frame them as "traitors" or agents of foreign powers (Colaresi 2014). Less benevolent shared principals may pit their agents against one another in order to increase their control (e.g. Pakistan pitting Pakistani groups against indigenous Kashmiri groups). This should boost the agent's fear of exploitation from both the principal and partner and weaken the alliance in the long run. Further complicating things, multiple shared principals can issue conflicting orders to the alliance partners, damaging the alliance in two ways. For example, Free Syria Army's (FSA) key sponsors pursue different policies regarding Moscow-backed Astana talks on Syria: while Turkey participates in the talks, the United States has opted out. The agents may play the principals against one another

to increase their autonomy. While the agents decrease the fear of exploitation from the principals, they simultaneously become more vulnerable to each other as the external arbiter is unable to sanction their behavior. This leads to a scenario in which despite shared sponsors rebels end up fighting each other. For instance, skirmishes broke out between CIA-sponsored Fursan al Haq, by and Pentagon-backed Syrian Democratic near Aleppo last year.[7] Simultaneously, benevolent agents may fall prey to the conflict between their principals. Because the agents may be confused whose orders to follow, their alliance might run the risk of rupture.

The potential costs of foreign support may lead rebels to seek cooperation without external guidance. Indeed, civil wars feature inter-rebel alliances absent sponsors (e.g. Guatemala, El Salvador, Myanmar). One alternative is that similar ethnic background may bring groups together. However, co-ethnic groups might see each other as competitors for popular support and territorial control, and engage in outbidding (Bloom 2004). Eliminating a rival co-ethnic group may be more beneficial because it allows the winner to attract the membership of the defeated. Failing to do so poisons the relationship between co-ethnic rebels and may lead to vicious circle of rivalry and violence. In this case, shared sponsors could serve as a barrier to internecine fighting while single or different sponsors may fuel outbidding. A more viable alternative is the ideological compatibility. Communist insurgencies in Latin America during the Cold War and, more recently, jihadi coalitions in Syria and Iraq suggest that shared ideology may act as catalyst for alliance. In some cases, rebel groups embrace certain ideologies to appeal to specific sponsors (San-Akca 2016). For example, leftist ideology served groups to make themselves look favorable to USSR during the Cold War period. In this respect, it may be that rebel ideology depends on the sponsor's ideology, and that this, in turn, depends on access to foreign support. It is unclear whether shared sponsors also prefer ideologically congruent agents beyond the Cold War (e.g. Iran's support for alliance between Shia Hezbollah and Sunni Hamas). Thus, it may

be that ideology can have both independent and intervening effect on alliance-making, depending on the absence or presence of foreign support.[8]

In sum, these examples suggest that while shared sponsors is not without imperfections, it promises to have direct effect on inter-rebel alliances, more so than shared ethnicity or ideology.

Foreign Sponsors and Inter-Rebel Alliance

If sponsors can delegate authority to individual rebel groups (Byman and Kreps 2010; Salehyan 2010; Salehyan et al. 2014; Szekely 2016), then they should theoretically be able and willing to foster relationships, belligerent or cooperative, between two rebel groups. Existing research on rebel alliance hints at this possibility but either develops no specific mechanisms that would link sponsors and inter-rebel alliance (Christia 2012) or doubts that sponsors can mitigate the imbalance of power between the prospective alliance partners (Bapat and Bond 2012). In contrast, this article links insights from the literature on foreign sponsorship with the emerging literature on rebel alliances to argue that alliance-making will depend on the structure of the relationship between sponsors and rebels. In this article, there are three possible configurations: 1) sponsors may serve as a principal of a single rebel group; 2) two groups may act as agents of different sponsors; 3) two groups may be agents of a shared sponsor.

The first form is likely to offer narrow prospects for alliance formation due to the imbalance of power between two prospective partners. The externally-backed rebel group may be uninterested in the cooperation with a rebel group lacking external backing because the presence of foreign support may boost the capabilities and self-confidence of the former. Consequently, the externally-backed group may view its bargaining position as more favorable and decide to dictate preconditions for cooperation. Ultimately, the externally-backed group may choose belligerence over cooperation in an attempt to eliminate the competition. For example, this logic corresponds with the observation of the British liaison

officer Captain Hudson in the Chetnik headquarters in occupied-Yugoslavia during World War II. Analyzing the failure of the Partisans and Chetniks to form a viable alliance against the German forces in 1941 Hudson notes that

> The British promise of support had the effect of worsening Chetnik-Partisan relations. When I first arrived at Ravna Gora and Uzice, at the end of October, 1941, before Chetnik-Partisan hostilities, Mihajlovic already knew by telegram that he would get British support. He felt rightly that no one outside the country knew about the Partisans or that he alone was not responsible for the revolt (Maclean 1957, 126).

A similar pattern is visible in the Sri Lankan civil war where the Tamil Tigers used Indian support to wipe out their competitors. Another possibility is that the sponsor may be disinterested in fostering cooperation. If the sponsor desired genuine cooperation between its agents, it would have provided support to both groups. Instead, the empowered agent may be unleashed against other groups. For example, Pakistan encouraged Hizbul Mujahideen to initiate fratricidal attacks against its former agent, JKLF. Similarly, Fjelde and Nilsson (2012) find that such sponsors are more associated with inter-rebel violence than cooperation. This implies that sponsors favoring one rebel group over the other may hamper their potential for cooperation. This leads to the first hypothesis:

> H1: Ceteris paribus, foreign support will have no effect on alliance formation if it is directed to only one group.

Another possibility is that both prospective partners receive support, but from different sponsors. While the imbalance of power becomes less of an issue, assuming that each sponsor equally contributes to rebels' capabilities, multiple principals face difficulties synchronizing their policies. Given their diverging preferences, multiple sponsors lack common standing toward their agents (Salehyan 2010). This, in turn, may lead principals

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to issue contradictory directions to their agents. At a maximum, sponsors may impose their own preferences on each other, preventing their agents from cooperation. One such example is the failure of two Congolese rebel groups, Rally for Congolese Democracy (RCD) and Movement for the Liberation of the Congo (MLC) to preserve their alliance once their respective sponsors, Rwanda and Uganda, turned against each other over the spoils of war in the eastern part of the country. Another example is the inability of Gulf countries to put together an anti-Assad alliance of their fragmented agents. Sponsors must synchronize their policies to make their agents cooperate. Due to collective action problems, this undertaking is ultimately very costly, and sponsors often end up issuing contradictory directives to their respective agents. This produces the second hypothesis:

> H2: Ceteris paribus, foreign support will have no effect on alliance formation when two groups receive it from different sponsors.

The final possibility is that two groups receive support from the same sponsor or sponsors. Shared sponsors are likely to demand cooperation between their agents, and may devote considerable resources to this goal than sponsors of a single group. Reasonably, shared sponsors may provide support to multiple rebels to instigate chaos or maintain their influence in the target country without a commitment to their cause. But the creation of a rebel alliance may signal the sponsor's resolve to topple down the target government. The presence of shared principal with superior monitoring and sanctioning capabilities should minimize the fear of cheating and exploitation inherent in the anarchic nature of civil conflicts. Shared sponsors might favor rebel cooperation either because it corresponds with their preferences or offers the possibility to manipulate alliance partners. For example, Iran fostered cooperation between Hamas and Hezbollah throughout the 1990s and 2000s as a part of their shared "resistance" against Israel and the West (Byman and Kreps 2010). Shared sponsors can also use monitoring and sanctions to increase the cost of unilateral defection "by offering material inducements to make alignment more attractive or by

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threatening to punish disloyal regimes" (Walt 1997, 164). For instance, in his recollection of Pakistan's relationship with the Afghan mujahideen (Yousaf and Adkin 1992, 150–151) specify how ISI officers manipulated the supply of weapons and ammunition to the seven parties:

> For planning purposes we worked on a rough percentage basis for each Party. These were not permanently fixed; they varied slightly for operational reasons, and sometimes they were deliberately reduced if a Party was seen not to be pulling its weight in the field. Such reductions were normally gradual and followed a verbal warning to the Leader. [...] If my officers reported a warehouse was always full, sometimes for months, it meant that the Party was less than enthusiastic at prosecuting the war, and as such never qualified for an increased share of arms.

Second, the shared sponsor's commitment may also signal its resolve to consolidate control over insurgency. Shared sponsors may foster the establishment of umbrella institutions to improve their monitoring and sanctioning capacity because it is easier to navigate a collection of groups rather than multiple outfits. Umbrella organizations also ensure that no single rebel outfit can negotiate separately with the incumbent government without the consensus of the sponsor. These include, for example, Pakistan's creation of the United Jihad Council, an umbrella organization of jihadists based in Pakistan, Seven-Party alliance in Afghanistan and, the Arab-sponsored Syrian National Council. Shared sponsors should be most committed to forging cooperation between their agents when they have strategic interests in the conflict-ridden country, such as the acquisition of the territory, resources or population as well as weakening of their rival (Maoz and San-Akca 2012). For example, the long-desired acquisition of Kashmir was the driving force behind Pakistan's decision to support the alliance between its agents, Lashkar-e-Taiba and Hizbul Mujahideen, and to later establish the umbrella institution for Pakistani-based jihadi outfits. The shared

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sponsor's influence on alliance formation may be buttressed by common ties with its agents such as ideology, ethnicity or religion. Under such circumstances, shared sponsors can combine material support with legitimacy to foster cooperation between their agents.

While alliance formation may serve the shared sponsor's interests, rebels receiving external support are also likely to benefit from cooperation. Rebel groups may anticipate valuable resources such as weapons, funding or sanctuary. For instance, Yousaf and Adkin (1992, 150–155) portray how the ill-equipped Afghan mujahideen largely toned down their differences to receive external support. Without such a support the mujahideen would have risked an uncertain future against a stronger foe. Another advantage is that the shared sponsor may guarantee that alliance partners will not exploit each other even if one of them becomes much stronger. Shared sponsors can threaten to withdraw resources or punish an agent for disobedience. This guarantee minimizes fear and distrust that would otherwise deter cooperation under anarchy. Therefore, this leads to the third hypothesis:

> H3: Ceteris paribus, when two rebel groups share a sponsor, they are more likely
> to form alliance.

Data and Research Design

To examine these hypotheses, I have assembled an original dataset of all multiparty civil conflicts for the period 1975–2009 in which rebel groups may or may not cooperate against the government or other rebel groups. I begin with the existing UCDP Armed Conflict Dataset (Gleditsch et al. 2002), which includes civil conflicts with two or more non-state actors that are fighting against a government. Next, I code those civil conflicts where there were at least two rebel groups active for any observed year. After selecting those conflicts, I then arrange the dataset into dyad-years where a dyad includes two rebel groups. Following Bapat and Bond (2012) a dyad is coded only if two rebel groups were active in the same territory and year. For instance, Hamas and Hezbollah were both militarily active from

1987 until 1996, and MILF and MNLF were active throughout the 1980s, which makes them potential partners in a respective conflict and time period. In this case, I analyze the dyadic relationship between Hamas and Hezbollah, and between MILF and MNLF for the period in which they were active. In most instances, the government is fighting more than two rebel groups so I create annual dyads from every possible combination of the active groups. If two groups were fighting within a country in two different territorial conflicts (e.g. Kashmir insurgents and the Naxalites) they were not considered as potential dyads. In rare instances, (i.e. ELN and FARC in Colombia, MCC and PWG in India, and SPM and SNM in Somalia) the alliance between two groups collapsed only to be re-established within one to two years.

The dataset covers the post-1975 period because the UCDP data on external support—used to measure my main independent variable—records information only for this period. To my knowledge, there are no datasets with similar time-sensitive and robust information on the identity of foreign sponsors. This limits my ability to fully evaluate my argument and competing explanations in the pre-1975 period. In total, the dataset includes 165 rebel dyads nested within 985 dyad-years.

Alliance

Alliance is a formal or informal cooperation between two rebel groups in which they share resources or coordinate attacks against the government or other rebel groups. It denotes whether there is alliance or not. I borrow this variable from Bapat and Bond who measure alliance as "resource-sharing or tactical co-ordination between the groups at some time during a year" (2012, 19). Their dataset includes information on alliance-making for the period 1946–2001 or 1,318 observations with 429 occurrences of alliance (33 percent). In the first stage of coding, I excluded from their dataset cases in which one of the potential partners is an alliance (e.g. UIFSA in Afghanistan), military faction or nameless group of organizations labeled "various insurgents" (these include, for instance, Chadian rebels

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in the 1970s, Myanmar's Shan insurgents, Lebanon's sectarian organizations, and other non-PLO groups in Israel).

Since my dataset extends to 2009, I then searched for additional evidence on alliance-making in the UCDP External Support in Armed Conflict Dataset (Högbladh et al. 2011). Similar to Bapat and Bond (2012), this dataset codes alliance as the provision of warring (i.e. troops) or non-warring support (e.g. money, logistics or training) support as well as the coordination of policies, including information on the identity of partners on an annual basis. Additionally, I searched for mergers in the UCDP Non-State Actor dataset since Bapat and Bond also record them.[9] Where there was evidence of one group providing support to or merging with its prospective partner, alliance was coded 1, and 0 otherwise. Following Bapat and Bond, I considered only cases where two rebel groups cooperated in the same territory and year because transnational alliances may entail different alliance dynamics and foreign sponsors may not hold the same influence on rebel groups. Therefore, alliances with militant movements outside a conflict (e.g. MILF and ASG with Jemayyah Islamiyya) or with transnational militant movements (e.g. ARS/UIC with Al-Qaeda) were not considered. In sum, the data include roughly 21 percent of dyad-years with alliance (206 observations) and 79 percent of dyad-years without an alliance (779 observations), yielding a total of 985 observations.

Shared Sponsors

The central argument of this article is that sponsors are likely to boost alliance formation if they are shared by both members of a dyad. To test this argument, I draw on UCDP External Support in Armed Conflict Dataset (Högbladh et al. 2011). The key advantage of this dataset is that it provides information on the identity of the sponsor and year of support for every rebel group that fought against the government from 1975 to 2009. This allows me to identify not only who were recipients of foreign support in a dyad, but also whether the potential partners shared a sponsor for any given year. UCDP defines sponsor as a

government of an internationally recognized country that provides warring or non-warring assistance to a party in an ongoing civil conflict (Ibid). This support can take a form of the provision of weapons, funding, sanctuary, logistics, training, intelligence, regular troops and other types of material support. In this article, I consider all these forms of support together. The resulting variable, "Sponsor", measures whether any member of a dyad receives foreign support in any given year or not.

Next, I determine whether one or both groups have sponsors to test the hypotheses. This variable is an upgraded version of the previous in that it displays the source of foreign support in the following way. If no member of a dyad received support in a given year, the predictor takes the value of 0; if only one receives external backing the variable takes the value of 1; support for both partners from different sponsors is coded 2; and if both received support from the same sponsor it equals 3. It is worth noting that the value of 0 (no support) is regarded as a baseline category in the subsequent analyses.

Figure 1 here

The frequency plot in Figure 1 shows that no support and shared support are prevalent in the data, while observations with different and single sponsors are rarer. Put simply, this implies that foreign support more often takes the form of shared delegation than that of single or competing sponsors. When these categories are compared with the occurrence and non-occurrence of alliance, visible is a large discrepancy in observations related to non-support, and a balance regarding shared sponsorship.

Other Predictors

Beyond testing the main hypotheses, this article also engages two main explanations in the literature. The first is advanced by Bapat and Bond (2012) and includes an interaction between relative rebel strength and foreign support. Relative rebel strength ("Weak Dyad") denotes whether the dyad members are weaker than the host government. This variable

was coded following Bapat and Bond, in that I use the weaker of the Non-State Actor (NSA) dataset figures (Cunningham et al. 2013) for both groups to denote their ability to resist the government's repression. The variable is coded 1 when both groups are weaker than the government, and 0 if they are a match to or stronger than the government.

The second explanation comes from Christia (2012) who argues that rebel groups are more likely to cooperate with groups of similar strengths. "Ratio" measures the balance of power within any given dyad as a range of values from 0 (extreme imbalance) to 1 (balance). Drawing on the number of troops from the NSA (Cunningham et al. 2013), I calculate "Ratio" by dividing the number of troops of group A by number of troops of group B. If this argument holds, then "Ratio" should be positively associated with the probability of alliance.

Controls

To ensure that my analysis does not simply reflect the impact of other predictors potentially associated with both alliance formation and with the main variables of interest, I include a number of dyad-, conflict-, and country-level controls. In particular, I include the variables suggested by Bapat and Bond (2012) to control for the impact of environment.

"GDP per capita" is used to denote the government's ability to control its territory. Countries with lower GDP per capita should stimulate rebel groups to cooperate against the government. I draw on Gleditsch (2002) for the measure of this variable, which is log-transformed for the purpose of this article. Another proxy for the government's absolute capacity to deal with the insurgency is military spending ("Expenditure"). An increase in military spending should signal the lack of capacity to tackle the insurgency. Thus, with every unit increase in spending, there should be an increase in the likelihood of alliance. This variable is borrowed from the COW dataset (Singer 1988), and log-transformed. Another possibility is that the central government is recently formed and that multiple rebel groups may seize this opportunity to join hands in toppling down the incumbent

regime. This predictor is taken from Gurr et al. (2010), and logged. Other controls include non-contiguity—denoting countries, like Indonesia or the Philippines whose capitals are physically separated from the rest of the territory—duration, which controls for temporal dependence in the data, and ethnic and religious fractionalization.

Analysis and Discussion

The data is composed of dyad-year observations, where each dyad-year is nested within a dyad. This implies that observations are not independent of each other given that there are multiple rebel groups who operate within the same conflict, and may indirectly interact with each other. Violating the assumption of independence of observations can lead to biased estimates of coefficients and their standard errors (Barcikowski 1981). Accordingly, I use multilevel logit regression, which is found to mitigate this issue (Gelman and Hill 2006). The multilevel model allows coefficients to vary across several levels even where observations are non-independent, correctly modeling correlated error. In this article, I cluster observations by government (country) level.[10]

Figure 2 reports the direction of each of the predictors on alliance formation, using the coefficient estimates and confidence intervals.[11] The vertical dotted line represents no effect; positive coefficients (associated with alliance) are represented by point estimates to the right of the dotted line, while negative coefficients (associated with no alliance) are represented by point estimates to the left of the dotted line. The horizontal solid lines represent the 95 percent confidence intervals. These intervals display the range of values in which one can be 95 percent certain that the true value of the parameter lies. The observed relationship is regarded as above the conventional critical values when the interval bars do not include 0. The effect is thus present if 0 lies outside the intervals, and unclear if 0 is included in the intervals.

Figure 2 here

Figure 2 includes three models of alliance-making.[12] I begin my analysis by presenting Model 1, in which I test H1 and H2 that single and different sponsors will have no effect on alliance-formation between two given rebel groups, whereas shared sponsors should increase the probability of cooperation, as H3 suggests. As envisaged, the findings show that the presence of either single or different sponsors has no effect on alliance-formation given that their confidence intervals include the line of no effect. This squares with the wider expectations in civil war literature that foreign support may not necessarily have a positive effect on inter-rebel cooperation (Fjelde and Nilsson 2012). In fact, the external backing may bolster power asymmetry between potential partners, encouraging competition and fratricide rather than cooperation. In contrast, confidence intervals for shared principals are positive exclude "zero", indicating that the effect of shared sponsors has a practical significance for understanding the onset of alliance-formation. These results suggest that there is more space for inter-rebel cooperation if the potential partners are agent to the same foreign sponsor.

Model 2 tests the explanation advanced by Bapat and Bond (2012) that foreign support ("Sponsor") interacted with the strength of the dyad relative to the government ("Weak Dyad") is more likely to lead to alliance formation in civil wars. I find no support for this argument as the interaction effect ("Sponsor x Weak Dyad") displays unclear effect on alliance. In contrast, the interaction term for foreign support ("Sponsor") has a positive and considerable effect on the probability of alliance, indicating that sponsors of a strong dyad may be more likely to lead to alliance formation. The failure to replicate findings in Bapat and Bond (2012) is, first, due to a difference in time-period covered in our respective analysis because I omit 236 observations from the pre-1975 period, and include 97 observations for the post-2001 period. Even when I constrain the time period to 1975–2001 the results do not change.[13] Another reason is that Bapat and Bond use their own measure of sponsorship, whereas I borrow the measure from the UCDP. But the UCDP

measure covers the post-1975 period. Their measure does not include information on identity of sponsors, and that precludes me from using their proxy to test my argument. Finally, the difference in statistical models might be driving the outcome. While Bapat and Bond employ probit model, I use multilevel logistic model, which accounts for the fact that rebel dyads are nested within conflicts.

On the other hand, the findings in Model 3 lend support to Christia's argument that a balance of power facilitates cooperation between rebel groups as the coefficient estimate for balance ("Ratio") has a large and positive effect on alliance. Therefore, the shadow of anarchy constraints cooperation as rebel groups fear exploitation from stronger partners.

Regarding control variables, the models offer two findings. First, an inter-rebel alliance is likely to take place when potential partners are facing a durable incumbent regime. Even though this may run against some expectations in the civil war literature, the logic follows that of balance-of-threat theory where actors are likely to resolve their disputes if their common foe is perceived as more dangerous. This dynamic is not fully captured in coefficients for GDP per capita and expenditure, as neither have a clear effect on alliance formation. Second, I find that alliance is more likely to take place in the early years of conflict. Perhaps rebel capabilities are largely even at the outset of the conflict or the goal of toppling down the government resonates well across the opposition spectrum. Either way, this finding offers important implications for Syria where multiple groups have failed to form alliance after six years of combat.

Now I turn to Model 1 and Model 3 in detail given that shared sponsors and Christia's troop ratio demonstrate practical significance for alliance-formation. Using the estimates from Model 1 and Model 3, respectively, Figure 3 shows the predicted probability of alliance by types of foreign sponsors (left-hand side boxplot) and troop ratio (right-hand-side line plot with 95 percent confidence intervals) while holding other predictors constant. This includes a prototype case with the following characteristics:

- The country is contiguous and polarized along the ethnic and religious lines;

- The incumbent regime has been in power for a decade, and spends more than USD 3 million annually on military with a GDP per capita of approximately USD 300;

- The conflict has been active for two decades.

Figure 3 shows the substantive impact of shared sponsors on alliance-making as well as a substantive variation in the effects of sponsor types. The probability of alliance-making is at its lowest when neither of the prospective allies receives foreign support (less than 0.1). There is more probability of alliance for those dyads in which at least one group receives foreign support (around 0.15). However, that is much lower compared to cases in which both groups receive backing from different sponsors (0.25). Interestingly, this finding suggests that cooperation is far more likely among groups with external backing than those that rely solely on domestic support. Shared sponsors boost the probability of alliance more than all other types of support taken individually. The probability of alliance is this case is double than that of different sponsors (0.5 vs. 0.25), and nearly triple than that of single sponsors (0.5 vs. 0.18). Shared sponsors are, therefore, a crucial factor in predicting alliance-formation in future civil conflicts.

Figure 3 here

Moving to the right-hand side part of Figure 3, there is a clear upward trend in predicted probability of alliance as ratio inches closer to 1, i.e. balance of power. As the balance between two groups increases the probability of alliance grows nearly five times. Although the effect is impressive the 95 percent intervals are extremely wide, decreasing the confidence in the result.

Forecasting

While the results and the substantive effects show the strong effect of shared sponsors on the presence of inter-rebel alliance, it is equally important to explore the predictive capacity of the models. I do so using 10-fold cross-validation, which is a machine learning technique used to address the model underperformance and overfitting through a random partition and analysis of data (Colaresi and Mahmood 2017).[14] I first determine predictive performance of the models using Receiver Operating Characteristic (ROC) curves.[15] ROC curve is used in applications in which data are class imbalanced to indicate the true and false positive rates for a classifier.

In this article, the ROC curve shows the extent to which the model correctly classifies "alliance" and "non-alliance". The ROC graph is summarized by the Area Under Curve (AUC), which is the probability that the model correctly ranks positive cases ("alliance") versus negative cases ("no alliance"), and that one has the greater probability than the other. Models with greater predictive capacity gravitate toward the upper left corner of the plot, and have higher AUC scores. This indicates the true positive rate against the false positive rate for the different possible cut-points of a diagnostic test. The closer the curve to the diagonal line, the more the prediction resembles a coin-flip (.5); the closer the curve to the upper left corner, the more accurate the model—a perfect fit would have the curve hugging the top-left corner (1).

Figure 4 here

AUC scores of 0.70 are regarded as fair, while AUC scores equal to or higher than 0.80 are considered good. The predictive performance in Figure 4 varies from 0.85 to 0.87. Model 1 has the highest AUC of 0.87, while Model 2 and Model 3 have slightly lower AUC scores of 0.85 and 0.85 each. I conclude that my model is slightly more capable in predicting alliance-making.

These results show the overall performance of my model, but it is also important to understand how to improve its predictive power. I, therefore, identify observations that generate lower performance using the model criticism plot (Colaresi and Mahmood 2017).[16] The model criticism plot shows the distance between actual and predicted values by plotting the latter for each observation on x-axis. Observations are then colored according to their observed value (in this case, non-alliance is blue, while alliance is red). The plot then ranks the predicted values in descending order on the y-axis. Extremely inconsistent positive values (alliance is observed, but the model predicts low probability of alliance) are colored in red and gravitate toward the southwest, whereas highly inconsistent zero values (non-alliance is observed, but the model predicts high probability of alliance) appear in blue toward northeast. Observations appear on the vertical separation plot on the right y-axis, with most discrepant positive and zero observations being colored in intense red and blue, respectively. These observations are labeled and connected by lines to their respective points on the y-axis on the left.

Figure 5 here

Figure 5 displays the model criticism plot for Model 1.[17] Similar to ROC scores, Model 1 demonstrates a solid predictive performance as well as good separation of negative and positive values given that there are only a few extremely inconsistent positive values in the southeast. The top ten discrepant cases of alliance (red) are: SSDF–SNM in 1991 (Somalia), NRA–UPM in 1986 (Uganda), JEM–SLM in 2007 (Chad), Amal–LNM in 1985–1986 (Lebanon), SPM–SNM in 1989, and EPDM–TPLF in 1989 (Ethiopia), FAR-PGT and FAR–ORPA, all in 1979 (Guatemala), and ELN–FARC in 1991 (Colombia). Foreign sponsorship is present in one instance, in the JEM–SLM dyad. The most common denominators for the remaining nine observations are weaker capabilities relative to the government and a rather long time period during which the dyads entered into alliance (within a decade of

their existence). Interestingly, most of these observations belong to the Cold War period where ideological polarization played a critical role in intra-conflict dynamics as well as in relation to foreign sponsors. Using Non-State Armed Groups (NAG) dataset (San-Akca 2016), I check whether the groups in those dyads shared one of the possible ideologies: left-wing, nationalist, religious, right-wing. I find that eight out of ten dyads are ideologically compatible. This suggests that adding shared ideology could be useful for exploring whether it improves the performance of the model regarding alliance.[18]

I notice that highly discrepant cases of non-alliance are clustered in the Israeli–Palestinian conflict where ethnic outbidding and foreign support among the Palestinian outfits may have prevented the formation of cooperation. This reinforces my previous point that foreign support may not necessarily contribute to inter-rebel alliance unless it comes from shared sponsors.

Conclusion

This article builds on principal-agent framework to argue that an inter-rebel alliance in civil conflict is more likely when any two potential partners share a foreign sponsor. This relationship provides two-way benefits: sponsors can use alliance to manipulate the dynamics of the conflict while rebels receive material incentives such as weapons, funding or sanctuary. Moreover, shared sponsors are likely to invest effort in preventing potential defections through controlling and monitoring mechanisms. The empirical analysis, using novel panel data on rebel alliances, suggests considerable support for this argument. I find that alliance formation is more likely when both potential partners receive external backing from the same sponsor or sponsors. Moreover, I find that single and different sponsors have an unclear effect on alliance formation and that no foreign support appears to offer the worst prospects for cooperation.

Future research on civil war should take the foreign sponsorship of inter-rebel dynamics

more seriously. With a few exceptions, previous quantitative studies have largely explored the relationship between the incumbent government and rebel groups. As this study demonstrates, rebel groups develop ties with external governments, which can significantly influence their strategies. Bringing together data on foreign sponsors and rebel groups can shed more light on the blurry line between external and domestic actors in civil war. Research on political violence may also benefit from this merger by examining how links to sponsors affect rebel propensity for violence against civilians.

These insights may better inform both counter-insurgency and conflict resolution. While governments may deal with separate groups, the alliance makes rebels a more formidable opponent. Counter-insurgent strategies should factor in the presence of external ties, and invest more efforts into resolving issues with foreign sponsors by diplomatic means. Conflict resolution professionals should also take into account the preferences of foreign actors before investing considerable resources into mediation efforts. As the Syrian conflict testifies, there is no shortcut to peace, let alone cease-fire, when multiple foreign governments interfere in insurgent interactions.

Notes

[1]I am thankful to Kanisha Bond for sharing the dataset.

[2]I understand rebel alliance as a "formal or informal arrangement for security cooperation" (Walt 1990, 12) between two rebel groups.

[3]Principal-agent theory originates from political economy, management, and law, but it has also found its application in political science (McCubbins and Kiewiet 1991; Pollack 1997; Nielson and Tierney 2003; Hawkins et al. 2006).

[4]I thank a reviewer for pointing out this issue and example.

[5]I thank a reviewer for highlighting leverage as a distinguishing feature of shared principals.

[6]I thank a reviewer for bringing up this example.

[7]http://www.latimes.com/world/middleeast/la-fg-cia-pentagon-isis-20160327-story.html

[8]The model in Table 2 in the Appendix features shared ethnicity, ideology as alternative control variables.

[9]Mergers for the post-2001 period include MCC–PWG, UIFSA, and MJP–MPCI–MPIGO. Mergers from the Bapat and Bond include PF, SRRC, URNG, and FMLN.

[10]The multilevel logit analysis was conducted using a marginal likelihood estimator, and a logit link function as implemented in the glmmADMB package (Fournier et al. 2012) for the R language (Venables and Smith 2014). Missing data was corrected with multiple imputation using R's Amelia package (Honaker et al. 2011), creating 500 imputations. This number is considered very high as the literature recommends only 10 to 50 imputations. But for many of the estimates, the rate of missing information was too high when a lower number of imputations was used. Therefore, I increased the number of imputations to get the rate of missing information below 5 percent for all estimates. The coefficient estimates and standard errors from 500 models were pooled following "Rubin's rule" (Little and Rubin 2014, 86–87).

[11]Following American Statistical Association's (ASA) suggestion to avoid p-values in favor of other approaches (Wasserstein and Lazar 2016), I choose confidence intervals to present my findings. Conventional regression output with coefficient estimates, standard errors and p-values is in Table 1 in the Appendix.

[12] I separated the latter from my main predictor because both relative rebel strength and troop ratio are theoretically endogenous to foreign support.

[13]See Figure 4 in the Appendix.

[14]K-fold cross validation (CV) is a way to analyze how the results of a model apply to an independent sample, i.e. predictive accuracy of the model. CV randomly partitions the original data into similar folds of subsets, and then performs analysis on a single subset ("training dataset"), while validating the analysis on the other ("testing dataset"). In my case, I partition the dataset into 10 folds of 98 or 99 observations, carry out CV on 500 multiple imputations, and pool predicted values for testing data.

[15]I provide additional CV diagnostics such as the precision-recall (PR) plot and confusion-matrix in the Appendix.

[16]I use R package ModelCriticism developed by Zuhaib Mahmood. Package source: https://github.com/zsmahmood89/ModelCriticism.

[17]The model criticism plots for Model 2 and Model 3 are available in the Appendix.

[18]Shared ideology turns out to be a "significant" predictor of alliance when included in a model with shared ideology and a number of other alternative dyad-level variables (see Table 2 in the Appendix). I have also included a robustness test for the model with shared ideology/ethnicity and other rebel-level variables by interacting the Cold War dummy variable with shared ideology as well as including this variable as a predictor. Ideological proximity is robust to the inclusion of the Cold War variable, which itself demonstrates no effect on alliance-formation. These results are in Figure 8 in the appendix.

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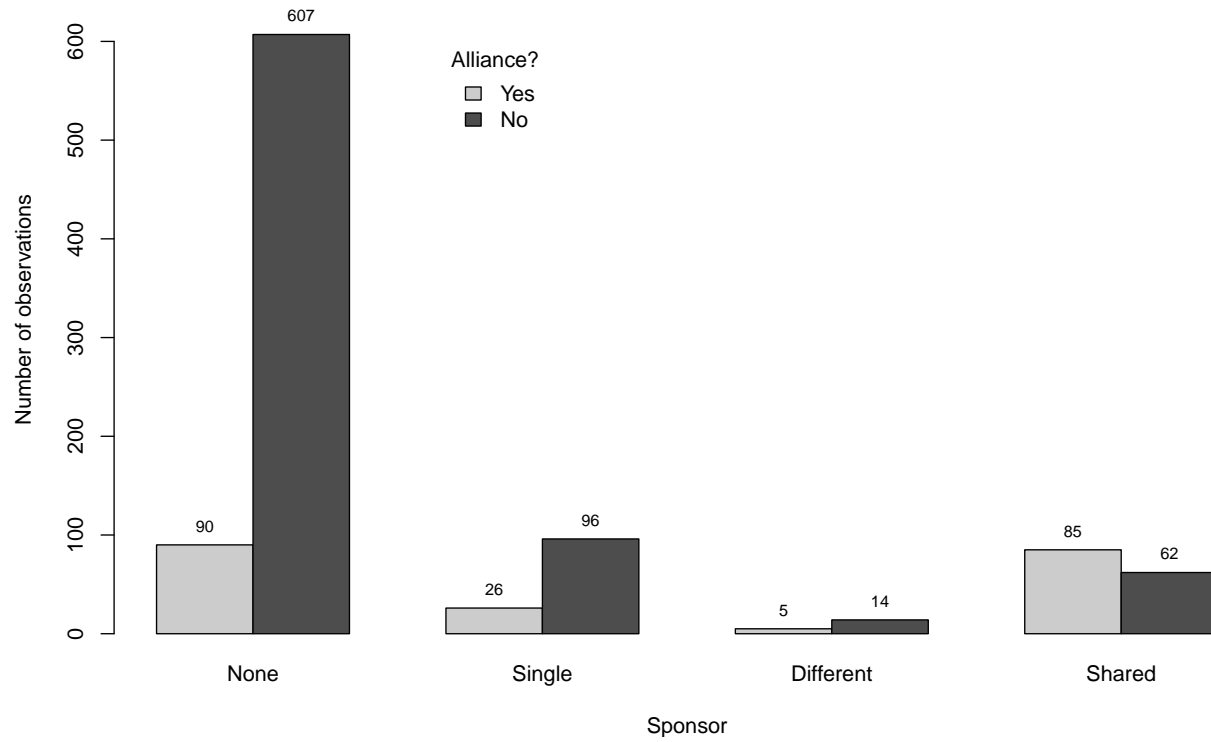
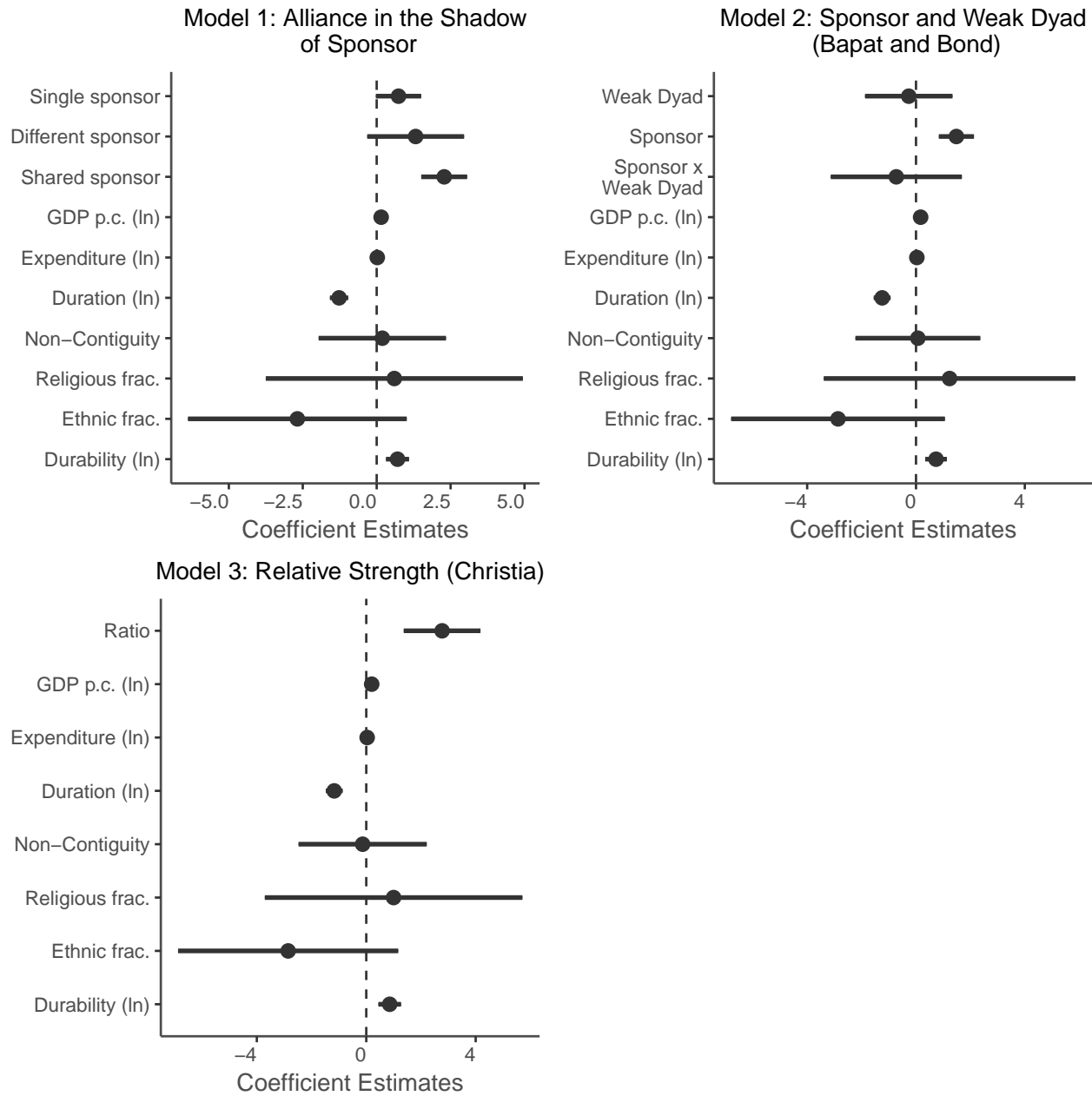Figure 1: Distribution of Type of Sponsors by Alliance

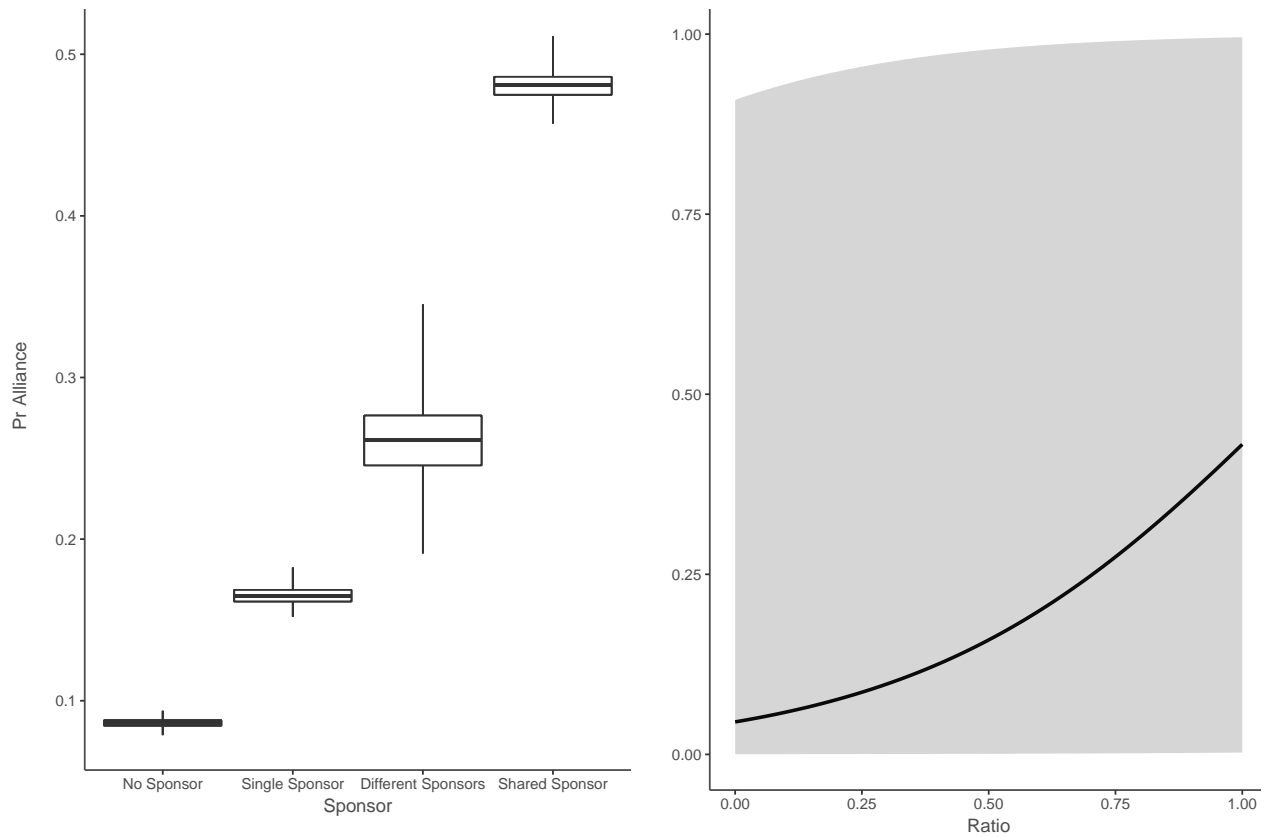Figure 2: Pooled Models of Alliance-Making in Civil War, 1975–2009

Figure 3: Marginal Effects on Predicted Alliance based on Model 1 (left) and Model 3 (right, including 95 percent confidence intervals in grey). GDP p.c., ratio, military expenditure, conflict duration, religious and ethnic fractionalization, and regime durability are held at mean values. The remaining control variables are set to their modal values.
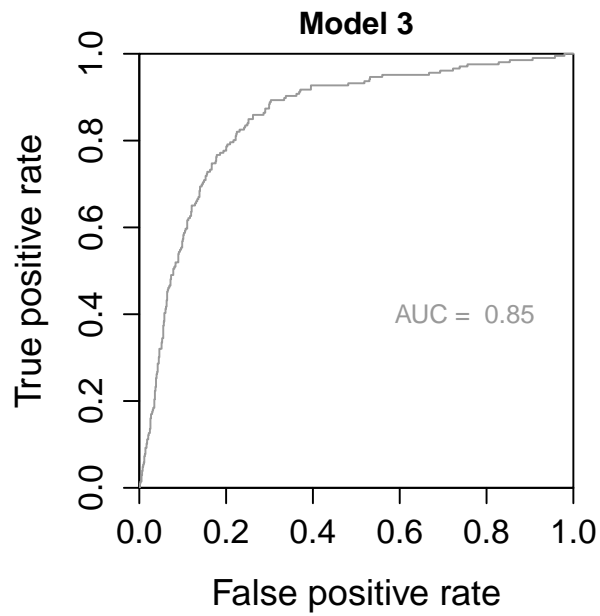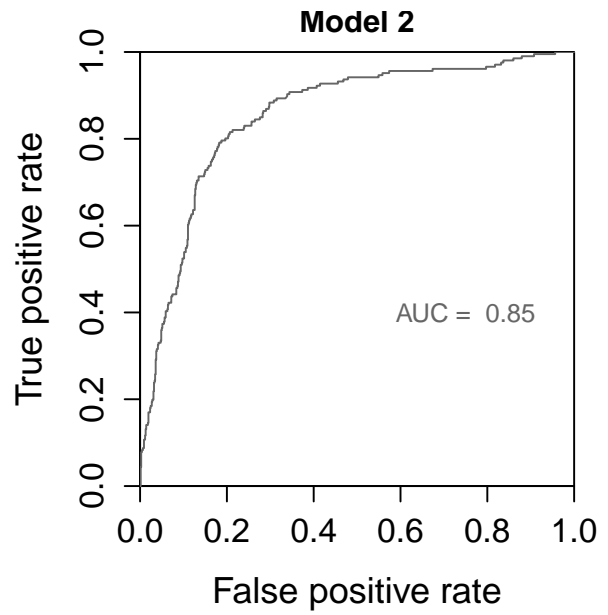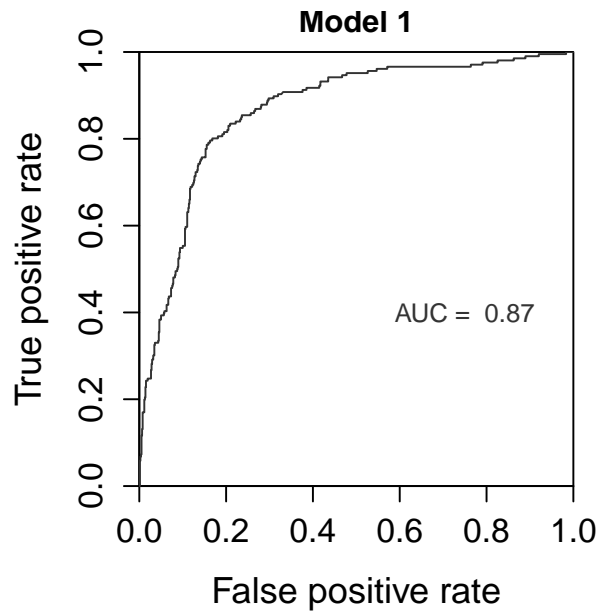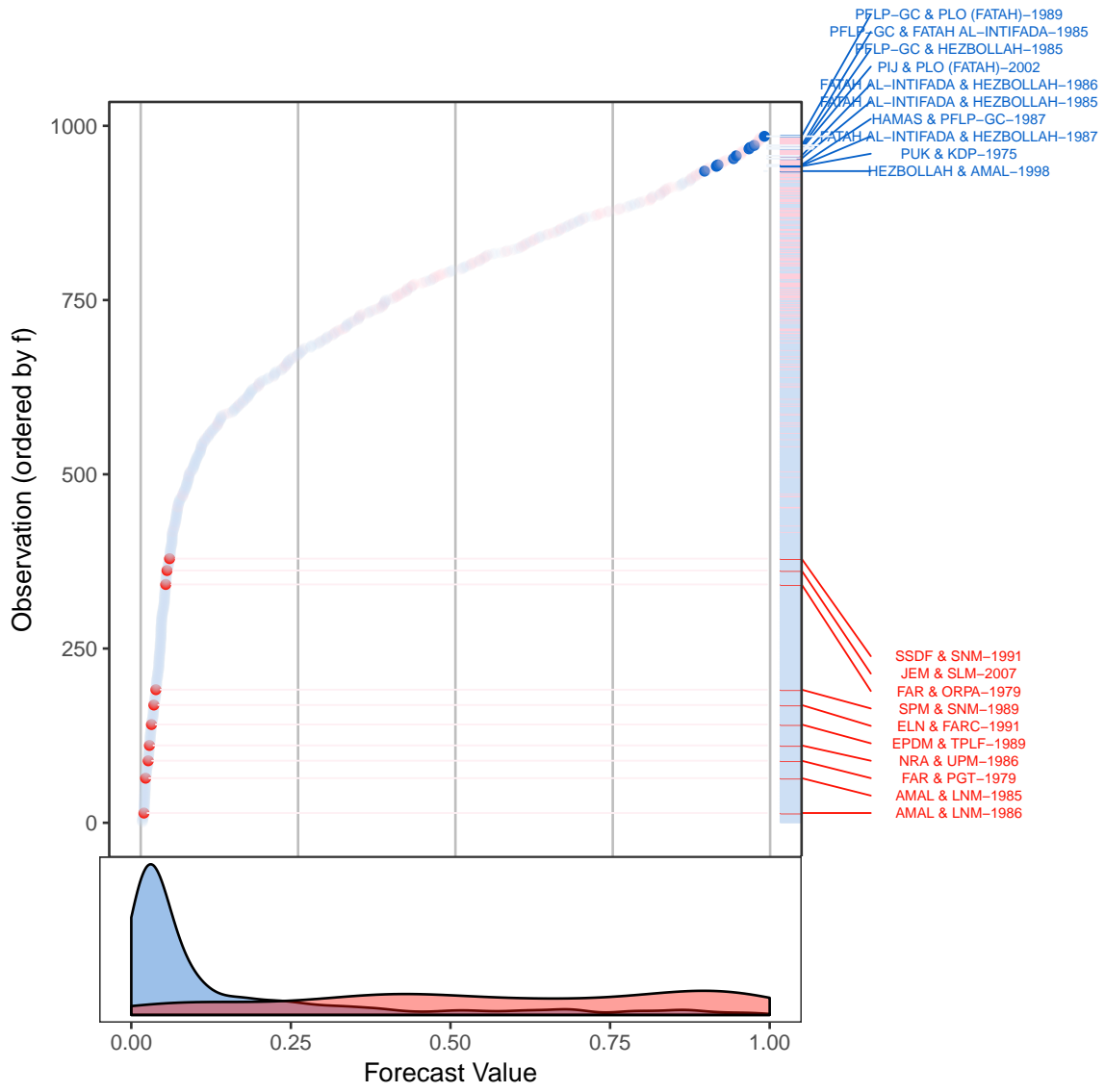
Figure 4: ROC Plots for Pooled Cross-Validated Models of Alliance-Making

Figure 5: Model Criticism Plot for Model 1