Unrecognized States: A Theory of Self-Determination and Foreign Influence

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Abstract

Unrecognized states are characterized by stagnant or crumbling economies and political instability, often serve as havens for illicit trade, and challenge the territorial sovereignty of recognized states. Their persistence is both intellectually puzzling and normatively problematic, but unrecognized statehood can be a remarkably stable outcome, persisting for decades. Our dynamic four-player model reveals that unrecognized statehood emerges as an equilibrium outcome when a patron state is willing and able to persistently invest resources to sustain it. We assess options available to actors in the international community who seek to impose their preferred outcomes in these disputes and find that, although sanctions are the most frequently employed, they can often lead to renewed conflict instead of the intended resolution.

1   Introduction

South Ossetia is an archetypical unrecognized state – characteristic of those regions of the world in which non-state actors control territory and govern populations. From 1990 to 1992, Ossetian rebels fought a successful secessionist civil war against the Georgian government that ended with a ceasefire and left the rebels in *de facto* control of much of the region of South Ossetia, which sits along Georgia's northern border with Russia. In the 22 years since the ceasefire was signed, South Ossetia has functioned as an unrecognized state, governing its own affairs but unrecognized by foreign nations.[1] The Georgian government maintains its claim to the territory of South Ossetia, while the South Ossetians continue to seek international recognition of their independence. In 2004, the Georgian government began intermittent efforts to close trade with the separatist region, and in 2008, following escalating provocations from the Ossetian side, Georgia attempted to reclaim the territory by military force. Russian troops acting in support of the Ossetians quickly crushed the would-be reconquest, and the status quo was restored.

The international system is characterized by a norm under which seceding entities are rarely recognized by foreign states unless they are first recognized by the home state.[2] This norm makes sense in a context where almost all states have reason to fear the emergence of secessionist movements within their own borders, and a state system that places seceding entities at an extreme disadvantage lowers the expected benefits of secession, thereby reducing the incentives for secessionist movements.[3] Thus, unrecognized states emerge when seceding entities gain *de facto* territorial control through successful wars of secession, but are not militarily strong enough to force recognition of their independence from the home state from which they have seceded.

Persistent unrecognized statehood is both intellectually puzzling and normatively undesirable. It is an extremely costly outcome for the secessionists, the home states from which they are attempting to secede, and the international community more broadly. Nonetheless, unrecognized statehood has been a recurring phenomenon since WWII, with half a dozen current unrecognized states having existed for more than 20 years.[4]

Much of the existing literature treats unrecognized statehood as either a transient phenomenon or simply as a failure to reach recognized statehood. In contrast, we argue that unrecognized statehood is an important outcome in its own right, and one that is potentially extremely stable over time. A major contribution of this paper is the demonstration of unrecognized statehood as a long-run equilibrium outcome of the strategic interaction between not just the secessionists and the home government, but also the international community and states or non-state actors who act as patrons of the secessionists. We show that unrecognized statehood can be a stable outcome despite its persistently high costs to all actors involved.

The costs to the secessionists are arguably the highest. Non-recognition locks unrecognized states out of a states-only club whose members enjoy benefits in terms of both security and economic integration. Unrecognized states do not benefit from the norm of territorial integrity that reduces the cost of territorial defense by increasing the chance that foreign powers will intervene against, or at least sanction, an invader.[5] Non-recognition also prevents entry into multilateral and bilateral trade agreements, dramatically reduces access to foreign aid, and excludes their territory from international legal frameworks, making it harder to secure foreign investment (Milhalkanian, 2004; Caspersen, 2013: 40-45).[6]

The home state bears costs of non-settlement as well, although they are not as high as those facing the unrecognized state. Instability in the border region and the diversion of military resources to monitor the *de facto* border are costly, as is maintenance of economic sanctions against the unrecognized state. In Azerbaijan, where an oil boom sent GDP soaring in the mid-2000s, the unresolved secessionist conflict in Nagorno-Karabakh led a massive military buildup to take precedence over other government spending.[7] Foreign investors are more wary of investing in states that do not effectively control their own territory, and there are diplomatic costs as well. For Georgia, failure to resolve its outstanding secessionist conflicts has hindered progress toward NATO accession.

The purpose of this paper is to identify the mechanisms that sustain unrecognized

statehood as a stable equilibrium and to evaluate potential strategies through which actors may preserve the stability of this equilibrium, or disrupt it by inducing war or negotiated settlement. While there are many game theoretic treatments of civil conflict, we believe ours is the first formal model in which unrecognized statehood is addressed as an outcome.

We develop a dynamic four-player model that focuses on the core conflict between the home state and the secessionist elite, but also incorporates the actions of outside states with interests in the outcome. These outside actors are a patron, which prefers independence to reunification, and a fourth player we denote as player c who represents one or more members of the international community. Player c is assumed to prefer reunification to independence.

The dynamic game has an infinite horizon and proceeds as follows. At the beginning of each period, the payoffs for the secessionists from unrecognized statehood—to which we refer as the status quo—deteriorate by a fixed amount, representing the ongoing costs of non-recognition. Next, the patron and international community can, in turn, make investments to augment the payoffs of the home state government and the secessionists. Finally, the home government and secessionists play a simultaneous stage game in which each decides whether to initiate conflict, maintain the status quo of unrecognized statehood, or cede the issue of status.

We provide a set of parameter restrictions under which perpetual unrecognized statehood is the outcome of a stationary Markov equilibrium of this game. Somewhat counterintuitively, in this equilibrium a patron will expend resources every period if necessary to sustain the status quo of unrecognized statehood even when the patron would prefer that the secessionists achieve recognized independence. This occurs when the international community's preferences against recognition are sufficiently strong—as is almost always likely to the case—to make it prohibitively expensive for the patron to facilitate recognition in the face of counteractivity by the international community.

In the end, the status quo outcome is observed when the patron—who faces a much

tighter budget constraint—outspends an international community with access to a much larger pool of resources. This occurs because each outside actor's willingness to pay to achieve its most preferred outcome is outstripped by the other's desire to avoid its least desired outcome. We are left with an unresolved conflict with no clear winner, and even if there is no official loser, all parties pay significant costs.

We go on to analyze a tool that has been one of the most frequently employed by the international community in these types of territorial disputes: economic and military sanctions. We show that, although the goal of such sanctions is presumably to encourage secessionists to cede the issue of status, their most pronounced effect is to increase the range of conditions under which war occurs. In contrast, we argue that members of the international community (player c) are capable of intervening through other means to overcome the influence of the patron and induce settlement if they are sufficiently motivated to do so. Policy options include the enforcement of bargains and the granting of positive inducements for settlement, rather than direct pressure on the unrecognized state via sanctions.

1.1   The Empirical Landscape

The contributions of this paper are primarily theoretical, but it is useful to introduce the empirical landscape that informs our model. Table 1 catalogs the post-WWII cases of unrecognized statehood, separated according to their current status. We define unrecognized states as territories in which a non-state actor controls territory, governs a population, and seeks but does not receive broad recognition as an independent state.[8] All six current unrecognized states have now been unrecognized for over twenty years.

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Of those cases in the table, all but Moheli controlled territory and govern(ed) populations for at least two years. These cases represent the most successful cases of attempted secession in the Post-WWII era, and yet eventual military defeat by the home state is still the modal form of resolution. Recognition by the home state is similarly rare, occurring

in only three cases and never except as a direct result of concessions won on the battlefield. In cases where recognition by the home state or the right to a referendum on independence is not secured as part of the initial peace agreement, it has not historically been forthcoming. Only four cases of negotiated reunification are observed: secessionists who are strong enough to secure and retain territorial control are rarely willing to surrender their independence at the bargaining table, even though the chances of eventual recognition are vanishingly slim. Thus, the number of long-running, costly stalemates has been substantial, most of them eventually ending in military reconquest by the home state.

1.2 Unrecognized States in the Literature

The political science literature on civil war is focused primarily on war onset, war intensity and duration, and the durability of post-conflict peace. Unrecognized statehood does not fit neatly into these areas of study because, while unrecognized states begin, and often end, through violent conflict, periods of unrecognized statehood generally contain little, if any, fighting. Unrecognized states also fall outside most treatments of state formation, because most unrecognized states never achieve recognition (or have not achieved it yet).[9]

The first literature to address unrecognized states directly was grounded in comparative politics, and a robust area-studies literature exists around each of the current cases of unrecognized statehood.[10] More recent literature has addressed wider ranges of cases and made important conceptual progress identifying patterns and commonalities across cases (e.g. Pegg, 1998; Kolstø, 2006; Geldenhuys, 2009; Caspersen and Stansfield, 2011; Caspersen 2013). Bakke (2011) summarizes four explanations for the persistence of unrecognized states, each of which plays a role in the theory we develop here. First, economic and political elites benefit from the status quo (e.g. King, 2001). Second, the secessionists have sufficient military capacity to make military reconquest costly (e.g. Kolstø, 2006). Third, secessionists enjoy external support from a patron (e.g. Lynch,

2002; Stanislawski, 2008). Lastly, the governments of unrecognized states are internally legitimate, enjoying support from residents of the unrecognized state (e.g. Lynch, 2002, Kolstø, 2006).

However, the literature continues to lack a clear general theory specifying the conditions under which this outcome emerges and persists.

One of the major contributions of this article is to provide a unified analytic framework for understanding the mechanisms sustaining unrecognized statehood as a stable equilibrium. By modeling unrecognized statehood formally, we move away from a case-by-case treatment toward development of a rigorous general theory. The model allows us to assess the conditions under which unrecognized statehood persists, and those under which war and negotiated settlement occur. It also allows us to evaluate various strategies available to actors, particularly states and coalitions of states who want to facilitate a peaceful and permanent resolution.

Although we are not aware of any formal models of unrecognized statehood there is a growing economics literature that employs game theoretic models of conflict. Grossman (2004) offers an early model of territorial disputes in which the divisibility of the contested territory is an important parameter. In Hirshleifer et al., (2009), conflict can be avoided when there is common knowledge, a common rate of time preference, and players can make a series of small concessions. In our context, the contested territory is indivisible; this implies that peace would require very large concessions so that this pathway of using small compromises to avoid conflict is not available.

In contrast to Bueno de Mesquita (2013), which exemplifies a class of literature that examines how rebel groups make decisions about resistance strategies, we begin our analysis at the point where initial rebellion has already been successful to the point of gaining *de facto* control of the disputed territory.

Another strand of the literature explicitly models the bargaining process between potential adversaries, either with asymmetric (Yared, 2010) or complete information (Jackson and Morelli, 2007; Schwartz and Sonin, 2008; Beviá and Corchón, 2010; McBride

and Skaperdas, 2014). Acemoglu et al. (2012) develop a dynamic model of resource wars featuring limited commitment. We abstract from questions of resource allocation and bargaining in order to focus on the dynamics created by the involvement of outside players: in the case of unrecognized states, the international community and patron states.

We next turn to presenting the model. In Section 3, we present a set of parameter restrictions under which unrecognized statehood is a stable, long-run equilibrium outcome. In Section 4, we analyze the potential effects of sanctions on the resolution of territorial disputes while Section 5 explores extensions of the model. Section 6 evaluates policy implications of the model, assessing various strategies available to outside actors that seek to induce their preferred outcomes. Section 7 concludes.

2   A Model of Unrecognized Statehood

We model a dispute over a piece of territory that is controlled by a secessionist group and also claimed by a home state. The central issue of contention, independence vs. reunification, is both difficult to divide and highly valued by both sides. The secessionists seek recognized statehood, the home state seeks reunification, and these demands do not vary over time. The side payments that can be offered in exchange for the opponent's surrender of the independence/reunification issue are sharply limited by the absence of large concessions that can credibly be made (Walter 1997, 2002; Schultz 2010).

One innovation of our model is the introduction of international actors. While the role of outside actors in determining the duration and outcome of civil conflicts is well documented (e.g., Elbadawi and Sambanis, 2000; Regan 2002; Balch-Lindsay et al., 2008), the role of these actors has not been incorporated into the modeling of these conflicts.[11] This is true even of work that addresses the role of outside actors as potential third-party enforcers (Walter, 1997; 2002).

The model presented here allows us to both articulate the mechanisms that create these persistent stalemates and to assess the consequences, intended and otherwise, of

outside actors' attempts to foster their desired outcome.[12]

2.1 The Players

We construct a model with four players: the secessionist elite (s), which seeks recognized independence; the central government of the home state (g) from which s is attempting to secede, which seeks reunification; and two other players, the patron (p) and the international community (c). The latter two are outside actors—states, groups of states and/or individuals acting in concert—that have interests in the outcome of the attempted secession.

Player c prefers reunification to recognized independence—a preference that is common to most states, and especially among those that fear the prospect of secessionist movements within their own borders. As discussed earlier, most states in the international system prefer any given secessionist conflict to be resolved by reunification. In practice we believe that in most cases there are many states that may act as player c in our model, and often we observe groups of states like the OECD or the UN acting in this capacity. Modeling the international community as a single actor is a strong simplifying assumption, but by leaving the preferences of player c quite general, the model can accommodate much of this diversity.[13]

Player p most prefers recognized independence, aligning its interests with the secessionists. We refer to p as the patron because p contributes resources to the unrecognized state in the status quo equilibrium. Patrons choose to contribute resources to secessionists for one or more of several reasons: 1) As an efficient mechanism for imposing costs on the home state (Salehyan et al., 2012), e.g. as Russia does to Georgia via South Ossetia and Abkhazia; 2) ethnic solidarity with the secessionists (e.g. Turkey's support of the Turkish Republic of Northern Cyprus); 3) hope of eventual annexation of the disputed territory (e.g. Armenia's support of Nagorno-Karabakh).[14]

We acknowledge that there may exist patrons whose most-preferred outcome is the status quo. This naturally makes a status quo equilibrium easier to achieve, as there is

an actor who strictly prefers the status quo and can expend resources to make it more likely. We choose to examine the case where the patron's most preferred outcome is independence because this is the condition under which the status quo is least likely. We will show that even in this circumstance the status quo remains an equilibrium outcome.

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2.2 Details of the Dynamic Game

The game begins at a status quo in which the secessionist elite controls at least some of the disputed territory, but cannot gain international recognition unless the central government cedes its claim to the territory. This condition is archetypical of cases in which a militarily successful war of secession ends in a ceasefire.

There are an infinite number of discrete periods $t = 1, 2, \ldots$. Play proceeds in each period t as follows (and as shown in Figure 1) until an absorbing state is reached.

1. p chooses an investment level $R_p^t \in \left[0, B_p^t\right]$ to influence the payoffs of s and g, where B_p^t is an exogenous limit on the finances of the patron.

2. c chooses an investment level $R_c^t \in \mathbb{R}^+$ to influence the payoffs of s and g.[15]

3. Conflict Stage Game: s and g play a stage game in which each chooses simultaneously from the following actions: Fight, Status Quo, Cede.

The payoffs at the end of a period are determined by these actions and six state variables. These state variables keep track of the value of the status quo (Q_s^t and Q_g^t), losing (L_s^t and L_g^t) and winning the issue of status (W_s^t and W_g^t) for the secessionists and government respectively. The transitions of the state variables are described below.

The game continues into the next period if the 'inside players'—the secessionists and government—selected (status quo, status quo) or (cede, cede). Otherwise, the game ends in an absorbing state as described in Section 2.2.1. Both because of the presence of absorbing states and state variables, this is a dynamic game rather than a standard repeated game.

Future payoffs are discounted with a common parameter δ, where $1/\delta$ is each player's discount rate and $0 \leq \delta \leq 1$.[16] Therefore payoffs for the entire game for player $i \in \{s, g, p, c\}$ can be expressed by the discounted stream of payments $\Sigma_{t=1}^{\infty} \delta^{t-1} U_i^t$ where U_i^t is player i's payoff in period t.

The payoff functions and all parameters, including probabilities in the war lottery, are common knowledge for all players, and actions are immediately observed by all players at the time they occur. We turn next to describing the payoffs.

2.2.1 Within-period Payoffs for the Secessionists and Government

Payoffs for players s and g in period t, gross of investments by players p and c, are:

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All the state variables except for the secessionists' status quo payoffs remain unchanged from period to period unless players p or c make an investment.[17] To be precise, we have[18]

$$L_s^t = L_s^{t-1} - R_p^t + R_c^t \qquad L_g^t = L_g^{t-1} + R_p^t - R_c^t$$

$$W_s^t = W_s^{t-1} + R_p^t - R_c^t \qquad W_g^t = W_g^{t-1} - R_p^t + R_c^t \qquad (1)$$

$$Q_g^t = Q_g^{t-1} - R_p^t + R_c^t \qquad Q_s^t = Q_s^{t-1} - \mu + R_p^t - R_c^t$$

The status quo payoffs for the secessionists are special in that the transition of this state variable from one period to the next involves an automatic reduction by μ. The steady reduction by μ represents the costs of non-recognition discussed in the introduction. As the economy in the secessionist region deteriorates, so does the standard of living for the secessionists.

Only two outcomes of the stage game do not lead to absorbing states, and the payoffs for these are bolded. If both s and g play Status Quo, then the status quo persists. Likewise, if both states simultaneously play Cede, we assume that both renege immediately and that the status quo is preserved for that period. In this case neither player has demonstrated a willingness to give up more than the other. Therefore, payoffs for both players ceding simultaneously are identical to the status quo payoffs.

If either s or g plays Cede while the other plays Fight or Status Quo, the game enters an absorbing state (i.e. the game ends), with payoffs in every subsequent period given by the corresponding entry in the stage game (Figure 2). We interpret one player ceding as that player ceding the issue of status (independence vs. reunification) in exchange for some set of (relatively small) payments from the opposing player. For example, if the secessionists cede, the secessionist region is reunified with the home state and the payoffs are L_s for the secessionists and W_g for the home state. Therefore, if one player agrees to cede while the other player chooses to remain in the status quo or fight, the result is a negotiated settlement benefiting the player who did not cede.

There are three ways to end up in war: either of the parties may attack first, or both may attack simultaneously. We denote the payoffs of war as a lottery Ω.[19] This lottery determines whether the secessionists or government wins the war. For simplicity, we assume the outcome of the war is an absorbing state.[20] Outright victory would, among other things, allow an unrecognized state to force recognition by the home state government. Therefore, outright victory requires more than simply securing control of the disputed territory (which the secessionists have already done when the game begins) and requires the ability to impose the terms of settlement. In practice, this likely involves the capture of the home state capital and/or the overthrow of the home state government.

For probabilities p of outright victory and $1 - p$ of loss, player $i \in \{s, g\}$ in period t with a fixed cost of war ζ_i faces war lottery $\omega_i^t \equiv (p(W_i^t - \zeta_i), (1 - p)(L_i^t - \zeta_i))$. $\Omega^t \equiv (\omega_g^t, \omega_s^t)$.[21] Players are assumed to approach war lotteries as expected values.

2.2.2 Within-period Payoffs for the Patron and International Community

We assume player c prefers peace to war. For simplicity, we limit our modeling of c's preference for peace to the assumption that c will not choose to fund a military buildup that it expects will induce war. This assumption is not necessary for the basic results to hold; however, it justifies our decision not to address military support of armed reconquest by the home state as a deliberate strategy by c to achieve reunification.

We use two binary variables to express the preferences among the three outcomes (status quo, reunification, recognition by the home state) for both p and c. X is a binary variable representing reunification: $X = 0$ in the status quo and $X = 1$ if the secessionists rejoin the home state. Y represents recognition by the home state of the secessionists' independence: $Y = 1$ if the home state recognizes the secessionists as independent, $Y = 0$ otherwise.

Player p's payoffs in period t are $U_p^t = -\alpha X + \lambda Y - R_p^t$, while the payoffs for player c are $U_c^t = \beta X - \nu Y - R_c^t$, with both payoffs denoted in currency units.[22] Taking α, β, λ, and ν to be positive, these payoffs represent the idea that the patron opposes reunification while player c prefers it, and that the patron prefers recognized independence while player c is averse to the creation of new states.

2.2.3 The Low Payoffs from Ceding

Aside from the central assumption that the government of the home state most prefers reunification and the secessionists most prefer independence accompanied by international recognition, we will for the most part leave the model general enough to incorporate a range of preferences and capabilities for players g and s. We do, however, assert that the payoffs for the party that cedes the issue of status (independence vs. reunification) are consistently low. This reflects a combination of two factors. First, the issue of status is indivisible[23] and highly valued by each side, making its surrender undesirable. Various forms of ethno-nationalism often motivate secession, and the values attached to independence by secessionists (and to reunification by citizens of the home state) are generally large relative to the values placed on economic prosperity and other goals. Second, many of the payments that could be offered are not credible (e.g. Schultz, 2010).

The difficulty of making credible payments in exchange for status is one clearly demonstrated in the civil war literature (e.g. Licklider, 1995; Walter 1997, 2002; Doyle and Sambanis, 2006; Fearon and Laitin, 2007). Unrecognized states generally constitute "sons of the soil" conflicts in which the central government cannot credibly commit to

preserving the local demographic and political dominance of the secessionist elite once the disputed territory reverts to central government control (Weimer, 1978; Fearon, 2004). While the central government might initially grant the secessionist elite a high level of autonomy in exchange for agreeing to reunification, the level of autonomy is likely to decrease over time, perhaps quite quickly. The payments that can be offered by the un-recognized state to the central government are similarly small or unenforceable: once recognition is achieved, the secessionists have little reason to uphold any prior commitments.

The case of Gagauzia illustrates the commitment problem nicely. Gagauzia achieved *de facto* independence at the time of the Soviet Union's collapse, but agreed to rejoin Moldova in 1994 as an autonomous region. While Gagauzia was granted substantial autonomy under the Moldovan Law on the Special Legal Status of Gagauzia, when the governor of Gagauzia, Dmitrii Croiter, moved to assert these powers in 1999, the Moldovan government balked. By 2002, Croiter was forced to resign, effectively deposed by the Moldovan government. The Moldovan government jailed a number of other Gagauz politicians, and while *de jure* Gagauz autonomy was enshrined in the Moldovan constitution in 2003, the *de facto* level of autonomy has been limited by continued central government meddling in less-than-free regional elections. The payoffs to Gagauzia for ceding have turned out to be quite low, and a similar fate can rationally be expected by other unrecognized states who choose to cede.

3   Explaining Outcomes of Secessionist Conflicts

Despite the preferences of the international community for peace, the most common outcome of secessionist conflicts in the post-WWII period has been reunification with the home state via outright military reconquest. By contrast, reunification through ne-gotiated settlement has been very rare. We will explore potential explanations for this seeming inability of the international community to achieve its aims in Sections 3.3 and 5. First, we turn to the outcome that we find the most puzzling: perpetual unrecognized

statehood.

3.1   Analysis of the "Status Quo" Equilibrium

Unrecognized states are frequently viewed as temporary phenomena or as non-equilibrium outcomes attributable to players' misperceptions of the strategic situation, or their fundamental irrationality. Our central result shows that unrecognized statehood can be an equilibrium outcome capable of being sustained in perpetuity by fully rational, perfectly informed actors. This is true even when there is no actor that prefers unrecognized statehood as a first-best outcome.

We begin by listing and providing intuition for a set of restrictions on the preferences of the actors and their resources for which we can guarantee that unrecognized statehood is an equilibrium outcome. This set of restrictions identifies a class of games, $\mathcal{G}$:

Definition 1 The class $\mathcal{G}$ includes all those games for which the parameters satisfy the following restrictions:

1. *For both players g and s, $Q_i^0 \geq L_i^0$: remaining in the status quo is better than ceding at the beginning of the game.*

2. *For both players g and s, $\frac{Q_i^0}{1-\delta} \geq \frac{\omega_i^0}{1-\delta} = -\zeta_i + \frac{W_i^0(p_i)+L_i^0(1-p_i)}{1-\delta}$: the expected outcome under war is worse than the status quo at the beginning of the game.*

3. *Either (a) $\frac{L_s^0}{1-\delta} > \frac{\omega_s^0}{1-\delta}$ or (b) $0 > -\mu > \frac{\lambda p_s - \alpha(1-p_s)}{1-\delta}$: either the secessionists prefer ceding to war or the patron's disutility from war is greater than the per-period cost of offsetting the deterioration in the secessionists' status quo payoffs.*

4. *$\frac{\alpha}{1-\delta} \geq \frac{\beta}{1-\delta} + \mu$: reunification is more important for the patron to avoid than for the international community to achieve.*

5. *$\nu \cdot p_s \geq \lambda \cdot p_s + \mu + \beta$: recognition of the secessionist state is more important for the international community to avoid than for the patron to achieve.*

6. $B_p^1 \geq \frac{\beta}{1-\delta} - \left(Q_s^0 - \mu - L_s^0\right)$: *the patron can afford to deter player c from inducing reunification at the beginning of the game.*

7. $B_p^t \geq \mu$, $\forall t$: *the patron can afford to pay to maintain the status quo.*[24]

There are many potential equilibrium outcomes of this game, including, under the right parameters, immediate ceding by either party as well as fighting (see Section 3.3). As we are interested particularly in the outcome of long-term unrecognized statehood, here we focus on the question of the existence of an equilibrium that leads to this outcome in perpetuity. We will show that, given a game satisfying the parameter restrictions in Definition 1, at least one status quo equilibrium will exist.

Our concept of equilibrium will be stationary Markov equilibrium as defined in Mailath and Samuelson (2006). That is, a strategy profile is a stationary Markov equilibrium if it is a stationary Markov strategy profile and a subgame-perfect equilibrium. In turn, a strategy profile is defined to be a stationary Markov strategy if any two ex post histories terminating in the same state play identically from the termination point forward. In other words, stationary Markov strategies ignore all details of the history aside from the current state.

The state is a vector of six variables comprised of the payoffs from the status quo, ceding, and winning the issue of status for each of the two inside actors. That is, $s = (Q_s, Q_g, L_s, L_g, W_s, W_g)$.[25] Strategies for the patron and the international community are how much to invest in each of the six state variables. However, positive investments in some of the state variables can be ruled out by preference assumptions.

Player c dislikes war and so will never invest in either state variable associated with winning since they increase the likelihood that one of the inside actors chooses to fight. It would also not want to make the government lose and so won't invest to augment L_g. This leaves three state variables in which player c might invest: Q_s, Q_g, L_s.

Because the patron's preferences are aligned with the secessionists and against the government, it never invests in W_g or L_s. The only reason the patron would invest in Q_g is to counter an investment by player c in the government's payoffs from war; since

player c will not make such an investment, we can also rule out investments by the patron in Q_g. This leaves three state variables in which the patron may invest: Q_s, L_g and W_s.

We now turn to defining and describing the Status Quo Equilibrium. We will see that, in this equilibrium, the outside actors' investments are paired: the patron's investments in the secessionists' status quo payoffs deter player c's investments in the secessionists' payoffs from ceding. Likewise, investments by player c in the government's status quo payoffs deter the patron from investing in the government's payoffs from ceding. Investments by player c in the secessionists' status quo payoffs deter the patron from investing in the secessionists' payoffs from winning the conflict via fighting. In each case, the potential investments are such that the largest continuation payoffs in the game between the secessionists and the government are those from playing status quo.

Definition 2 *A Status Quo Equilibrium is a stationary Markov equilibrium in which the outcome is perpetual unrecognized statehood.*

The strategies for the government and secessionists in this equilibrium are to play their best responses given the continuation values induced by the investments of the outside actors. The continuation value from choosing war is the expected future stream of payoffs from the two possible absorbing states net of the cost of war $\left(-\zeta_i + \frac{W_i^t(p_i)+L_i^t(1-p_i)}{1-\delta} \right)$. Similarly, the continuation value from ceding is $\frac{L_i^t}{1-\delta}$ while that for the status quo is $\sum_{s=t}^{\infty} \delta^{t-s} Q_i^t$. Unless otherwise noted below, playing Status Quo is the best response for both inside actors in terms of continuation values.

The strategies for the inside actors are the following, organized according to the patron's investments in each relevant state variable. In period t:

1. *The patron invests $R_p^t = \max \left\{ \frac{\beta}{1-\delta} - \left(Q_s^{t-1} - \mu - L_s^{t-1} \right), \omega_s^{t-1} + \mu - Q_s^{t-1}, 0 \right\}$ to augment Q_s^{t-1}. Player c invests $R_c^t = 0$ to augment L_s^{t-1}.*

   If $\frac{\beta}{1-\delta} - \left(Q_s^{t-1} - \mu - L_s^{t-1} \right) > 0$ and $R_p^t < \frac{\beta}{1-\delta} - \left(Q_s^{t-1} - \mu - L_s^{t-1} \right)$, player c invests $R_c^t = L_s^{t-1} - \left(Q_s^{t-1} - \mu + R_p^t \right) + \varepsilon$, for ε small, to augment L_s^{t-1} so that the secessionists play Cede.

2. As long as $R_p^t \leq \frac{v}{1-\delta} + \left(Q_g^{t-1} - L_g^{t-1} \right)$ to augment L_g^{t-1}, player c invests $R_c^t = R_p^t - \left(Q_g^{t-1} - L_g^{t-1} \right)$ to augment Q_g^{t-1}. Note that the outcome is that investments to augment L_g^{t-1} and Q_g^{t-1} are zero.

   If the patron invests $R_p^t > \frac{v}{1-\delta} + \left(Q_g^{t-1} - L_g^{t-1} \right)$ to augment L_g^{t-1}, player c is deterred from investing in Q_g^{t-1} ($R_c^t = 0$) so that the government plays Cede.

3. As long as $R_p^t \leq \frac{1}{p_s} \left[\frac{v p_s - \beta(1-p_s)}{1-\delta} - \mu + Q_s^{t-1} - \left(-\zeta_s(1-\delta) + W_s^{t-1} p_s + L_s^{t-1}(1-p_s) \right) \right]$ to augment W_s^{t-1}, player c invests $R_c^t = R_p^t p_s + \mu - Q_s^{t-1} + \left(-\zeta_s(1-\delta) + W_s^{t-1} p_s + L_s^{t-1}(1-p_s) \right)$ to augment Q_s^{t-1}. Similar to case two, the outcome is that investments to augment W_s^{t-1} and Q_s^{t-1} are zero.

   If the patron invests $R_p^t > \frac{1}{p_s} \left[\frac{v p_s - \beta(1-p_s)}{1-\delta} - \mu + Q_s^{t-1} - \left(-\zeta_s(1-\delta) + W_s^{t-1} p_s + L_s^{t-1}(1-p_s) \right) \right]$ to augment W_s^{t-1}, player c is deterred from investing in Q_s^{t-1} ($R_c^t = 0$) so that the secessionists play Fight.

To understand the construction of this equilibrium, notice that there are three possible ways to disrupt the Status Quo: (1) the international community can provoke the secessionists to Cede, (2) the patron can provoke the government to cede, or (3) the patron can provoke the secessionists to fight.[26] In order to establish that the Status Quo Equilibrium exists, it must be shown that each of these three deviations will be deterred.

Since the patron moves first, the only investment that takes place in the Status Quo Equilibrium is the patron's investment in the status quo payoffs of the secessionists to deter the international community from provoking the secessionists to cede the issue of sovereignty. The international community's willingness to counteract investments by the patron toward the other two disturbances implies that there will be no investments in equilibrium in cases (2) and (3).

If, however, off-path investments are ever made such that Status Quo does not yield the highest continuation value for one of the players, that player will play Cede or Fight and the game will end.

Equilibrium actions are for the patron to maintain the status quo by investing μ each

period once the difference in payoffs to the secessionists from playing Status Quo and Cede reaches $\frac{\beta}{1-\delta}$ (with a possible lump sum investment at $t = 1$ of up to that amount); for the international community to not invest and for both inside actors to play Status Quo each period.

Proposition 1 *For any game in the class of games $\mathcal{G}$, there exists at least one Status Quo Equilibrium.*

Proof of Proposition 1

Recall that each period is composed of three action stages: player p's investment decision (stage 1), player c's investment decision (stage 2), and the simultaneous game between players g and s (stage 3). Although period t may be reached either because in period $t - 1$ both players ceded or the status quo had been maintained, the strategic landscape in period t is the same given our restriction to stationary Markov strategies.

To establish that the Status Quo Equilibrium of Definition 2 exists, we must show that the given strategies constitute a Nash equilibrium in each subgame within a period given the induced continuation values.[27] We begin with the stage game between the government and secessionists. We assume that the government and secessionists choose the Status Quo strategy whenever indifferent between it and any other strategy.

Lemma 1 $Q_i^t \geq L_i^t$ and $\frac{Q_i^t}{1-\delta} \geq -\zeta_i + \frac{W_i^t(p_i) + L_i^t(1-p_i)}{1-\delta}$ for $i \in \{g, s\}$ are sufficient for (Status Quo,Status Quo) to be the outcome of Stage 3 in period t $\forall t$.

The proofs of the lemmas are in the Appendix.

Lemma 1 establishes ranges for the payoffs for players g and s—gross of investments by the outside players—in which the status quo outcome can occur.

We now turn to the incentives of the outside actors—that is, the patron state and the international community—in the subgames that begin in the first and second stages.

Recall that either outside actor could invest toward increasing any of the six state variables in a period. However, each outside actor only considers investments in three

of the state variables as treated in the three cases in Definition 2. The remainder of the proof addresses each set of matched investment decisions in turn.

Lemma 2 addresses potential efforts by the international community to influence the outcome toward *Reunification*:

Lemma 2 *When Restrictions (3) and (4) of Definition 1 hold, the patron's willingness to invest to maintain the status quo is sufficient to both deter the international community from intervening to encourage reunification and to avoid the secessionists choosing to go to war.*

Restriction (3) guarantees one of two outcomes: either the patron is willing to invest in the secessionists' status quo payoffs to avoid them falling below the expected payoffs from war or the secessionists' payoffs from war remain below those from ceding so that it is only the patron's incentives concerning the ceding outcome with which we must be concerned. The following treats the latter case; a parallel argument using Restriction 3(b) can be made in the former case.

Restriction (4) provides a bound on the amount that player p must be *willing* to invest each period in order to prevent player c from contesting the status quo outcome. To complete the equilibrium construction, we must determine the utility maximizing investments by p and conditions to ensure that it is *able* to make those investments.[28]

Consider period 1. When Restriction (4) holds, the patron will want to invest just enough to create a buffer of $\frac{\beta}{1-\delta}$ between Q_s^1 and L_s^1 so that c will not invest. That is, in equilibrium, $R_p^1 = \frac{\beta}{1-\delta} - (Q_s^0 - \mu - L_s^0)$ as long as p can afford to make this investment. Thus we need Restriction (6): $B_p^1 \geq \frac{\beta}{1-\delta} - (Q_s^0 - \mu - L_s^0)$, where B_p^1 is the amount p has available to spend on the conflict in period 1.

In periods $t > 1$, there are two cases to consider. Either (a) the buffer created in period $t-1$ was precisely the necessary $\frac{\beta}{1-\delta}$, or (b) the buffer is larger than $\frac{\beta}{1-\delta}$. In case (a), the patron must spend exactly μ to offset the degradation in the status quo payoffs and re-establish the buffer of $\frac{\beta}{1-\delta}$.[29] In case (b), the patron can spend less than μ in period t. However, because in each period Q_s^t degrades by μ, eventually the buffer will be reached and we will be returned to case (a). Again, assuming Restriction (4) holds,

the patron will want to make this investment if its budget allows, and so a sufficient condition is that p's budget is at least as large as μ in every period $t > 1$ (Restriction 7).

With the equilibrium status quo investments determined, we can proceed to Lemma 3, which rules out spending by the patron to help achieve recognition of the secessionist state:

Lemma 3 *When Restriction (5) of Definition 1 holds, the international community's willingness to invest to avoid recognition of the secessionist state is sufficient to deter the patron from investing to achieve recognition.*

In the Status Quo equilibrium, the patron will invest to maintain an outcome that is not its most preferred, but it will not invest to achieve its most preferred outcome. This behavior may appear counterintuitive, but we frequently observe patron states whose preferred outcomes are recognized independence for the secessionists who nonetheless contribute resources to sustain a status-quo outcome that is costly to all involved. The patron does not attempt to contribute sufficient resources to force recognition by the home state because doing so would induce offsetting expenditures by the international community to prevent this outcome.[30]

One last possibility is ruled out by Lemma 4: that the patron would invest to encourage the secessionists to fight. Note that the patron has no incentive to make this investment if Restriction 3b holds.

Lemma 4 *Restrictions (4) and (5) of Definition 1 ensure that the international community's willingness to invest to discourage new conflict is sufficient to deter the patron from investing to instigate such fighting.*

Note that this result depends on an implicit assumption that the patron is not able to skew the odds of the secessionists winning the conflict in a way that cannot be nullified by the international community. All other conflict scenarios are ruled out by the international community's assumed preference to avoid conflict.

Lemmas 2 through 4 establish that the only incentive compatible investment is that of the patron to deter the international community from inducing reunification, supported by the strategies described in cases (1)-(3) in Definition 2. This combined with Lemma 1 ensures the existence of the Status Quo Equilibrium described in Definition 2. ∎

3.2 Discussion

The existence and durability of this not-infrequently observed status quo equilibrium is counterintuitive on two levels. First, the large, relatively rich international community is outspent by a relatively small, less-resourced patron; second, unrecognized statehood is a stable equilibrium in spite of being undesirable to all players. The key condition leading to this outcome is that each outside actor's willingness to pay to achieve its most preferred outcome is outweighed by the other's desire to avoid it's least desired outcome. An ongoing unresolved conflict results.

Despite its high costs, this equilibrium is quite robust. Because player c and the patron can adjust contributions to reflect changing conditions on the ground, exogenous shocks that might otherwise have the potential to alter the equilibrium have their strategic impact nullified. For example, while a drought in the unrecognized state might decrease the secessionist elite's payoffs from the status quo and increase their need for international trade and assistance, additional humanitarian and economic assistance from the patron can offset the effects of the shock and preserve the status quo. Likewise, if the home state gains military strength, altering the probabilities in the war lottery, the patron can offset these changes by providing arms or otherwise investing in the defenses of the unrecognized state. See further discussion along these lines in Section 4.

While we do not model this directly, the stability of the status quo equilibrium may be further enhanced by the reluctance of the patron to withdraw support for an unrecognized state that was previously supported. Fearon (1994) and subsequent work on audience costs suggests that, past a certain threshold of escalation, it becomes difficult for leaders to back down from confrontation because they fear looking weak in front of

domestic audiences. Leaders of patrons that have supported the secessionists in a previous period may risk losing office if they later back down – even if it is the best interest of the patron state to do so.

3.3 Alternative Outcomes

First, note that the restrictions in Definition 1 are sufficient but not necessary. For example, if the status quo initially has a much higher long term payoff than the next best alternative for the secessionists, Restriction (7) need not be met to maintain the status quo in the short run. The inequality *will* bind for some set of periods $t \geq 1$ because the secessionist payoffs from the status quo decrease over time. In cases where Restriction (7) is not met, we can have unrecognized statehood for some time, but it is not a long-run equilibrium outcome.

On the other hand, the restrictions in Definition 1 also *do not* provide for a unique equilibrium, or even a unique equilibrium outcome. In fact, at least one additional equilibrium outcome always coexists with the status quo outcome.

If the payoffs from Fight are strictly greater than the payoffs from Cede for both players, then (Fight,Fight) will be the only additional equilibrium outcome. If this inequality holds for just one player, then we have only the additional outcome in which that player chooses Fight and its opponent cedes. If both players strictly prefer Cede to Fight, then there exist equilibria where both (Fight,Cede) and (Cede,Fight) are outcomes of the stage game.[31]

There are at least two takeaways from the multiplicity of equilibrium outcomes. First, it indicates that there may be an important role for external actors to play in coordinating expectations about which equilibrium will be played, and in the absence of such coordination, equilibrium switching from the status quo equilibrium to one of the other outcomes is possible. Second, most of the types of outcomes that we observe in the post-WWII era are consistent with the set of parameters outlined in Proposition 1 that support the status quo outcome. In the next section, we turn to the use of sanctions by

player c and the home state to attempt to force reunification.

4 The Impact of Economic Sanctions

In Section 3.1, we considered the outside actors' abilities to make investments to increase the various payoffs of the home state government and the secessionists. Player c, in particular, often employs another option by joining the home state in enforcing economic sanctions against the unrecognized state, an action that *reduces* the secessionists' payoffs from the status quo (i.e. sanctions are equivalent to $R_c^t < 0$). Note that this may be particularly effective if c is a large coalition of states acting in concert.

Let us begin with the simplest case, in which the sanctions affect only the secessionists' status quo payoffs, as when the imposition of sanctions has a negative impact on the economy of the unrecognized state. In the event that the secessionists cede or are defeated militarily, we presume the sanctions would be immediately lifted – the home state would not want to sanction itself. In the event the secessionists achieve military victory, we presume they are able to force the home state to lift the sanctions.[32] Sanctions are not expected to affect the payoffs to either ceding or military victory and neither should the cost of fighting itself be negatively impacted.

Thus, sanctions serve only two purposes: to narrow the difference between the payoffs from Status Quo and Fight, and to narrow the difference between the payoffs from Status Quo and Cede. If the patron wishes to maintain the status quo, its per-period investment must increase to compensate for the additional degradation of the status quo payoffs caused by the sanctions. All of this implies that the effect of sanctions on the unrecognized state's choice is not unambiguous. Proposition 2 lists necessary conditions for the existence of an equilibrium in which "ceding" is the equilibrium outcome once sanctions are introduced.

Proposition 2 *Assume the restrictions of* Definition 1 *hold in the absence of sanctions and that sanctions affect only player s's payoffs to maintaining the Status Quo (i.e.* $Q_s^t = Q_s^{t-1} - \mu -$

$\sigma + R_p^t - R_c^t$ *where σ is the reduction due to sanctions). In order for sanctions to lead to ceding by the secessionists, the following are required:*

1. *The patron must either be unable or find that it is not worthwhile to invest the additional amount now required to maintain the status quo.*

2. *The patron must either be unable or find that it is not worthwhile to invest to instigate fighting by the secessionists.*

3. *The secessionists' continuation value from playing Cede must be higher than their continuation value from playing Fight.*

The proof of Proposition 2 is in the Appendix.

If Condition 1 fails, player p will continue to invest to prevent reunification as in Proposition 1. If Conditions 2 or 3 fail, sanctions will lead to fighting initiated by the secessionists—either supported by the patron, or without its support in the case of Condition 3. Note here from Condition 2 that sanctions can induce investment behavior by the patron that was ruled out under the restrictions of Definition 1: the goal of sanctions is to destabilize the Status Quo Equilibrium and they certainly can achieve that goal but there may be unintended consequences, most notably the initiation of war by the secessionists.

Thus, even if we do not consider the sanctions to impose any direct costs on the home state (though in practice they likely do), it remains ambiguous whether sanctions will benefit the home state. Recall that in the Status Quo Equilibrium, the home state's expected returns from war are lower than from a continuation of the status quo. If sanctions induce the secessionists to play Fight, this is a worse outcome for the home state than if the status quo had been allowed to persist.

Moving beyond this simple case, we can add realism by allowing sanctions to have a negative effect not only on the economy (the status quo payoffs) but also on the military capabilities of the secessionists (the expected payoffs from war). This is an important

extension because one motivation for sanctions is often precisely that – to weaken the military capability of the secessionists.

In the model, this is represented as reducing (increasing) the secessionists' probability of victory (loss) in the war lottery. This should serve to increase the range of parameters over which the conditions of Proposition 2 hold. However, at the same time, the home government experiences changes of the same magnitude and opposite sign in its war lottery, increasing its payoffs from playing Fight. The effect of sanctions on the home state's strategic considerations is clear cut:

Proposition 3 *Assume the restrictions of* Definition 1 *hold in the absence of sanctions and that sanctions affect both player s's status quo payoffs and its military capabilities (i.e. $Q_s^t = Q_s^{t-1} - \mu - \sigma + R_p^t - R_c^t$ and $p_s(\sigma)$ $(p_g(\sigma))$ is decreasing (increasing) in σ). The parameter space over which a war will be initiated by the home state is increasing in the magnitude of the sanctions' impact on the secessionists' military capabilities.*

The proof of Proposition 3 is immediate. Although under the conditions of Proposition 1 (i.e. when the restriction of Definition 1 hold and the Status Quo Equilibrium is played) the home state's continuation value from maintaining the status quo is higher than from initiating conflict in the absence of sanctions, when those sanctions degrade the secessionists' military capabilities they increase the chances that the home state would prevail in a conflict, thus increasing the home government's continuation value from fighting. The stronger is the impact of sanctions on the secessionists military, the stronger is the effect on the home government's value of fighting and the greater is the range of parameters over which this change in payoffs will lead to a change in behavior.

Thus, Propositions 2 and 3 imply that sanctions are both wealth destroying and violence increasing. The sanctions destroy wealth directly by damaging the economy of the secessionist region and lowering the secessionists' payoffs from the status quo. If the degradation of status quo payoffs are not offset by the patron and if the secessionists' continuation value from fighting exceeds that from the status quo before the continuation

value from ceding does, the secessionists will initiate war. Conversely, if the sanctions degrade the secessionists military capabilities sufficiently, it induces the home state to fight.

This logic is well illustrated by the case of Tamil Eelam, a territory in Northern Sri Lanka that existed as an unrecognized state from 1987-2009. Throughout the conflict, the Sri Lankan government used sanctions and blockades to reduce the secessionists' status quo payoffs and degrade their military capabilities. However, the effects of these sanctions were offset by two patrons: India, during the early stages of the conflict, and the Tamil diaspora throughout. The disruption of the status quo equilibrium began in 2006, when the United States, European Union, Canada, and India formally designated the leading secessionist organization, the Liberation Tigers of Tamil Eelam (LTTE), as terrorists.[33] This designation greatly strengthened the sanctions against the secessionists and led to a sharp decline in both the quality of life in Tamil Eelam and the military capabilities of the LTTE. In January 2008, the Sri Lankan government abrogated the existing ceasefire agreement and in 2009 it launched a full-scale military offensive that ended with a decisive victory over the LTTE and reunification of Tamil Eelam and Sri Lanka. While there were many factors at play, the strengthening of sanctions increased the home state's probability of victory and thereby played a role in its decision to initiate a return to war.

Despite this potential for perverse effects, sanctions are a common tool of outside actors (*c*), more common than aid and other positive inducements. A flow payment of carrots, even backed by the promises of a "neutral" third party, may not be credible in the eyes of the secessionists, which could explain the frequent resort to sticks.

5 Extensions

5.1 Uncertainty and Outside Interactions Between the Patron and c

While we present a model with perfect information, there are some empirical cases in which it appears that various players have acted on mistaken beliefs about the strength or payoffs of other players. Modeling uncertainty falls outside the scope of this paper, but uncertainty does offer an additional plausible explanation for off-equilibrium-path behavior that we observe in empirical cases. For example, uncertainty regarding the payoff structure facing the secessionists may explain failed and costly efforts by the European Union and its members (i.e. player c) to promote a negotiated reunification of the Turkish Republic of Northern Cyprus into Cyprus.

The game we model, with the control of the unrecognized state at stake, is only one of several strategic games in which the patron and c may be interacting at any given time, and linkages between games are possible. We do not model any direct exchange of resources or imposition of harm between c and the patron, but we take the implications of these possible outside interactions seriously. The willingness and ability of either party to contribute resources within the game we model may be affected by their interaction with one another in other contexts. As we will discuss in greater detail below, in a number of cases a patron has withdrawn support for an unrecognized state in response to pressure exerted by actors in the international community (c) in other venues.

5.2 If the Patron Withdraws Support

Support by a foreign patron is, in almost all cases, necessary for the persistence of unrecognized statehood (Kolstø, 2006; Caspersen, 2013). When there is no patron, or when the patron withdraws its support, military reconquest by the home state is likely. The only unrecognized state currently in existence which has been able to survive without a patron is Somaliland. Somaliland has been able to survive as long as it has because of the extreme weakness of the home state (Somalia).[34]

The case of Chechnya is quite typical of unrecognized states without patrons. Chechnya fought and won its initial war of secession at a time when the home state (Russia) was in political and economic disarray following the collapse of the Soviet Union. As Russia gradually recovered and strengthened, Chechnya had no patron support to offset the relative decline in its military capabilities. Over time the war lottery became progressively more skewed in favor of Russian victory, the payoffs to ceding for the Chechen secessionists remained extremely low, and the Russian government invaded and reconquered Chechnya in 1999.

It is worth exploring, however, the reasons why a patron might support a secessionist group during its initial rebellion and then withdraw support at a later date. Patrons' strategic interests in the unrecognized state vary from patron to patron, and both budget constraints and salience of interest vary over time. Returning to the case of Tamil Eelam, domestic political concerns (primarily Tamil ethnic solidarity) induced a modest level of Indian support for the secessionists from 1983-1987. These domestic political concerns were eventually outweighed by broader strategic security concerns and a desire for regional stability. In 1987 the Indian government signed a peace accord with Sri Lanka (the home state) and largely withdrew their support from the secessionists.

As noted in the section on outside interactions between the patron and player c, the patron's decision to withdraw support for the secessionists is sometimes motivated by interactions between the patron and c that we do not model directly. Empirically, we observe a number of cases in which c applies pressure directly to encourage the patron to withdraw support from the unrecognized state. In an extreme example involving both sanctions and direct military confrontation, NATO coerced Serbia into, among other things, withdrawing its support from Republika Srpska and Republika Srpska Krajina, both of which were then reconquered militarily.[35]

6 Policy Implications: Options for Player c

Sanctions imposed by the home state, often co-enforced by player c, aim to disrupt the status quo equilibrium and force the secessionists to cede. However, as Section 4 demonstrates, sanctions also increase the risk of war, something player c prefers to avoid.

Fortunately, there is a better way. If instead of enforcing sanctions, player c tries to promote settlement by supplementing the payoffs from unification, it is able to induce negotiated settlement without simultaneously increasing the risk of war. This can be done either through promises of benefits to the unrecognized state provided directly by c, like aid, or by a commitment from c to serve as a third-party guarantor of side payments promised by the ceding side: both directly increase L_i with the goal of raising it above Q_i for the player who will cede in the settlement. In the case of contingent promises of aid, the calculation is relatively straightforward: 1) the promise of aid must be credibly contingent on negotiated settlement, and 2) the aid offered must be valued more highly than the concessions required to reach an agreement. It is the second condition that is most problematic. Because both sides place such a high value on status (independence vs. reunification), even large amounts of aid are likely to be valued less than the concessions necessary to reach an agreement.

Serving as a third-party guarantor of autonomy rights is a way for player c to potentially overcome problems of indivisibility and commitment and help the parties reach a credible compromise on status (Walter, 2002). However, this strategy is only tenable when the only impediment to settlement is the unenforceability of a bargain, and when c is credible as an enforcer of that bargain.

In Southern Sudan, third-party actors, including the UN, invested substantial resources to help negotiate a settlement to the initial war of secession and to ensure that the Sudanese government both allowed the promised referendum and respected its results. While the UN and others invested resources in Southern Sudan to enforce independence, not autonomy, they have demonstrated that outside actors are capable of

enforcing difficult concessions by the home state government. This bodes well for the future credibility of organizations like the UN as third-party enforcers. However, the role of outside actors in enforcing other past agreements might give secessionists pause. For example, a referendum on independence in Western Sahara, which the UN ruled to be necessary more than thirty years ago, has never come to pass.[36] Nonetheless, it is possible for an outside state or coalition to invest resources to enforce agreements, allowing for negotiated settlements that would otherwise be impossible to reach.

To show that it is possible for an actor like player c to enforce the terms of negotiated agreements at a reasonable cost is not sufficient to imply that such an outcome is likely. The political will necessary to achieve success in Southern Sudan was motivated largely by the magnitude of the atrocities that accompanied the war of secession, and enforcement was made credible, in part, due to the weakness of Sudan relative to the outside states involved. Enforcing the terms of an agreement between Georgia, South Ossetia, and Russia, for example, would be more difficult.

It is also possible for actors like c to affect the payoffs of the patron through interactions in other games outside of our model. Such actions would manifest themselves within the model as reductions in the patron's willingness to pay to sustain the status quo. If the patron is unwilling to pay to sustain the status quo, the status quo payoffs of the secessionists will decline over time, eventually leading to either war or negotiated settlement. Under these conditions, the within-game costs to c of inducing negotiated reunification also fall.

In this section we have argued that outside states are capable of imposing their preferred outcome, including peaceful reunification. The key, however, is motivation: actors like player c are capable of inducing peaceful reunification when they are willing to invest the resources necessary. However, strong preferences of secessionists against reunification and the opposing intervention of the patron make the costs of such interventions prohibitively high in most cases. Unrecognized statehood is a stable equilibrium because, while there are many actors in the international community that share the preferences

we ascribe to *c*, they are usually unwilling to invest sufficient resources to outspend the patron and induce their preferred outcome.

7   Conclusion

In this paper we establish unrecognized states as an outcome of interest for social scientists and provide a unified framework for analyzing that outcome and its alternatives. Current events, particularly Russia's military and economic support of secessionist rebels in Eastern Ukraine, suggest that the phenomenon of unrecognized statehood will not fade from relevance soon. While the Ukrainian situation remains fluid, as of October 2015, the status quo equilibrium we model is a plausible future. The equilibrium could emerge as follows: with Russian support, the secessionists solidify *de facto* control of parts of Eastern Ukraine, but risk of direct confrontation with the West is sufficiently high to prevent Russian annexation of Eastern Ukraine.[37] Further Russian economic aid keeps the status quo payoffs of the secessionists sufficiently high that they decline negotiated reunification. If necessary, contributions to the home state by U.S. and the EU (player *c*) strengthen the home state enough to prevent the secessionists from overthrowing the Ukrainian government and forcing recognition. In twenty years, Eastern Ukraine may look a good deal like South Ossetia does today.

While the importance of outside actors in civil conflict has been widely acknowledged in the empirical literature, it is rarely modeled formally. We introduce a dynamic four-player model that captures the core strategic interactions of the secessionist elite and the home state central government, as well as the interventions of outside actors with interests in the outcome. This allows us both to examine the means through which patron states sustain unrecognized statehood as a stable equilibrium, and to rigorously analyze the strategies available to other outside actors to pursue reunification. It is not always in the interests of outside states to bear the costs of inducing their preferred outcome, but we identify the mechanisms through which this is possible and the thresholds that must be overcome.

In the model we present, we show that unrecognized statehood can emerge as an equilibrium outcome even when it is a terrible outcome for all players involved. The patron, even when it prefers outright independence, is willing to bear costs in every period to uphold an outcome that is far short of its ideal, and which imposes high costs on others as well. The international community, though wealthier than the patron, does does not outspend the patron to force reunification because the patron's desire to avoid reunification is stronger than the international community's desire to achieve it.

By providing economic and other aid to the unrecognized state, the patron keeps the secessionist elite's payoffs from the status quo high enough to prevent a negotiated reunification. The stability of this equilibrium is abetted by the indivisible nature of independence and the difficulty of enforcing autonomy as a condition of reunification. In cases where there is no patron or where the patron eventually becomes unwilling to continue its support, the result has almost always been violent reconquest by the home state.

Our model also suggests, however, that the historical pattern of costly stalemate followed by violent resolution is not the only possible path. We show that the stabilizing effect of the patron can be overcome by a sufficiently motivated international community. While the most frequently employed means through which outside actors attempt to induce settlement—sanctions—also increases the risk of war, we show that it is possible for outside actors to induce their preferred outcome without running this risk. In particular, we suggest that they can provide positive inducements for settlement and serve as a third-party guarantor of negotiated settlements in which unrecognized states rejoin the home state as autonomous regions. It is often not the lack of available means that prevents outside actors from inducing their preferred outcome, but rather the lack of will.

A Appendix

Proof of Lemma 1

Recall that the upper case notation represents payoffs gross of investments by the outside players. Without loss of generality, consider the incentives to deviate for player s in period t given that the other three players play their equilibrium actions. Given the stationary equilibrium actions, playing Status Quo will lead to Q_s^t $\forall t$, so the continuation value is $\frac{Q_s^t}{1-\delta}$. Player s's continuation value from the one-shot deviation to Cede, which leads to an absorbing state with payoff L_s^t in each period, is $\frac{L_s^t}{1-\delta}$. The one-shot deviation to fight results in the war lottery, with a cost of $-\zeta_s$, W_s forever with probability p, and L_s forever with probability $1-p$. Thus the continuation value is $-\zeta_s + \frac{W_s^t(p) + L_s^t(1-p)}{1-\delta}$.

Given that the continuation value from Status Quo is higher than both that from playing Cede and Fight, player s will play Status Quo. The argument for player g is symmetric. ∎

Proof of Lemma 2

Begin by assuming Restriction 3a holds. In the status quo, we have $U_p^{t,SQ} = -R_p^{SQ}$ and $U_c^{t,SQ} = -R_c^{SQ}$. If the outcome is reunification, payoffs in this absorbing state in the period in which the investment is made are $U_p^{t,RU} = -\alpha - R_p^{RU}$ and $U_c^{t,RU} = \beta - R_c^{RU}$ where SQ and RU distinguish investments under the status quo and reunification scenarios respectively.

Since reunification is the patron's least preferred state, $R_p^{RU} = 0$; that is, the patron is not willing to invest to provoke reunification. But the patron *would* be willing to invest the amount it would lose from reunification to maintain the Status Quo: that is, $R_p^{SQ} = \frac{\alpha}{1-\delta}$.

For player c the difference in continuation values from switching from the status quo to reunification is $\frac{\beta + R_c^{SQ}}{1-\delta} - R_c^{RU}$. So c is willing to invest up to $\frac{\beta + R_c^{SQ}}{1-\delta}$ toward reunification—or preventing the status quo.

Player c would be able to induce the secessionists to play Cede—e.g. counter an

addition to Q_s^{t-1} with an investment to L_s^{t-1}—as long as $R_c^{RU} = \frac{\beta + R_c^{SQ}}{1-\delta} > Q_s^{t-1} - \mu + R_p^t - L_s^{t-1}$.[38] For this to work, the investment required of player c must be no more than the gain player c receives from investing.

On the other hand, if $\frac{\beta + R_c^{SQ}}{1-\delta} \leq Q_s^{t-1} - \mu + R_p^t - L_s^{t-1}$, the patron's investment creates a large enough difference in the secessionist's payoffs from the status quo versus ceding (net of player c's investment) so that player c will not find contesting the status quo to be in its interest. Whenever the status quo will be the outcome in this way, c maximizes its utility by choice of $R_c^{SQ} = 0$.

Restriction (1) combined with equilibrium play implies that $Q_s^{t-1} > L_s^{t-1}$. Combining this with $R_c^{SQ} = 0$, a tighter condition for preventing player c from inducing reunification is $\frac{\beta}{1-\delta} + \mu \leq R_p^t$.

Since the patron is willing to invest up to $\frac{\alpha}{1-\delta}$, $\frac{\beta}{1-\delta} + \mu \leq \frac{\alpha}{1-\delta}$ is a sufficient condition to prevent c from inducing the *reunification* outcome.

If Restriction 3a is violated, as the secessionists' status quo payoffs degrade from period to period, they will fall below ω_s^t before they fall below L_s^t. If no investment is made in Q_s^{t-1}, the secessionists will choose the war outcome. Restriction 3b guarantees that the patron will make the investment $R_p^{t'} = \frac{\omega_s^{t-1}}{1-\delta} + \mu - \frac{Q_s^{t-1}}{1-\delta} \leq \mu$ to prevent the secessionists choosing war since this $R_p^{t'}$ is strictly less than the patron's expected loss from the war outcome. Note that the patron's actual investment will be the maximum of the investment required to prevent the war and ceding outcomes. ∎

Proof of Lemma 3

Again, in the status quo, we have $U_p^{t,SQ} = -R_p^{SQ}$ and $U_c^{t,SQ} = -R_c^{SQ}$. If the outcome is recognition of the secessionists, per-period payoffs in this absorbing state become $U_p^{t,REC} = \lambda - R_p^{REC}$ and $U_c^{t,REC} = -\nu - R_c^{REC}$ where SQ and REC distinguish investments under the status quo and recognition scenarios respectively.

Thus the difference in continuation values from switching from the status quo to recognition for player p is $\frac{\lambda + R_p^{SQ}}{1-\delta} - R_p^{REC}$. For player c it is $\frac{-\nu + R_c^{SQ}}{1-\delta} - R_c^{REC}$. $R_c^{REC} = 0$

since the international community will not invest to create its least preferred outcome. So c is willing to invest up to v per period toward maintaining the status quo, and p is willing to invest up to $\frac{\lambda + R_p^{SQ}}{1-\delta}$ toward recognition. We have shown that the largest possible investments by p in the status quo are $\frac{\beta}{1-\delta}$ in $t = 1$ and μ in each period thereafter, so the largest this difference can be for p is $\frac{\lambda+\beta+\mu}{1-\delta} - \mu$.

If $\frac{v}{1-\delta} < L_g^{t-1} + R_p^t - Q_g^{t-1}$, the patron's investment to augment L_g^{t-1} creates a large enough difference in the secessionists' payoffs of ceding versus the status quo (net of player c's investment) so that player c will not find it worthwhile to re-establish the status quo outcome.

On the other hand, player c would be willing to counter whatever investment player p makes to try to induce recognition—e.g. counter an addition to L_g^{t-1} with an investment to augment Q_g^{t-1}—as long as $\frac{v}{1-\delta} \geq L_g^{t-1} + R_p^t - Q_g^{t-1}$.[39]

Restriction (1) combined with equilibrium play implies that $Q_s^{t-1} > L_s^{t-1}$ so that a tighter condition for preventing player p from inducing recognition is $\frac{v}{1-\delta} \geq R_p^t$.

Since the patron is willing to invest up to $\frac{\lambda+\beta+\mu}{1-\delta} - \mu$, when $\frac{v}{1-\delta} \geq \frac{\lambda+\beta+\mu}{1-\delta} - \mu$, player c's willingness to counter the patron's investments is sufficient to prevent the *recognition* outcome. A slightly weaker version of this inequality is stated as Restriction (5) so that this deterrence dynamic is guaranteed to operate through the war lottery as well, as will be seen in Lemma 4. ∎

Proof of Lemma 4

The difference in continuation values from switching from the status quo to taking the war lottery for player p is $\frac{\lambda p_s - \alpha(1-p_s)}{1-\delta} + R_p^{SQ} - R_p^{WAR}$. For player c it is $\frac{-v p_s + \beta(1-p_s)}{1-\delta} + R_c^{SQ} - R_c^{WAR}$. As noted above, $R_c^{SQ} = 0$. So c is willing to invest up to $\frac{v p_s - \beta(1-p_s)}{1-\delta}$ toward preventing fighting.

The patron is willing to invest up to $\frac{\lambda p_s - \alpha(1-p_s)}{1-\delta} + R_p^{SQ}$ toward instigating fighting when this quantity is positive, and will not invest when the quantity is non-positive. Thus we must only examine the case where this quantity is positive.

We will again set R_p^{SQ} at its largest value of $\frac{\mu+\beta}{1-\delta} - \mu$ as this is most restrictive. In this only case of interest, we have $\frac{\lambda p_s - \alpha(1-p_s)+\mu+\beta}{1-\delta} - \mu > 0$ for an upper bound on the amount the patron is willing to invest to instigate fighting.

If $\frac{\nu p_s - \beta(1-p_s)}{1-\delta} < \omega_s^t\left(R_p^t\right) - Q_s^t$, the patron's investment in ω_s^t creates a large enough difference between the payoffs from fighting and the status quo so that player c will not find it worthwhile to re-establish the status quo outcome.

On the other hand, player c would be willing to counter whatever investment player p makes to try to induce fighting—e.g. counter an addition to ω_s^t with an investment to augment Q_s^{t-1}—as long as $\frac{\nu p_s - \beta(1-p_s)}{1-\delta} \geq \omega_s^t\left(R_p^t\right) - Q_s^t$.

This can be expanded as $\frac{\nu p_s - \beta(1-p_s)}{1-\delta} \geq -\zeta_s(1-\delta) + (W_s^{t-1} + R_p^t)p_s + L_s^{t-1}(1-p_s) - Q_s^{t-1} + \mu = \omega_s^{t-1} - Q_s^{t-1} + R_p^t p_s + \mu$.

Restriction (1) combined with equilibrium play implies that $Q_s^{t-1} \geq \omega_s^{t-1}$ so a tighter condition for preventing player p from inducing fighting is $\frac{\nu p_s - \beta(1-p_s)}{1-\delta} - \mu \geq R_p^t p_s$.

Since $R_p^t \leq \frac{\lambda p_s - \alpha(1-p_s)+\mu+\beta}{1-\delta} - \mu$, if we can show $\frac{\nu p_s - \beta(1-p_s)}{1-\delta} - \mu \geq p_s\frac{\lambda p_s - \alpha(1-p_s)+\mu+\beta}{1-\delta} - p_s\mu$, we will have the guarantee that player c will counterinvest after any effort by the patron to instigate fighting, thereby making p's optimal investment in fighting zero.

Multiplying Restriction (4) by $-(1-p_s)$, we have $\frac{-\beta\cdot(1-p_s)}{1-\delta} - \mu(1-p_s) \geq \frac{-\alpha\cdot(1-p_s)}{1-\delta}$. Using this with Restriction (5) multiplied by $\frac{1}{1-\delta}$, we have $\frac{\nu p_s - \beta(1-p_s)}{1-\delta} - \mu \geq \frac{\lambda p_s - \alpha(1-p_s)+\mu+\beta}{1-\delta} - p_s\mu$. Since it is assumed that the war lottery probabilities are non-degenerate, we also have $\frac{\lambda p_s - \alpha(1-p_s)+\mu+\beta}{1-\delta} - p_s\mu > p_s\frac{\lambda p_s - \alpha(1-p_s)+\mu+\beta}{1-\delta} - p_s\mu$. ∎

Proof of Proposition 2

Suppose that sanctions are applied by player c in period $t+1$ after a Status Quo equilibrium such as the one supported by the construction in Proposition 1 has been established in period t. As the only alteration is a reduction in Q_s^t by the amount of the sanctions, it is immediate that if player p is willing and able to supplement player s's status quo payoffs to counteract sanctions, then player s's incentives to play Status Quo are not disturbed. As in Proposition 1, it is not necessary that the patron make these payments

immediately if player s's utility from playing Status Quo is high enough relative to its other options, but the degradation of the status quo payoffs will eventually make these payments necessary in order to sustain a Status Quo equilibrium.

Therefore if sanctions are to disrupt the Status Quo equilibrium and potentially lead to ceding by the secessionists, it must be that the patron is either not able or not willing to make the investment required to maintain the status quo under player c's sanctions (Condition 1).

Assume then that Condition 1 holds so that the patron makes no investments in the Status Quo payoffs of player s. We also need the patron to withhold investments toward encouraging the secessionists to fight. Lemma 4 of Proposition 1 is not sufficient to guarantee this behavior since no investments are being made in the Status Quo. In addition, the reference outcome changes: players p and c must now compare their payoffs in the war scenario to the reunification outcome. To be precise, the least stringent condition is m periods of Status Quo followed by the Reunification outcome, where m is the maximal number of periods that it takes for the sanctions to degrade the status quo payoffs below the level of the payoffs from ceding for player s.

Player p's continuation value when the status quo is played for $m - 1$ periods before ceding is $0 - \frac{\delta^m}{1-\delta}\alpha$, whereas the continuation value from war is $\frac{\lambda p_s - \alpha(1-p_s)}{1-\delta}$. For player c, it is $0 + \frac{\delta^m}{1-\delta}\beta$ versus $\frac{-\nu p_s + \beta(1-p_s)}{1-\delta}$. Thus the condition for p's willingness to instigate fighting to outweigh c's willingness to deter fighting is

$$\frac{\lambda p_s - \alpha(1-p_s)}{1-\delta} + \frac{\delta^m}{1-\delta}\alpha > \frac{-\nu p_s + \beta(1-p_s)}{1-\delta} - \frac{\delta^m}{1-\delta}\beta$$

If this condition holds, then there will be no investments following sanctions. But it is still not guaranteed that the secessionists will choose to cede. Status Quo is no longer a long-run equilibrium strategy, but even without outside investments, it is possible that Fight could be a more attractive action than Cede.

The status quo payoffs will degrade period by period in the absence of investments. Whether the secessionists choose Cede or Fight depends on which strategy yields the

higher continuation value. In order to avoid conflict, sanctions must cause player s's continuation value from playing Status Quo to fall below its continuation value from playing Cede before it falls below the continuation value from playing Fight. ∎

Notes

[1]South Ossetia, along with Abkhazia, was recognized by Russia and Nicaragua in 2008, Venezuela and Nauru in 2009, and Tuvalu in 2011.

[2]This norm is not absolute: in some cases, like the People's Republic of China, the sovereignty of the home state government (over Taiwan) has never been recognized by some states. In other cases, like Kosovo, the commission of mass atrocities by the home state government may supersede its sovereignty.

[3]Coggins (2011: 451) notes that, "The more acute the domestic threat, the more the reticence to recognize." For the definitive international legal treatment of recognition, see Crawford (2006).

[4]Abkhazia, Ngorno-Karabakh, Transnistria, Somaliland, South Ossetia, and the Turkish Republic of Northern Cyprus.

[5]See Zacher (2001) on the norm of territorial integrity.

[6]Transnistria represents a case where the gains from smuggling, particularly for the elite, may have outweighed these other economic costs in the 1990s (King, 2001). However, as Moldova deepens ties with the EU, Transnistria's lack of access to EU markets and EU aid becomes a much larger relative cost to bear (Tudoroiu, 2011).

[7]Military spending increased 51% in 2004-2005, and went up another 82% in 2006 (International Crisis Group 2007)

[8]This excludes, for example, the territories governed by FARC in Colombia because FARC does not seek recognized statehood and includes cases, like South Ossetia, where recognition is obtained by only a handful of other states. We also exclude entities, like the Slovak Republic, whose secession was not opposed by the state from which it seceded. We acknowledge that other scholars might differ with us with regard to the inclusion or exclusion of specific cases. We assert that our model is a useful tool for analyzing each of the cases in this table; it may be useful in explaining some of the ambiguous cases we exclude as well.

[9]For example, Roeder (2007) treats unrecognized states simply as failures to gain recognized statehood, not as outcomes to be analyzed in their own right.

[10]Lynch (2004), King (2001), Stanislawski (2008), and Bakke et al. (2013) provide notable treatments of the Former Soviet cases, and a pair of edited volumes by Bahcheli et al. (2004) and Kingston and Spears (2004) each compile broader sets of case studies.

[11]One exception is van Houten (1998), who models the patron state ("reference state") as a player in ethnic conflicts but otherwise takes an approach quite different from ours.

[12]For another example of the strategic manipulation of decision-makers into (and out of) conflict see Baliga and Sjostrom (2012).

[13]A variety of scholars, including Owtram (2011) and Coggins (2011) discuss the international relations of unrecognized states and variation across third-party states in their preferences with regard to unrecognized

states.

[14]While annexation is appealing to many patrons (and some unrecognized states), annexation is not an outcome we model. International norms against irredentism are strong, and the costs of annexing an unrecognized state appear to be prohibitively large in most cases (e.g. Zacher, 2001). Prior to Russia's annexation of Crimea, all post-WWII cases of annexation involved the annexation of colonial territory, rather than parts of the metropole. Israel's occupation of the Golan Heights and the West Bank are possible exceptions here.

[15]We assume that player c, which is often a large coalition of states, does not have a binding budget constraint.

[16]All of the results that follow go through essentially unchanged in the general case where the players potentially discount at different rates. This simplifying assumption is made solely to highlight the essential mechanisms of the model.

[17]We will see below that restrictions on the initial values of the state variables are essential for characterizing our main result, but in general we leave them unrestricted.

[18]Here we anticipate a bit the incentives of the patron and international community to sign the impact of contributions in each case.

[19]Because the unrecognized state already controls territory and the *de facto* borders are armed, there is likely only a small advantage to be gained by attacking first for either side. Therefore, we argue it is not essential to differentiate between these war scenarios analytically.

[20]The model can easily be extended to encompass the possibility of an indecisive war.

[21]Baseline costs of war are fixed (ζ_i) but additional costs of war based on war's result are captured in W_i and L_i. Note that the structure of the war lottery along with the assumption that the outside actors influence the payoffs only and not the probabilities of winning imply that any way in which the patron influences the payoffs from war can be counteracted by the international community through its own investments.

[22]Note that, in equilibrium, after an absorbing state has been reached, neither outside player will make any investments. Thus the relevant per period payoff will be repeated with $R_p^i = R_c^i = 0$ for $i > t$ if an absorbing state is reached at time t.

[23]Either the unrecognized state has sovereignty over its territory and is co-equal with the home state, or the secessionist region (and its government) are subordinate to the central government.

[24]Depending on parameters, one might think that Restriction (5) is more likely to be binding than Restriction (6). If there is great variance in budget between periods for the patron, such as a greatly reduced budget in some period $t > 1$ compared to period 1, (6) could be the binding constraint.

[25]In the case of W_s^t and W_g^t, it is more intuitive to imagine investments increasing the probability of winning a war; because the lottery is additively separable and the "Win" outcome is always preferred when it occurs independently in the stage game, this more convenient modeling choice is inconsequential.

[26]The international community might also provoke the government to fight, but it is assumed to avoid conflict.

[27]Subgame perfection within the one-shot game combined with the stationary Markovian property ensures subgame perfection in the whole game.

[28]Efforts by the patron to create the conditions for the *Recognition* outcome are addressed in Lemma 3 once the equilibrium investments are established.

[29]A third case in which the buffer is smaller than $\frac{\beta}{1-\delta}$ provides lower welfare to player p. Restrictions (4) and (6) ensure that player p can avoid this case.

[30]We do not provide conditions on the budget of player c similar to Restrictions (6) and (7): since the size of the international community relative to any particular country is large, it can be assumed that a budget constraint does not bind.

[31]In the case of any indifference, we get the relevant combination of (Fight, Fight), (Fight,Cede) and (Cede, Fight).

[32]Recall that our definition of military victory includes the ability to dictate the terms of settlement.

[33]Other states then followed suit, including Australia in 2008.

[34]Owtram (2011) argues that, over time, unrecognized states can become sufficiently "consolidated" as to no longer be dependent on a patron for support. However, no cases other than Somaliland support this claim empirically.

[35]For an excellent discussion of the case of Republika Srpska, see Zahar, 2004.

[36]For a thorough analysis of the Western Sahara case, see Zunes and Mundy (2010).

[37]Annexation of Crimea was achieved at a reasonable cost to Russia. The costs of annexation Eastern Ukraine would likely be substantially higher.

[38]Here we assume that the payoff relationship at t is such that ceding is better than fighting. If this relationship is reversed, similar analysis and results hold.

[39]As in the proof of Lemma 2, we have assumed that the payoff relationship at t is such that ceding is better than fighting. If this relationship is reversed, similar analysis and results hold.

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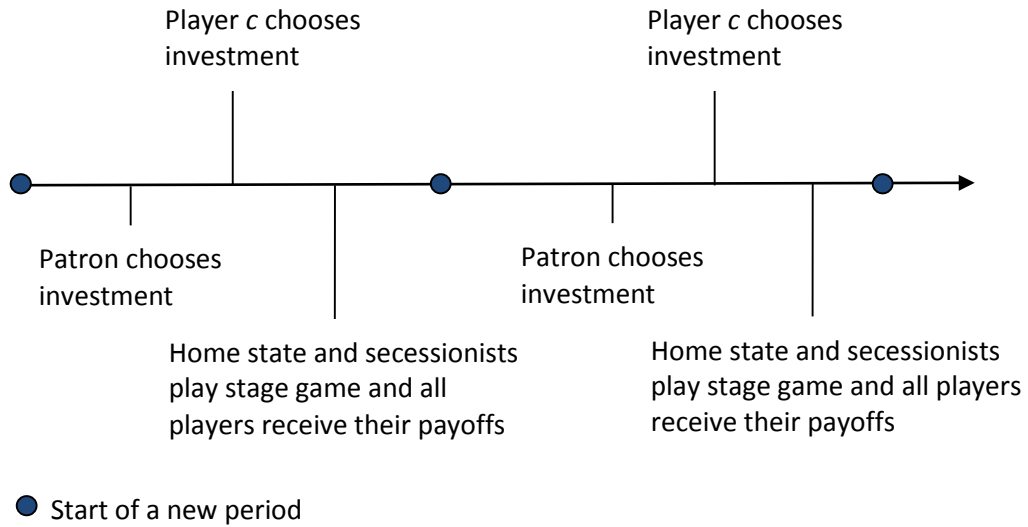
Player *c* chooses
investment

Player *c* chooses
investment

Patron chooses
investment

Patron chooses
investment

Home state and secessionists
play stage game and all
players receive their payoffs

Home state and secessionists
play stage game and all players
receive their payoffs

● Start of a new period

Figure 1: Timeline

$g \downarrow, s \rightarrow$	Fight	Status Quo	Cede
Fight	$p_g W_g^t + p_s L_g^t - \zeta_g, p_s W_s^t + p_g L_s^t - \zeta_s$	$p_g W_g^t + p_s L_g^t - \zeta_g, p_s W_s^t + p_g L_s^t - \zeta_s$	W_g^t, L_s^t
Status Quo	$p_g W_g^t + p_s L_g^t - \zeta_g, p_s W_s^t + p_g L_s^t - \zeta_s$	$\boldsymbol{Q_g^t, Q_s^t}$	W_g^t, L_s^t
Cede	L_g^t, W_s^t	L_g^t, W_s^t	$\boldsymbol{Q_g^t, Q_s^t}$

Figure 2: Stage Game Payoffs

Table 1: Current Status of Militarily Successful Secessions

Unrecognized States (Recognized by fewer than 10 UN members)	Partially recognized states (Recognized by more than 10 members, but not the home state)[1]	Rejoined home state following military defeat of secessionists	Rejoined home state in negotiated settlement	Recognized by the home state
• Abkhazia • Nagorno-Karabakh • Somaliland • South Ossetia • Transnistria • Turkish Republic of Northern Cyprus	• Kosovo • Taiwan • Palestine[2]	• Anjouan[2] • Biafra • Chechnya • Croatian Republic of Herzeg-Bosnia • East Turkestan Republic • Hyderabad • Katanga • Republic of Mahabad • Tamil Eelam • Republika Srpska • Republika Srpska-Krajina • Western Bosnia • Western Sahara[3]	• Ajara • Bouganville • Gagauzia • Moheli	• Bangladesh • Eritrea • South Sudan

1 Palestine is recognized by about 100 states, but has only permanent observer status at the UN, the same status accorded the Vatican.

2 Anjouan separated from the Comoros on two occasions: first in 1997 and again in 2007. The first separation ended in negotiated settlement. The latter separation lasted less than a year and ended in military defeat of the secessionists.

3 All but a tiny portion of the territory claimed by the Polisario Front is under the control of Morocco: nonetheless, some states still recognize the territory's independence.