

Unrecognized States: Theory and Cases

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Abstract

Unrecognized states destabilize the international system and impoverish their residents. Thus, unrecognized statehood is a profoundly undesirable outcome, and yet it is often a stable equilibrium. Game theoretic modeling has proven effective at clarifying the strategic logic that sustains unrecognized states, and offers insight into possible paths to resolution. In this chapter we draw on these insights, and illustrate them with discussion individual cases. The game theory on which we draw analyzes not only the actions of unrecognized states and the home states from which they are attempting to secede, but also the patrons that support these unrecognized states and the actors in the international community who work to induce peaceful settlement. In this piece we focus particularly on evaluating the policy options available to peace and development-seeking actors in the international community as they work to resolve these stalemated conflicts.

Introduction

Unrecognized states destabilize the international system and impoverish their residents. Because their territorial borders are contested, the threat of violent conflict is ever present. Facing sanctions, unable to sign trade agreements or receive most foreign aid, their residents are isolated and impoverished. Thus, unrecognized statehood is a profoundly undesirable outcome, and yet it is often a stable equilibrium. In addition to Somaliland and the Turkish Republic of Northern Cyprus, many of the unrecognized states that emerged when the Soviet Union collapsed still enjoy *de facto* independence a quarter century later.

1. Unrecognized states are destabilizing to the international system, bad for their residents, and yet often very long in tenure. 2. Game theory helps us understand the mechanisms by which they are sustained, and the ways in which they can be transformed 3. Engagement with the details of actual cases informs us to what actual paths to resolution of these disputes look like, and what roadblocks stand in the way

[Include an updated version of Table 1 from the JLEO article. Ben's RA will update this]

From Kristy, 6/30/17:

Note new requirement from editors, accompanied by increase in word limit to 7,000 (we would probably have done this anyway): To make the book more coherent, we are asking that your chapter address the following questions:

1. How does your work relate to a key change or new challenge- change in environment, your field, way of thinking or intervening?
2. Why was the past approach/thinking incomplete/not adequate?
3. How does the new approach/thinking/framing in your chapter advance the

field?

Self Determination and Foreign Influence

[Summary of our theory in approx 1500 words]

1 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.¹ 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 other-

¹One 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.

wise, of outside actors' attempts to foster their desired outcome.²

1.1 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.³

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

²For another example of the strategic manipulation of decision-makers into (and out of) conflict see Baliga and Sjöström (2012).

³A 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.

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).⁴

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.

«COMP: Place Figure 1 about here»

1.2 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 $t = 1, 2, \dots$. 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 $R_p^t \in [0, B_p^t]$ to influence the payoffs of s and g ,

⁴While 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.

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 .⁵
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 1.2.1. 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 $0 \leq \delta \leq 1$.⁶ Therefore payoffs for the entire game for player $i \in \{s, g, p, c\}$ can be expressed by the discounted stream of payments $\sum_{t=1}^{\infty} \delta^{t-1} U_i^t$ 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.

⁵We assume that player c , which is often a large coalition of states, does not have a binding budget constraint.

⁶All 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.

1.2.1 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.⁷ To be precise, we have⁸

$$\begin{aligned} L_s^t &= L_s^{t-1} - R_p^t + R_c^t & L_g^t &= L_g^{t-1} + R_p^t - R_c^t \\ W_s^t &= W_s^{t-1} + R_p^t - R_c^t & W_g^t &= W_g^{t-1} - R_p^t + R_c^t \\ Q_g^t &= Q_g^{t-1} - R_p^t + R_c^t & Q_s^t &= Q_s^{t-1} - \mu + R_p^t - R_c^t \end{aligned} \quad (1)$$

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

⁷We 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.

⁸Here we anticipate a bit the incentives of the patron and international community to sign the impact of contributions in each case.

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 .⁹ This lottery determines whether the secessionists or government wins the war. For simplicity, we assume the outcome of the war is an absorbing state.¹⁰ 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 $\omega_i^t \equiv (p(W_i^t - \zeta_i), (1 - p)(L_i^t - \zeta_i))$. $\Omega^t \equiv (\omega_g^t, \omega_s^t)$.¹¹ Players are assumed to approach war lotteries as expected values.

⁹Because 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.

¹⁰The model can easily be extended to encompass the possibility of an indecisive war.

¹¹Baseline 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

1.2.2 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.¹² 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.

1.2.3 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

the patron influences the payoffs from war can be counteracted by the international community through its own investments.

¹²Note 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 .

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 indivisible¹³ 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 unrecognized 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

¹³Either 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.

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.

2 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 negotiated settlement has been very rare. We will explore potential explanations for this seeming inability of the international community to achieve its aims in Sections 2.3 and ???. First, we turn to the outcome that we find the most puzzling: perpetual unrecognized statehood.

2.1 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. $v \cdot p_s \geq \lambda \cdot p_s + \mu + \beta$: recognition of the secessionist state is more important for the international community to avoid than for the patron to achieve.
6. $B_p^1 \geq \frac{\beta}{1-\delta} - (Q_s^0 - \mu - L_s^0)$: 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.¹⁴

¹⁴Depending 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.

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 2.3). 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, $s = (Q_s, Q_g, L_s, L_g, W_s, W_g)$.¹⁵ 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 ,

¹⁵In 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.

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

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

2. As long as $R_p^t \leq \frac{\nu}{1-\delta} + (Q_g^{t-1} - L_g^{t-1})$ to augment L_g^{t-1} , player c invests $R_c^t = R_p^t - (Q_g^{t-1} - L_g^{t-1})$ 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 $R_p^t > \frac{\nu}{1-\delta} + (Q_g^{t-1} - L_g^{t-1})$ 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 $R_p^t \leq \frac{1}{p_s} \left[\frac{\nu p_s - \beta(1-p_s)}{1-\delta} - \mu + Q_s^{t-1} - (-\zeta_s(1-\delta) + W_s^{t-1} p_s + L_s^{t-1}(1-p_s)) \right]$ to augment W_s^{t-1} , player c invests $R_c^t = R_p^t p_s + \mu - Q_s^{t-1} + (-\zeta_s(1-\delta) + W_s^{t-1} p_s + L_s^{t-1}(1-p_s))$ 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 $R_p^t > \frac{1}{p_s} \left[\frac{\nu p_s - \beta(1-p_s)}{1-\delta} - \mu + Q_s^{t-1} - (-\zeta_s(1-\delta) + W_s^{t-1} p_s + L_s^{t-1}(1-p_s)) \right]$ 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.¹⁶ In order to establish that

¹⁶The international community might also provoke the government to fight, but it is assumed to avoid conflict.

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.¹⁷ 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.

¹⁷Subgame perfection within the one-shot game combined with the stationary Markovian property ensures subgame perfection in the whole game.

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.¹⁸

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 $\frac{\beta}{1-\delta}$.¹⁹ 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

¹⁸Efforts by the patron to create the conditions for the *Recognition* outcome are addressed in Lemma 3 once the equilibrium investments are established.

¹⁹A 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.

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.²⁰

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

²⁰We 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.

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. ■

2.2 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 its 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 3.

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.

2.3 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.²¹

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.

3 The Impact of Economic Sanctions

In Section 2.1, 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

²¹In the case of any indifference, we get the relevant combination of (Fight, Fight), (Fight,Cede) and (Cede, Fight).

lift the sanctions.²² 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.

²²Recall that our definition of military victory includes the ability to dictate the terms of settlement.

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.²³ 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.

²³Other states then followed suit, including Australia in 2008.

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 $R_c^{RU} = \frac{\beta + R_c^{SQ}}{1-\delta} > Q_s^{t-1} - \mu + R_p^t - L_s^{t-1}$.²⁴ 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. ■

²⁴Here 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.

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 ν 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 $\frac{\nu}{1-\delta} < L_g^{t-1} + R_p^t - Q_g^{t-1}$, 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 $\frac{\nu}{1-\delta} \geq L_g^{t-1} + R_p^t - Q_g^{t-1}$.²⁵

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 $\frac{\nu}{1-\delta} \geq R_p^t$.

Since the patron is willing to invest up to $\frac{\lambda + \beta + \mu}{1-\delta} - \mu$, when $\frac{\nu}{1-\delta} \geq \frac{\lambda + \beta + \mu}{1-\delta} - \mu$, 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

²⁵As 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.

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 $\frac{-\nu p_s + \beta(1-p_s)}{1-\delta} + R_c^{SQ} - R_c^{WAR}$. As noted above, $R_c^{SQ} = 0$. So c is willing to invest up to $\frac{\nu p_s - \beta(1-p_s)}{1-\delta}$ 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 $\frac{\nu p_s - \beta(1-p_s)}{1-\delta} < \omega_s^t (R_p^t) - Q_s^t$, 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 $\frac{\nu p_s - \beta(1-p_s)}{1-\delta} \geq \omega_s^t (R_p^t) - Q_s^t$.

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 $\frac{vp_s - \beta(1 - p_s)}{1 - \delta} - \mu \geq \frac{\lambda p_s - \alpha(1 - p_s) + \mu + \beta}{1 - \delta} - p_s\mu$. 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. ■

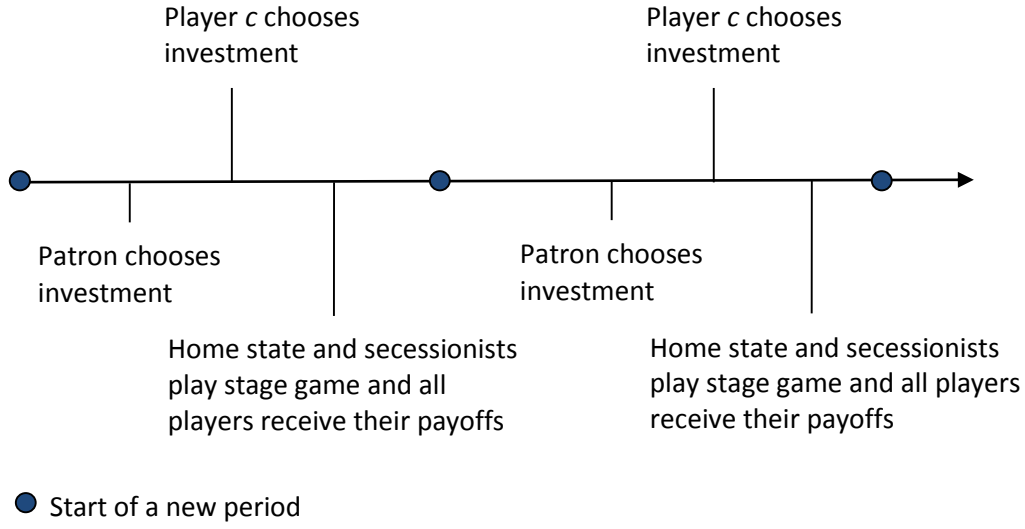


Figure 1: Timeline

$g \downarrow, s \rightarrow$	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	$p_g W_g^t + p_s L_g^t - \zeta_g, p_s W_s^t + p_g L_s^t - \zeta_s$	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	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
<ul style="list-style-type: none"> • Abkhazia • Nagorno-Karabakh • Somaliland • South Ossetia • Transnistria • Turkish Republic of Northern Cyprus 	<ul style="list-style-type: none"> • Kosovo • Taiwan • Palestine² 	<ul style="list-style-type: none"> • Anjouan² • 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 Sahara³ 	<ul style="list-style-type: none"> • Ajara • Bouganville • Gagauzia • Moheli 	<ul style="list-style-type: none"> • 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.

How Unrecognized Statehood Ends

Unrecognized Statehood exists as a halfway point between recognized independent statehood and reunification with the home state. Unrecognized statehood ends when either recognized statehood is achieved, or reunification occurs. In the following sections we discuss how these transitions occur – both through negotiated settlement and as a result of decisive military victory by one side or the other.

Reunification via Military Reconquest

Most attempted secessions end in military defeat before territorial control is ever achieved (Fazal and Griffith 2008). Unrecognized states are thus a relatively elite set of secessionist movements, those that are unusually militarily powerful relative to the home state. However, even among secessionist movements that succeed in maintaining territorial control for a minimum of two years, the most common form of resolution remains military reconquest by the home state. When unrecognized states return to war with the home state, it is almost always the home state that initiates and the home state that is victorious (we discuss military victory by the secessionists in a later section).

In the case of most prolonged stalemates, a patron provides enough military assistance to the secessionists to make military reconquest by the patron prohibitively costly. The 11 cases of military reconquest in Table 1 occur in cases with no patron or cases in which the patron withdraws or reduces its support.

The cases with no patron are fairly straightforward. For example, Chechnya achieved its *de facto* independence immediately after the fall of the Soviet Union when Russia was very weak. As Russia strengthened, there was no patron support to offset the relative decline in the Chechens' military capabilities. Over time, Russia's military advantage grew and in 1999 the Russian government invaded and reconquered Chechnya.

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. For example, domestic political concerns (primarily ethnic solidarity with the secessionists) induced a modest level of Indian support for the Tamil Tigers in Sri Lanka 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 Tamil secessionists, even sending in peacekeepers that later clashed with the secessionists militarily.²⁶

The patron's decision to withdraw support for the secessionists is sometimes motivated by interactions between the patron and the international community, which may bribe or coerce the Patron to abandon its support. In an extreme example involving both sanctions and direct military confrontation, the United States and other members of the North Atlantic Treaty Organization (NATO) coerced Serbia into withdrawing its support from Republika Srpska and Republika Srpska Krajina, both of which had secured *de facto* independence after the collapse of Yugoslavia.²⁷

Negotiated Reunification

Just as military reconquest becomes more likely when Patron support is withdrawn or declines, so too does negotiated reunification. Negotiated agreements are struck when the patron does not contribute sufficiently to prevent the secessionists from preferring ceding to the status quo, and when a deal is available that both sides prefer to war. Since WWII, four peacefully negotiated reunifications have occurred.²⁸ Secessionists in Ajara, Bouganville, and Gagauzia have opted to rejoin the home state. In all four of the cases of negotiated settlement, the observed outcomes seem to match the model well: the payoffs to the secessionist elite from ceding have been low, and the payoffs to the central government high.

²⁶Singer 1992

²⁷For an excellent discussion of the case of Republika Srpska, see Zahar 2004.

²⁸We limit our discussion here to entities that had existed in a period of stalemate prior to reaching a settlement – i.e. those that had maintained territorial control for at least two years.

In Ajara, where the level of patron (Russian) support was quite low, the choice facing the secessionist elite was between agreeing to reunify with Georgia or facing military defeat. In Bouganville, which separated from Papua New Guinea, secessionists lacked not only a patron, but also a clear preference for secession – demands for secession had emerged only late in a struggle that began as an effort to stop a mining operation.²⁹ Here the value of status to the secessionists was actually quite low, and they were willing to surrender it in exchange for relatively small side payments.

However, despite past failures, our theory suggests that a sufficiently motivated patron can induce negotiated settlement if it so chooses. The means through which the international community might induce negotiated settlement are discussed in detail in the section on policy implications. It is notable, however, that we do not expect any future cases of peacefully negotiated independence. While negotiated reunification is the preferred outcome of the international community, and they may be willing spend to achieve it, recognized statehood is generally not the preferred outcome of the patron or the international community. Our analysis suggests that the most likely path to recognized statehood is, and will remain, military defeat of the home state.

The difficulty of making credible payments in exchange for status is one clearly demonstrated in the civil war literature.³⁰ 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.³¹ While the central government might initially grant the secessionist elite a high level of

²⁹Ghai and Regan 2006

³⁰e.g. Licklider 1995; Walter 1997, 2002; Fearon and Laitin 2007; Doyle and Sambanis 2006

³¹Weimer 1978; Fearon 2004

autonomy in exchange for agreeing to reunification, the level of autonomy is likely to decrease over time, perhaps quite quickly. Reference to the cases of Abkhazia and Gagauzia are informative here.

At the time of secession, ethnic Abkhaz made up a minority of the population of Abkhazia,³² but they now [DOUBLE CHECK WHAT THE CURRENT SITUATION IS] control almost all political posts in the *de facto* government of the region. In 2004, the basket of payments offered by the Georgians in exchange for reunification included a provision guaranteeing that ethnic Abkhaz would retain a majority in the regional parliament, even if the return of internally displaced persons (IDPs) once again placed ethnic Abkhaz in a minority demographic position in the region. The promise, however, was not very meaningful. First, even if the promise were upheld, it would still mean a step back from the total dominance the ethnic Abkhaz currently enjoy in the region. Second, if Georgian IDPs returned, they may demand and receive a more equitable system of representation. These concerns are not abstract; this type of renegeing has already occurred in cases that did reach settlement.

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 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

³²Cornell 2001; Wooleh 2006

less-than-free regional elections.³³ 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.³⁴

Recognition via Secessionist Military Victory

While the path to independent statehood via secession is an extremely narrow one, recognition does sometimes occur. It has occurred primarily in cases where the secessionists (often supported by a patron) are so strong militarily that they not only achieve territorial control in the initial conflict, but also threaten the home state government outside the unrecognized state. Bangladesh and Eritrea both secured recognition as part of the peace agreement ending the war of secession.

[DISCUSS BANGLADESH AND ERITREA IN DETAIL]

Negotiated Recognition

No unrecognized state has yet managed to gain recognition from the home state when recognition or a referendum was not agreed to as a condition of ending the initial war of secession. Wars that have reignited after a period of unrecognized statehood have always either resulted in reunification or left the status quo intact. However, if an unrecognized state were to gain an outright military victory over the home state at any time, this does represent a plausible path to recognition. Once unrecognized statehood has emerged as an equilibrium, however, the path to recognition is narrower still.

³³Protsyk (2010) provides an account of the "salami tactics" by which Moldovan authorities have gradually reclaimed powers originally granted to the regional government.

³⁴Roper (2002) argues that secessionists in Transnistria are wary of negotiated reunification precisely because of the creeping re-centralization they have observed in Gagauzia.

DISCUSS KOSOVO AND SOUTH SUDAN HERE.

Policy Implications: Options for The International Community

In general, the international community has preferences for reunification over independence, for resolution over the status quo, and for peace instead of war. In this section we consider four means through which the international community might pursue these ends: sanctions against the secessionist region, direct incentives provided to the secessionists in exchange for ceding, enforcement of concessions offered by the home state, and direct coercion of the patron.

The intended effect of sanctions is to make the status quo less appealing vis-à-vis ceding. However any sanctions that increase the secessionists' hostility toward reunification will also increase the range of conditions under which war will be chosen. Sanctions can have this effect if they reduce the secessionists' quality of life under the status quo and reduce the quality of the deal secessionists expect to get if they opt for negotiated resettlement. As the peaceful options become worse, war becomes relatively more attractive. Compounding this, sanctions that reduce the secessionists' military capabilities (and thus reduce the secessionists' expected payoffs from war) also have the effect of making military reconquest easier for the home state, making it more likely that the home state will attack. In either case, the range of conditions under which war will be initiated becomes broader.³⁵

There is a better way. If the international community tries to promote settlement by supplementing the payoffs from unification, they are able to induce negotiated

³⁵In most cases, the military position of the home state is stronger than that of the secessionists, so a further tip in the balance of military power toward the home state is more likely to induce war than a similar change in favor of the secessionists.

settlement without simultaneously increasing the risk of war. This can be done either through promises of benefits to the unrecognized state provided directly by the international community, like aid, or by a commitment from the international community to serve as a third-party guarantor of side payments promised by the ceding side. 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 the international community to potentially overcome problems of indivisibility and commitment and help the parties reach a credible compromise on status³⁶ However, this strategy is only tenable when the only impediment to settlement is the unenforceability of a bargain, and when the international community is credible as an enforcer of that bargain.

In Southern Sudan, the international community invested substantial resources to help negotiate a settlement and to ensure that the Sudanese government both allowed the promised a referendum and respected its results. While the international community acted in Southern Sudan to enforce independence, not autonomy, it has shown itself capable of enforcing difficult concessions by the home state government. This bodes well for the future credibility of the international community as a third-party enforcer. However, the role of the international community in enforcing other past agreements might give secessionists pause. For example, a referendum

³⁶Walter 2002

on independence in Western Sahara, which the UN ruled to be necessary more than thirty years ago, has never come to pass.³⁷ Nonetheless, it is possible for the international community to invest resources to enforce agreements, allowing for negotiated settlements that would otherwise be impossible to reach.

To show that it is possible for the international community 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 international community. Enforcing the terms of an agreement between Russia and Georgia, for example, would be more difficult.

It is also possible for the international community 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 war payoffs and 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 the international community of inducing negotiated reunification also fall.

In this section we have argued that successful intervention by the international community is possible. The key, however, is motivation: the international community is capable of inducing peaceful settlement when it is 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

³⁷For a thorough analysis of the Western Sahara case, see Zunes and Mundy (2010).

equilibrium because the international community is unwilling to invest sufficient resources to outspend the patron and induce its preferred outcome.

Conclusion