

# Short Term Power Asymmetries as Cause of Internal Conflict

Gerald Pech  
American University in Bulgaria\*

## Abstract

In the presence of short-term power asymmetries between conflicting parties stable bargaining solutions may not be available. This is true even if the pay off structure of the conflict game is otherwise stationary. We argue that such power asymmetries are likely in conflicts over secession where the union is in a strong position before the outbreak of conflict. A prediction of the model is that if the present value of combined expected fighting costs is sufficiently small, persistent fighting is an equilibrium of the game. Our analysis may offer a rational explanation for such conflicts as the Kosovo war.

## 1 Introduction

For a rational analysis, any actually observed conflict poses a puzzle to be explained: From an ex post perspective, all parties to the conflict could have been made better off, if the conflict had been avoided. Rationalist explanations of conflict concentrate on two lines of explanation: Asymmetric information and the presence of commitment problems.<sup>1</sup> In what follows we focus on the latter problem.<sup>2</sup>

Because the pay offs from conflict are dominated by some feasible division of the cake – that is the resources over which conflict takes place – a negotiated outcome which is preferred to conflict must exist. It may, however, be that the parties cannot commit to the agreed bargaining outcome and that one party defects from it. One reason why a stable

---

\*Izmirliiev Square 1, 2700 Blagoevgrad, email: gp@geraldpech.net, tel: 00359-73888493.

<sup>1</sup>For an overview see Fearon (1995)

<sup>2</sup>See Ausubel, L., Crampton, P., Deneckere, R. (2000) on conflicts under asymmetric information problems.

negotiated outcome may not exist is the presence of offensive advantages: To be stable, a negotiated solution has to give both parties a pay off which is higher than the pay off they receive when going first. Clearly, these pay offs may well exceed the size of the cake that can be divided if the probability of each party of winning when going first is sufficiently high. This pay off structure may result in preemptive wars (see Fearon, 1995).

Another reason why parties may not be able to agree on a negotiated outcome is a change of relative power over time: If one party is presently strong but expects to be weaker in the future, the only way to benefit from its present level of strength may be to enforce an outcome by defeating the other side. Whilst the other party may be willing to acquiesce at present to avert an attack, it is unable to commit to any offer which perpetuates the advantage of the first party given that it would want to defect from any such offer once the future stage is reached and it has become strong (see Fearon, 1995). Any credible deal would involve the transfer of resources at present but such a transfer may not be feasible unless the size of the cake in any given period is sufficiently large. Powell (2004) shows that this kind of commitment problem underlies a number of known policy inefficiencies, involving public debt policies and violent social change.<sup>3</sup> It is common to those problems that an underlying stochastic process changes relative power positions over time. Even in infinite stochastic games, no subgame perfect strategy will support an agreement if the present value of the expected flow of pies is insufficiently large.

In this paper we introduce a short term power asymmetry into a secession conflict which results in an incentive for the union to deviate in the short run, even if it expects that this results in a conflict which the secessionists will win with a very high probability. The problem is that a negotiated solution can only do as much as avoiding the cost of fighting and, therefore, it is only the joint expected cost of fighting what the secessionists have on offer for the union to compensate them for not attacking. This may well fall short of what the union could get by attacking early on. In that case, a secession-proof bargaining outcome does not exist.

Our approach offers explanations for conflicts such as in Kosovo where the union embarked on a course towards conflict even though the experience of the previous conflicts in former Yugoslavia would have suggested that such conflicts do not result in long term success for the union. At the time of the unionist intervention, the leadership of the Albanian community seemed to have settled for reluctant cohabitation.

---

<sup>3</sup> See, for example Acemoglu/Robinson (2006).

Compared to the prospect of keeping the status quo a policy of intervention has at least the appearance of short-termism. Amazingly though, this possible explanation is typically dismissed in favor of an alternative interpretation which says that Milosevic had expected to get away with his intervention in Kosovo, possibly being enticed by ambiguous signals on the side of the international community in the earlier conflicts, particularly in Bosnia.<sup>4</sup> While it is true that the overall cost of the fighting for the population were high, the perceived costs borne by the rebel army and the Serbian government might have been sufficiently low to prevent a bargaining outcome that would have been attractive for both.

It makes sense to argue that a power asymmetry which favours the union in the short run is reflected in most secession scenarios: Before conflict breaks out, the government of the union is in command of all power structures that come with the organization of the state. For the rebel army, it will normally take time to build up power bases. In sufficiently heterogeneous societies, it will need hostilities to have started before the rebel movement finds widespread support in the population. As for the central government, with some (union-centered) nationalistic sentiment prevailing in the rest of the country, it will often be able to reap some political benefit from enforcing central control in the province even if those political advantage wear off as the conflict becomes entrenched. Once the conflict has started, the union typically cannot expect that winning will settle anything except for the time being. Only a comprehensive settlement will actually put an end to the conflict. The punishment for attacking may involve continued conflict which only ends when secession eventually takes place. Allowing for all that, it is only the present value of combined expected fighting costs compared to the short term gain of the union which determines whether or not a negotiated solution exists.

Because a repeated game can be thought of as a special case of a stochastic game, the case we present is included in the class of games discussed in Powell. Yet there are particular features about the pay off structure which we incorporate into our modeling approach which are descriptive of internal conflicts: Winning the conflict allows the union to ensure the integrity of the state and to impose its preferred solution but only for the current period. It does not, however, exclude further conflict. Whilst secession institutionalizes a new status quo,<sup>5</sup> the continued existence of the union might very well involve further conflict, unless there is a comprehensive settlement. Continued conflict is a pos-

---

<sup>4</sup> Carter (1994) discusses such signals.

<sup>5</sup> This is an idealized vision of secession. Whilst secession clearly defines a new status quo, the empirical evidence as to whether this arrangement prevents further conflict is mixed (see Sambanis, 2000).

sible path in our model. The short term asymmetric power structure supports continued conflict as a subgame perfect equilibrium. Our modeling approach shares this feature with Fearon (2004).

Whilst our game structure shares elements with the previously mentioned approaches, it is also distinguishable from them: Although acting first implies an advantage for the union, we do not have a preemptive war situation because the acting first advantage is not shared by the rebel movement. So this argument alone cannot account for there not being a bargaining solution. Like in the stochastic game models, there is an asymmetric power structure in the first period which, in the end, precipitates conflict. However, the distribution of power over time is stationary in the sense that the union can avail of its first mover advantage in any period. Finally, we identify a simple relationship between temptation to attack and the stream of cakes that can be divided in a bargaining solution.

Section 2 sets up the model and reports the results for a truncated game in section 2.1 and for an infinite horizon model in section 2.2. Section 3 concludes.

## 2 Model and Results

$A$  and  $B$  are two parties to a conflict.  $A$  is a secessionist movement and  $B$  represents the union. Let  $x \in [0, 1]$  be a transfer from  $A$  to  $B$ . The parties have linear utility functions of the form  $u^A = 1 - x$  and  $u^B = x$ . The status quo is given by  $\{x^0, R^0\}$  where  $x^0$  is the transfer in the current period and  $R^0$  is the organizational state of the unionized state, i.e.  $R \in \{union, session\}$ . The status quo prevails in the absence of either a settlement. If there is conflict, the winner imposes its will. Both groups are farsighted and discount future benefits with a factor  $\beta < 1$ . In the case of conflict the groups realize with certainty costs of  $c^A$  and  $c^B$  in the current period.

### 2.1 A truncated game with commitment problems

Suppose there are two periods,  $t = 1$  and  $t = 2$  and that there has been no conflict in  $t = 0$ . In  $t = 1$ , the transfer is  $x_1 = x^0$  unless either the union government defects or unionists and secessionists agree on a different outcome. If the union defects in  $t = 1$  it can realize  $x_1 = 1$  and impose  $x_2$  if it wins or the secessionists acquiesce. If the secessionists attack, they still cannot change the outcome in  $t = 1$ . Upon an attack they may change the outcome in  $t = 2$  if either they win or the unionists acquiesce. If both sides take up the fight in  $t = 2$ ,  $A$  wins with a probability of  $p$  and  $B$  wins with a probability of  $1 - p$ .

Because  $t = 2$  is the last period, only the unionists may change the outcome by seizing the entire income. For simplicity we assume that due to its short term advantages,  $B$  incurs no fighting cost at all and  $A$ 's entire loss is her share of the income.<sup>6</sup> Rationality demands that  $B$  fights and impose  $x_2 = 1$ . In that case, the best the secessionists can do in  $t = 1$  is to defect as well whilst for the unionists their best response is to defect in  $t = 1$ . Therefore, conflict erupts in  $t = 1$ . The unionists have an expected utility of  $1 + (1 - p)\beta - (1 + \beta)c^B$  and the secessionists of  $p\beta - (1 + \beta)c^A$ .

## 2.2 A repeated game where persistent fighting is a possible outcome

In a repeated game, the parties can use punishment strategies which may make not defecting credible. Say conflict breaks out in period  $\tau$ . If the fighting continues for  $t$  periods, the probability that the union is still in existence in  $t$  is  $(1 - p)$ . If  $B$  wins in  $t$ , it imposes  $x = 1$ . If  $A$  wins, it leaves the union.  $B$ 's expected utility from fighting without cessation is

$$\widehat{U}_\tau^B = \frac{(1 - p)\beta}{1 - \beta + p\beta} - \frac{1}{1 - \beta - p\beta}c^B.$$

In  $t$ ,  $A$  consumes its income minus the transfer. Its expected utility from persistent fighting starting in  $\tau$  is

$$\widehat{U}_\tau^A = \frac{\beta}{1 - \beta} - \frac{(1 - p)\beta}{1 - \beta + p\beta} - \frac{1}{1 - \beta - p\beta}c^A.$$

Say, the following actions comprise the stage game in  $\tau$ :  $B$  defects or does not defect,  $A$  announces to fight or not and  $B$  announces to fight or not. It is immediate that the strategies “ $A$  announces to fight” and  $B$  defects and realizes  $x = 1$  in  $\tau + 1$  if  $A$  does not fight yield a Nash-equilibrium. But then persistent conflict is a possible subgame perfect equilibrium of the repeated game.<sup>7</sup>

The income for which  $A$  stays in the union is:

$$1 - x_\tau^A = \frac{1 - \beta}{\beta}\widehat{U}_\tau^A \tag{1}$$

so  $1 - x_\tau^A < 1$ , so  $x_\tau^A > 0$ . Say, there is a negotiated solution  $x'$ . In no period can  $A$  pay more than  $x' = x_\tau^A$ .  $B$  fights if

---

<sup>6</sup>Our results do not change substantially if we assume that both parties suffer conflict costs if  $B$  opens the conflict in  $t$ .

<sup>7</sup> On repeated games see Fudenberg/Tirol (1991).

$$1 - x' > \frac{\beta}{1 - \beta} x' - \widehat{U}_\tau^B. \quad (2)$$

We use the condition for the critical value of  $x' = x_\tau^A$  in (2) to obtain (3). This is the condition under which  $B$  has to fight even when  $A$  makes her best offer, leaving her just indifferent between fighting and acquiescing:

$$\frac{1}{\beta} \widehat{U}_\tau^A + \widehat{U}_\tau^B > \frac{\beta}{1 - \beta}. \quad (3)$$

Economically, it makes sense that the weight of  $\widehat{U}^A$  is greater relative to  $\widehat{U}_\tau^B$ : In  $\tau - 1$ , only  $B$  decides over outcomes whilst  $A$ 's decision only affect outcomes starting in the following period  $\tau$ . Therefore,  $A$ 's trade off involves comparing future transfers and the continuation pay off starting in  $\tau$ . If  $A$ 's payment in period  $t = 1$ ,  $(1 - x)$  would enter her decision of whether to fight or not, the distortion would disappear and efficiency would again prevail. This distortion is, of course, precisely the consequence of the power asymmetry. The following proposition is straightforward:

**Proposition 1** *For  $\beta < 1$  and sufficiently small but positive combined fighting costs, there is no bargaining outcome which satisfies  $A$  and  $B$ .*

**Proof.** Because  $\frac{1}{\beta} \widehat{U}_\tau^A > \widehat{U}_\tau^A$  and  $\widehat{U}_\tau^A + \widehat{U}_\tau^B$  converge to  $\frac{\beta}{1 - \beta}$  for sufficiently small fighting costs, (3) is fulfilled if fighting costs get arbitrarily small. ■

Predetermining  $c_A$ , we can calculate critical values for  $c_B$  and  $p$  which fulfil (3) as an equality. Even with non negligible fighting costs for  $A$ , such as  $c_A = 0.5$  and a reasonable discount factor of  $\beta = 0.9091$  we obtain fighting for a range of parameters, which are located below the read increasing line in figure 1. As  $p$  increases,  $\widehat{U}^A$  increases relative to  $\widehat{U}^B$ . This allows  $c^B$  to increase as well because of  $\widehat{U}^A$ 's greater weight.

As figure 2 shows, even for a relatively large probability of losing the fight of  $p = 0.9$ ,  $B$  may not be able to commit to not fighting for a range of cost combinations (all points below the red line in figure 2):

### 3 Conclusion

Our analysis concentrates on the causes of conflict. It demonstrates how a first mover advantage for the union destroys the possibility of having a negotiated solution if the combined expected discounted costs of fighting for the two parties are sufficiently small. This result is independent

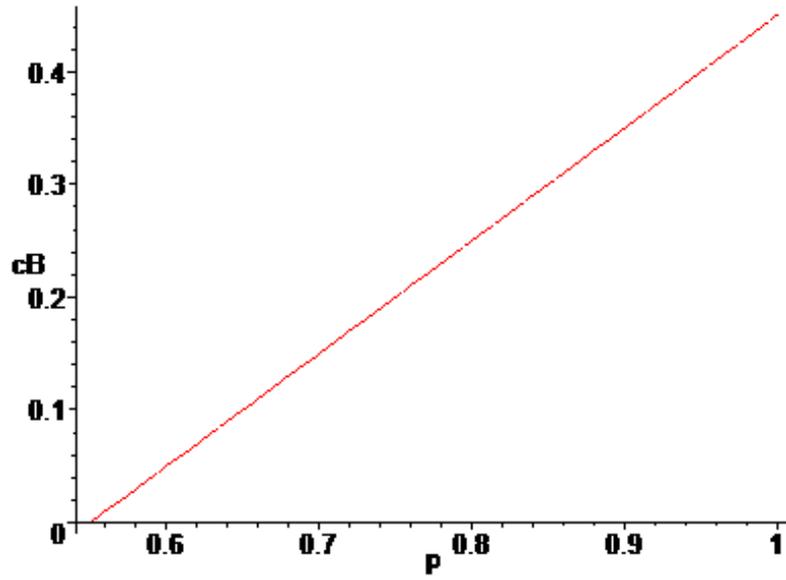


Figure 1: Critical values of  $p$  and  $c^B$  for  $c^A = 0.5$  and  $\beta = 0.9091$ .

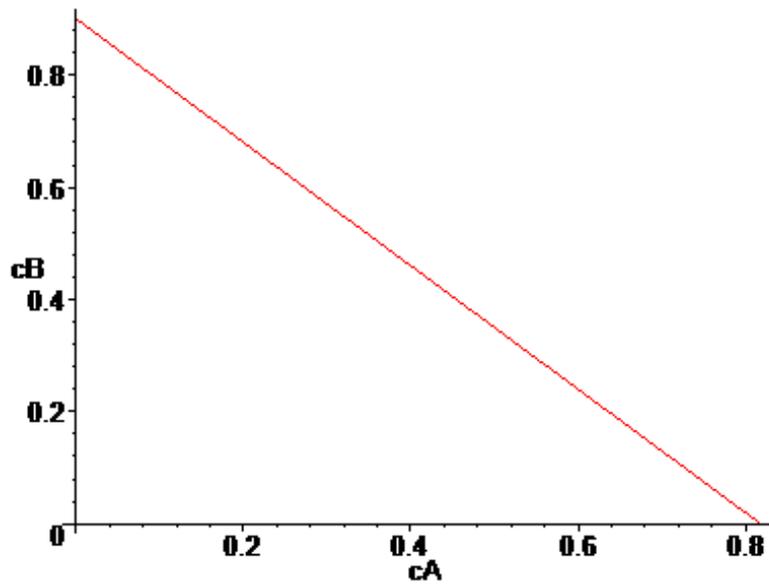


Figure 2: Critical cost combinations for  $p = 0.9$  and  $\beta = 0.9091$ .

of the prospects which the parties have of actually winning the conflict. That is, even if the union suspects that it will ultimately lose the province by opening a conflict, no agreed bargaining outcome exists. The theory therefore gives a rational explanation for the outbreak of secessionist conflicts where the union tries to “solve” the problem by military means rather than by acquiescing moderate elements in the province. This offers a rational explanation for conflicts such as in Kosovo which otherwise have to be explained by policy errors. Basing an explanation of secessionist conflicts on a notion of “winning” seems particularly problematic given that few of those conflicts have a solution other than entrenched strife or eventual secession. Conflict costs, on the other hand, seem to offer a more promising angle given that players may have low discount factors or perceive their fighting costs different from the costs of the population as a whole.

## References

- [1] Acemoglu, D., Robinson, J.A. (2006): *Economic Origins of Dictatorship and Democracy*, Cambridge UK.
- [2] Ausubel, L., Crampton, P., Deneckere, R. (2000): *Bargaining in Incomplete Information*, in: Aumann, R.J., Hart, S. (eds.), *Handbook of Game Theory 3*, Amsterdam: Elsevier.
- [3] Fearon, J.D. (1995): *Rational Explanations for War*, in: *International Organization* 49, S. 379-414.
- [4] Fearon, J.D. (2004): *Why Do Some Civil Wars Last so Much Longer than Others?* in: *Journal of Peace Research* 41, S. 275-302.
- [5] Fearon, J.D., Laitin, D.D. (2003): *Ethnic Insurgency and Civil War*, *American Political Science Review* 97, S. 75-90.
- [6] Fudenberg, D., Tirole, J. (1991): *Game Theory*, Cambridge MA.
- [7] Kaufmann, C. (1998): *When All Else Fails: Ethnic Population Transfers and Partitions in the Twentieth Century*, in: *International Security* 23, S. 120-156.
- [8] Lake, D.A., Rothchild, D. (1996): *Containing Fear. The Origins and Management of Ethnic Conflict*, in: *International Security* 21, S. 41-75.
- [9] Ottaway, M. (2002), *Nation Building*, in: *Foreign Policy* 132, S. 16-24.
- [10] Pech, G. (2006a): *Secession and Value*, in: *Economics Letters* 92, S. 306-310.
- [11] Pech, G. (2007): *Der Status Quo als Maßstab der Konfliktlösung*, appears in: Neumärker, B., *Konfliktökonomie*.
- [12] Powell, R. (2004): *The Inefficient Use of Power: Costly Conflict with Complete Information*, in: *American Political Science Review*

98, S. 231-241.

- [13] Sambanis, N. (2000), Partition as a Solution to Ethnic War. An Empirical Critique of the Theoretical Literature, in: *World Politics* 52, S. 437-483.