Is There A Tradeoff Between Audience Costs and Diplomatic Success in Crisis Bargaining?

Selçuk Özyurt*
Sabancı University

Abstract

It is conventional wisdom in crisis bargaining literature that the ability of generating higher audience costs is an advantage. However, empirical studies show that democratic states raise their sensitivities to audience costs in some crises but try low-key ways in many others. This paper shows that this inconsistency is not against the audience costs theory, and that states may prefer not to use this mechanism in some circumstances. That is, in crises where "benefit-cost" ratio is sufficiently low, having greater sensitivity to audience costs undermines democratic states’ diplomatic success. Thus, following low-key ways is an optimal strategy in these instances.

*Faculty of Arts and Social Sciences, Sabancı University, 34956, Istanbul, Turkey. (e-mail: ozyurt@sabanciuniv.edu)
1. Introduction

A growing literature on crisis bargaining argues that presence of domestic audiences is the major source of diplomatic success. The idea that some leaders on average have an easier time generating audience costs is advanced in the seminal paper of James Fearon (1994) as a plausible working hypothesis that has interesting theoretical and empirical implications.\(^1\) The audience costs may occur if the leader makes public threats or commitments but fail to carry through on them. It helps because leaders that are more sensitive to audience costs are less likely to bluff, and thus the threats they make are more likely to be genuine. As a result, the targets of their challenges should be less likely to resist.

It is conventional wisdom that greater sensitivity to audience costs is an advantage for a leader, and thus making a tough public stand strengthens a country’s position and gives it the upper hand in a crisis. This idea is consistent with the formal theories of audience costs. It actually emerges from Fearon’s original model of crisis bargaining. In that model, each state’s expected payoff increases with the state’s sensitivity to audience costs, i.e. audience costs coefficient, and this is true regardless of the states’ resolve (cost of war), value of the prize or the uncertainty about the opponent’s type. Fearon explicitly states this point in his paper in several occasions and adds (page 585): “... [it] provides a rationale for why, ex-ante, both democratic and authoritarian leaders would want to be able to generate significant audience costs in international contests.” One prominent part of this idea is the conjecture that democracies had an advantage in international bargaining because of their superior ability to generate audience costs.

Despite the sincere efforts that have been put out to support the conjectures derived from the audience costs theory, empirical studies could not help but increase the skeptic views about the validity of this theoretically plausible mechanism. Trachtenberg (2012) and Snyder and Borghard (2011), two recent empirical papers, claim that audience costs mechanism does not play a major role in many historical cases and reject the audience costs arguments altogether.

Not observing this mechanism on work in all cases does not prove that it does not exist. Both Trachtenberg (2012) and Snyder and Borghard (2011) indeed end up saying that leaders can sometimes make use of this mechanism. Therefore, what we need to understand is when this mechanism benefits the democratic states such that they choose to use it, and when it does not. On this account, an appealing argument comes from

Schultz (2012): “... the signaling value of audience costs stems not only from the hand-tying associated with a public commitment but also from the fact that, under some conditions, leaders would be unwilling to undertake such an act. If the value of the good in dispute is low or if war is not expected to go well, making a public threat creates the risk of an undesirable choice in the event that the target refuses to make concessions: the leader will either have to back down from the threat or fight a war with poor prospects for a good of little value.”

Although Kenneth Schultz’s claim is very appealing, Fearon’s original model (Fearon 1994) does not support it. In fact, there is no formal theory that supports Schultz’s arguments. In this paper, I provide a formal theory supporting the Schultz’s above point. The model implies that states can get better off by not tying their hands through the use of the audience costs mechanism if the value of the good in dispute is low or if war is expected to be costly.

For this purpose I use the crisis bargaining game of Fearon (1994) with no structural change, except the source of uncertainty. Fearon interprets states’ costs of war as their level of resolve, and thus model uncertainty about states’ resolution by assuming that each state’s cost of war is a random variable to its opponent. I am not in the position of rejecting this plausible working hypothesis. However, I show that a different interpretation of “resolve” could lead to technically easier and unique equilibrium strategies, which provide a theoretical support to Schultz’s appealing point. The analyses show that there is no need for a new setup to generate the necessary dynamics; the platform developed by Fearon (1994) is indeed rich enough. However, the source of informational uncertainty is crucial as it allows states to build false reputation on resolve, which is the missing ingredient in Fearon’s original model.

Why do states choose low-key ways to resolve a conflict?

There are countless historical examples where a state prefers to resolve one conflict by choosing a low-key way and another conflict by a very aggressive way (see for example Schultz 2001, Trachtenberg 2012, and Snyder and Borghard 2011.) For example, in 1990, prior to the Gulf War, President Bush made explicit foreign policy statements regarding Iraq’s invasion of Kuwait and threatened Saddam Hussein. By comparison, U.S. policy toward Bosnia was less direct. Both presidents Bush and Clinton adopted vague, ambiguous policies toward the Bosnian crisis, and U.S. intervention was limited (Smith 1998). Likewise, the United Kingdom made very mild threats to Iran the Abadan Crisis of 1951, but issued serious warnings to Argentina during Falkland Island crisis in 1982.
A more recent example is the international community’s reactions to the civil wars in Libya and Syria. French President Sarkozy, British Prime Minister David Cameron and most of the NATO members were very aggressive to resolve the social upholding in Libya in 2011. At the very early stages of the revolution, French President Nicolas Sarkozy pushed the EU to pass sanctions and explicitly threatened Gaddafi. UN Security Council approved a no-fly zone approximately two months following the start of serious protest in Libya. Although the brutality in Syria exceeds what was occurring in Libya, the international community’s response to the violence in Syria has been comparatively limited. There has been diplomatic censure with envoys withdrawn and Syrian ambassadors expelled. The United Nations condemned Syria for a massacre in the town of Houla with more than 100 casualties but the United Nations took no major steps to stop further mass killings. Just after Syria’s shooting down of a Turkish air force jet on 22 June 2012, Uri Rosenthal, Dutch foreign minister, said: “military intervention in Syria is out of the question.” The point is that the international community has shied away from sending explicit threats to Syrian President Bashar Assad comparable to the ones sent to Gaddafi. These observations generate some important questions: What makes NATO members hesitant in taking actions that are likely to increase their sensitivity to audience costs? Is lack of response in Syria a rational strategy or just a signal of ignorance of (or incompetence to recognize) the role of audience costs in diplomatic success?

Many commentators discuss that compared to Libya, the benefits of a successful resolution to the Syrian crisis is less significant for the international community, and that the risks involved in a possible military intervention are more substantial. U.S. Secretary of State Hillary Clinton explicitly underlined some of the risks: “Syria has a more diverse society with greater ethnic divisions, no unified opposition, stronger air defense and a much more capable military than Libya’s.” She added: “Above all, there is no international support because of Russian and Chinese opposition at the U.N. Security Council, where they have twice vetoed resolutions on Syria.”

Executives of the states should choose their wordings, messages or threats in an international crisis after taking in account the possible reactions of both domestic and international audiences. In the case of Syria, for example, Russia, China and Iran unambiguously supports Assad regime, and this support clearly increases the risks involved in any military intervention. Existence of strong international audiences may force demo-

---

3 Syria tells Nato territory is sacrosanct, By Abigail Fielding-Smith, Daniel Dombey, and Roula Khalaf, Financial Times, 25 June 2012.
4 Clinton argues against Syria military intervention, Arshad Mohammed, Reuters, 31 May 2012.
5 Russia could lose last Arab ally as Assad regime teeters, Henry Meyer, 19 July 2012.
ocratic states to make some sort of “benefit-cost” analysis before sending any public threat to their adversaries. However, it seems that the current audience costs literature ignores these crucial dynamics of international crises. Therefore, answering the following questions empirically and theoretically has the potential to make important contributions to the literature. Does sensitivity to audience costs reduce the credibility of democratic states’ bluffs, and undermine their success in international disputes? If so, when and why?

In what follows, a resolute leader is stubborn and committed not to back down from his demand(s). This does not necessarily imply that a resolute leader is irrational. Rational explanations for resoluteness and further discussions about the model are provided in the following section. Thus, in the spirit of Harsanyi (1967), I assume that each state has two types; “resolute” or “flexible” (not resolute). The flexible type has no commitment to his demand, and is willing to back down and mimic the resolute type (i.e. bluff) if optimal. This interpretation of resolve is consistent with Schelling (1966). He suggests that states may be resolute or not, and that they wish to acquire reputations for resolve in order to increase their credibility in international conflicts.

The main message of the analyses is that there exists a significant trade-off between sensitivity to audience costs and the ability of being persuasive (or credible) in a conflict. In this regard, the “benefit-cost ratio of the crisis” plays a crucial role. As the states’ type is not certain, there are two commitment devices that flexible players can utilize to make their bluff credible. The first one is the cost of war and the ability of generating audience costs. The second one is the opportunity of mimicking the resolute type and building false reputation on resolve. If the benefit-cost ratio of the crisis is high enough —which is the case when the value of peaceful resolution is high, or the cost of military intervention is low—, then the former commitment device is more effective. In that case, the threat of costly war gives the advantage to the state that is more sensitive to audience costs (call it democratic state). However, if the benefit-cost ratio of the crisis is sufficiently low, then it is too risky to use attacking as a credible threat. Thus, the second commitment device —building false reputation on resolve by mimicking the resolute type— becomes more effective. In this case, the second state that is less sensitive to audience costs (call it autocratic state) has the advantage.

The threat of war favors the democratic state because this state can generate greater audience costs by assumption. On the other hand, the ability of building false reputation benefits the autocratic state. This is true because the autocratic state builds its reputation faster. That is, in equilibrium, the flexible leader of the autocratic state is less likely to dispute and more likely to back down if the crisis escalates. This fact is indeed
consistent with the conclusions of Fearon (1994). An important implication of this result is that if the leader of the autocratic state challenges his opponent, then at any given moment of the escalation, he is more likely to convince his opponent that escalating the conflict further is pointless. Therefore, if states expect sufficiently long escalation, which is the case when the cost of war is high enough, then the autocratic state will have the advantage. Thus, higher sensitivity to audience costs undermines democratic state’s success when war is sufficiently costly (assuming for simplicity that both states’ valuation for the prize is the same).

When the states’ valuations for the prizes are different, it is not only the cost of war but also autocratic state’s valuation for the prize that makes a possible escalation lengthier. As a result, an autocratic state that values the prize more than its democratic rival may have an advantage when the cost of war is significantly high for all parties. In that case, a democratic state would be better off by having low sensitivity to audience costs. Thus, it would indeed be consistent with rational behavior for a leader to send vague and noncommittal messages, thus keeping its sensitivity to audience costs as low as possible.

2. The Model

Two states (or leaders), 1 and 2, are in dispute over a prize (e.g. territory, valuable resources, or austerity measures) worth \( v_i > 0 \) for each state \( i \in \{1, 2\} \). The crisis occurs in continuous time. At all times \( t \geq 0 \) before the crisis ends, each state can choose to escalate, back down (yield), or attack. The crisis ends when one or both states attack or yield.

Payoffs are given as follows. If either state attacks before the other concedes, the dispute ends with war and each state \( i \) receives the (net expected) payoff of \( -w_i < 0 \). It indicates all the risks and gains in a military intervention. That is, \(-w_i\) is the expected benefit net of losses due to attacking. The inequality \(-w_i < 0\) indicates that not being involved in the dispute is more desirable than attacking. If state \( i \) concedes at time \( t \) before the other has yielded or attacked, then its opponent \( j \) receives the prize, while state \( i \) suffers audience costs equal to \( c_i(t) \), a continuous and strictly increasing function of the amount of escalation with \( c_i(0) = 0 \). Only the state that backs down after some escalation experiences audience costs. In case of simultaneous concessions, the prize is divided equally.\(^6\) For analytical simplicity, I consider the linear case \( c_i(t) = tc_i \), where the audience costs coefficient \( c_i \geq 0 \) indicates state \( i \)'s sensitivity to audience costs (or how

\(^6\)If one state chooses to attack at time \( t \) and the other chooses to yield or attack at the same time, both states receive their war payoffs \(-w_i\). However, if both yield at time \( t \), then state \( i \) receives \( \frac{v_i}{2} - c_i(t) \).
rapidly escalation creates audience costs for state $i$). The values of all these parameters are common knowledge.

Finally, I assume that there is some uncertainty about states’ resolve. In the spirit of Harsanyi (1967), each state has two types; “resolute” or “flexible.” The prior probability that state $i$ is resolute is denoted by $z_i \in (0, 1)$. A resolute type of state $i$ implements a simple strategy: It never yields to its opponent. The flexible player, on the other hand, picks a strategy, given his beliefs, to maximize his expected payoff in the crisis game. Each state knows its own type but does not know the opponent’s true type. Call this Crisis Game, where all parameters are common knowledge, $G$.

In the context of international crises, audience costs can be interpreted as the opportunity cost of backing down. That is, it is the total value of the opportunities that are missed or not used effectively by backing down from the hard line policy. There has been much discussion in the crisis bargaining literature on the micro-foundations of audience costs. For instance, a leader that backs down from a public commitment may suffer audience costs because the leader is less likely to be reelected (Smith 1998), violated the national honor (Fearon 1994), or lost reputation and the credibility of his rhetoric (Sartori 2002, Guisinger and Smith 2002).

This interpretation provides an additional intuition for Fearon’s critical assumption that audience costs increase with time. Public statements or messages that the leaders send in crises are expected to serve an agenda states form. This agenda may include items that are not directly related to the prize, such as increasing audiences’ support and the likelihood of winning elections, building reputation for future negotiations, discouraging potential rivals and preventing future crises. Therefore, a leader’s expected value of following a hard line policy may increase with time because as time passes the leader is more likely to convince domestic and international audiences about his resolve, and audiences persuaded would increase the likelihood of successful execution of his agenda. As a result, if the expected benefit of following the hard line policy increases in time, then the opportunity cost of backing down (that is, audience costs) is expected to increase with time as well.

---

Finally, if states escalate the conflict forever, both get some payoff strictly less than their war payoffs. These particular assumptions are not crucial because in equilibrium, simultaneous concessions or attacks, or escalation with infinite horizon occurs with probability 0.

7I also assume that the resolute types understand the equilibrium and start the war immediately once they are convinced that their opponent is also a resolute type. Although it is dispensable, this assumption ensures that the crisis game ends (either with concession or war) when states are convinced that the adversary is resolute.
Resolute types never back down and are willing to pay the price of war in order to obtain the prize. Resolute types closely resemble the obstinate types defined first by Myerson (1991) (r-insisting types) and studied further by Abreu and Gul (2000), and Kambe (1999). In a bilateral negotiation, obstinate types always demand a particular share and accept an offer if and only if it weakly exceeds that share. Abreu and Sethi (2003) supports the existence of obstinate types from an evolutionary perspective and show that if players incur a cost of rationality, even if it is very small, the absence of such types is not compatible with evolutionary stability in a bargaining environment.

The resolute types are defined by the strategies they pursue, and so they are *strategy types*. This approach is first used in game theory by Kreps and Wilson (1982) and Milgrom and Roberts (1982) where commitments are modeled as behavioral types that exist in the society so that rational players can mimic if it is optimal to do so. Later, this technique is used extensively in the reputation and imperfect information literature.

More traditionally, types have the same generic utility functions, but have different values for some of the key parameters. In this regard, we can modify the setup of this paper, model the resolute players as rational actors with payoffs (objectives) different than the flexible types, and prove that the strategy types endogenously emerge in equilibrium. However, this attempt would distract the main focus of this paper. Besides, the growing literature on international conflicts provides valid explanations for why rational actors follow this seemingly suboptimal strategy of resolute types in equilibrium.

For example, Putnam (1988), Iida (1993) and Mo (1994/95) investigate international disputes as a part of multilayered games, and claim that central decision-makers (the state) must be concerned simultaneously with pressures of domestic and international actors. Putnam (1988) argues that at the national level, domestic groups (such as social classes, both economic and non-economic interest groups, public opinion and elections, institutional arrangements, executive officials, political parties and legislators) pressure the state to adopt favorable policies. Therefore, a state that is involved in a dispute has to seek optimal policies that maximize its own ability to satisfy domestic pressure and minimize the unfavorable consequences of foreign developments. The complexity of these two-level negotiations could lead to policies that are suboptimal on one level but optimal for the same player when the entire strategic environment is concerned.

Iida (1993) claims that a rational agent (the leader) who is engaged in a dispute with another state may be resolute because of his firm belief that backing down, and thus giving up for the prize, is simply a decision that will not be ratified by domestic actors. On the other hand, one may interpret resolute type as a “competent” type of Smith
(1998). In his paper, Alastair Smith shows that sending a public threat and delivering it if the conflict escalates is consistent with equilibrium behavior. Therefore, the rationale behind this seemingly suboptimal behavior is that competent leaders want to signal their competence and increase their chance of re-electing.

French president Nicolas Sarkozy’s commitment to the liberation of Libya from Muammar Gaddafi can be viewed as an example to Smith’s point. President Sarkozy took an enthusiastically active and leading role to stimulate NATO’s intervention in Libya. Sarkozy told French ambassadors on August 31, 2011: “the Europeans demonstrated for the first time that they were capable of intervening decisively, with their allies, in a conflict on their doorstep. For the first time since 1949, NATO was placed at the service of a coalition led by two determined European nations.”

Many believed that President Sarkozy hoped Libya could boost France’s reputation—as well as his own—to save his re-election battle for 2012: “In March 2011, over 80% of French people feared France’s role in global politics was weakening. Sarkozy was very keen on changing public opinion on this issue. He reportedly told French generals that he wanted a victory in Libya before 14 July, hoping to capitalize on a mood of joy for Bastille day.”

Likewise, President Sarkozy’s resolve to pass a bill just before the presidential elections that would ban the Armenian genocide denial is yet another example to Smith’s point. Turkey has accused Sarkozy of pandering to the estimated half a million ethnic Armenians in France to win votes in the presidential vote in April and May 2012.

The difference between the current formalization and the related literature hinges on the type of uncertainty, and so the prior probabilities $z_1$ and $z_2$ qualitatively play crucial role. The (common) prior $z_i$ is the belief that state $j$ holds about state $i$’s actual type of being resolute. In a crisis, although parties may seem very resolute, it is nearly impossible to distinguish whether they are bluffing or not. Schelling (1960) and Putnam (1988) conjectured that a leader (or an executive) might intentionally tie his hands domestically to gain a leverage in international negotiation. However, much case study evidence suggests that this tactic may sometimes fail (Evans, Jacobson and Putnum 1993, Schoppa 1993).

---

8 Sarkozy’s pro-NATO policy is much more than symbolism, Bloomberg, 5 September 2011.
10 Supporters of the bill allege that 1.5 million Armenians were deliberately slaughtered by Ottoman authorities during the world war I. However, Turkey refuses the claims and insists that there were much less than 1.5 million Armenians living in the region. Turkey also asserts that many Turks died during fighting with Armenian rebel groups in 1915-16, and many of the casualties were victims of starvation or exposure, and so not targeted killings. The bill was targeting those denying or “minimizing” the genocide and penalizing them with a €45,000 fine and a year in jail. Members of French parliament approved the bill in December 2011 that sparked a major diplomatic row between France and Turkey. Two months later, the law passed by members of the Assemblée Nationale, the lower house.
That is, leaders cannot always credibly establish constraints because leaders who can tie their hands can just as easily untie them (Elster 1979). Therefore, the initial priors $z_1$ and $z_2$ shall be interpreted as the leaders’ uncertainty about their opponents’ actual situations whether their hands are tied or not.

In order to underline the difficulty of evaluating or estimating the other party’s true intention, we may consider a very recent case. As a part of the Eurozone debt crisis, anti-austerity parties in Greece want the terms of their bailout deal to be renegotiated with the European Union and the International Monetary Fund. German Chancellor Angela Merkel, on the other hand, seems very strict about the terms of the jointly signed agreements. Although there are substantial reasons to believe that Germany will not retreat, many experts accept that Germany will eventually back down. Along with Greece, many Euro zone countries such as Ireland, Portugal, Spain and Italy are in trouble in paying their immense public depths. The Germans see strict austerity measures as essential discipline for the survival of the single currency. Despite increasing questions over Berlin’s hard line, Germany’s finance minister Wolfgang Schäuble rejected any idea of watering down the diet of austerity and structural reforms that are being used to combat the Eurozone debt crisis. On the other hand, many economists believe that without economic growth, strict austerity measures would have no sustainable impact. Lately, search for growth strategies are spoken more often, and it has been expressed louder with the leadership of new French President François Hollande.

Germany is one of the rare countries in the Euro zone showing strong growth in the years 2011 and 2012. Germany, Europe’s current paymaster, is resisting backing down from its hard line policy because Chancellor Merkel does not want to overburden German taxpayers for ill-considered public and private spending of the weak Euro zone countries. Moreover, Germany does not want to soften its standing against Greece because of the fear that what bailout concessions may be followed by Ireland, Portugal and Spain in particular. Spain, the fifth largest economy in Europe, has currently triggered bailout requests for its banks for the amount of 100 billion euros, and there is little, if any, hope that this amount will solve the problems of the Spanish banks. On the other hand, Greece believes that Germany will, at worst, partially give up on their rigid stance because they believe that the EU and Germany will not allow them to exit Euro with all its incalculable consequences. Therefore, actions that Chancellor Merkel and Greeks will take in the future may reveal their actual type. Currently, all that is certain is that resoluteness is just a possibility.
Strategies

Strategies of resolute players are simple: never back down and attack when convinced that the opponent is also resolute. On the other hand, flexible types have the opportunity of credibly bluffing, manipulating the adversaries’ belief and thus building false reputation as a leverage to increase their bargaining power. Therefore, what motivates and interests the subsequent analyses is the optimal (equilibrium) strategies of the flexible types.

Strategy of the flexible type of state \( i, \sigma_i = (F_i, Q_i), \) has two parts. \( F_i(t) : \mathbb{R}_+ \cup \{\infty\} \rightarrow [0,1] \) denoting the probability of state \( i \) yielding to state \( j \) (or backing down) by time \( t \) inclusive, and \( Q_i(t) : \mathbb{R}_+ \cup \{\infty\} \rightarrow [0,1] \) denotes the probability of state \( i \) attacking by time \( t \) (inclusive). It follows that \( F_i(t) + Q_i(t) \leq 1 \) for all \( t \geq 0 \) and \( \lim_{t \to \infty} F_i(t) \leq 1 - z_i \) for all \( i \). Note that, the distribution functions \((F_i, Q_i)\) are state \( j \)'s belief about state \( i \)'s play during the escalation. State \( j \) believes that \( i \) is flexible with probability \( 1 - z_i \). Since resolute types never back down, we must have \( \lim_{t \to \infty} F_i(t) \leq 1 - z_i \).

Given \( F_j \) and \( Q_j \), flexible state \( i \)'s expected payoff of conceding at time \( t \) is

\[
U_i(t, F_j, Q_j) := \int_0^t v_i \, dF_j(y) - \int_0^t w_i \, dQ_j(y) + [1 - F_j(t) - Q_j(t)] [-tc_i]
+ \left( \frac{v_i}{2} - tc_i \right) \left[ F_j(t) - F_j(t^-) \right] - w_i \left[ Q_j(t) - Q_j(t^-) \right]
\]

(1)

with \( F_j(t^-) = \lim_{y \uparrow t} F_j(y) \) and \( Q_j(t^-) = \lim_{y \uparrow t} Q_j(y) \).

3. Results for the Simpler Version of the Model

In this section, I analyze two special cases. These particular cases both convey the flavor of the analysis and are furthermore the basic building blocks for the unrestricted version of the model examined subsequently. For the rest of this section, I will assume that \( c_1 > c_2 \), and that both states’ cost of war and the value of the prize are equal, i.e. \( v_i = v \) and \( w_i = w \) for \( i = 1, 2 \). I also assume that states’ initial reputations (of being the resolute type) are the same. That is, \( z_i = z \) for each \( i \).

For the first special case (complete information), suppose that both states are known to be flexible, i.e., \( z = 0 \). In this case, state \( i \) does not escalate the dispute beyond the time \( t_i \) where its audience costs is equal to its cost of war, i.e. \( t_ic_i = w \). Since state 1 can generate higher audience costs (as \( c_1 > c_2 \)), it would be the first player to attack (as \( t_1 < t_2 \)). However, state 2 can anticipate that delaying the concession has no benefit, and thus in equilibrium, concedes at time zero. Hence, in equilibrium, the conflict resolves before it escalates, and payoffs of state 1 and 2 are \( v \) and 0, respectively.

\[1^2\]Note that \( U_i(t, F_j, Q_j) \) is evaluated at time zero.
Therefore, if there is no uncertainty regarding the players’ resoluteness, then the party that is more sensitive to audience costs always has the advantage. That is, regardless of the value of the prize or the cost of war, state 1 will get the prize without any delay. This result directly follows from Fearon (1994).

The second case is much more interesting. Now, I resume the case where \( z \) is positive, that is \( z \in (0, 1) \). In this case, each (flexible) state has the option of building reputation on its resolve by bluffing and escalating the crisis. The (sequential) equilibrium of the crisis game is unique, and the formalization provides essential predictions. A remarkable implication of the equilibrium is that the ability of generating higher audience costs is not always an advantage for diplomatic success.

In equilibrium, each flexible state chooses the timing of backing down randomly with a decreasing hazard rate. That is, flexible states are more likely to back down at the early stages of the crisis, and less likely to back down as it escalates further. Hazard rate is a concept borrowed from survival analysis of statistics, which deals with death in biological organisms and failure in mechanical systems. Survival analysis is also called duration analysis or duration modeling in economics or sociology. The ultimate purpose of these analyses is to answer questions such as the following: What is the fraction of a population that will survive past a given period? Of those that survive, at what rate will they die or fail? In the context of the current construct, state \( i \)’s hazard rate \( \lambda_i(t) \) measures its (instantaneous) rate of backing down at any time \( t \) conditional on the crisis escalates until time \( t \). More specifically, given state \( i \)’s equilibrium strategy, \( F_i(t) = Pr(y \leq t) \), indicating the probability that \( i \) backs down before time \( t \), we have

\[
\lambda_i(t) = \lim_{\Delta \to 0} \left\{ \frac{Pr(t \leq y < t + \Delta | y \geq t)}{\Delta} \right\} = \frac{dF_i(t)/dt}{1 - F_i(t)}
\]

Moreover, in equilibrium, escalation of the conflict stops at some finite (deterministic) time \( t^* \), a function of primitives, with certainty and no state attacks before this time. State 2’s hazard rate is higher simply because it is less sensitive to audience costs. Since state 1 generates higher audience costs, it is indifferent between conceding (or backing down) and slightly delaying concession if its gain from delay is sufficiently higher than that of state 2. State 1’s benefit from delay is determined by the likelihood of the second state’s concession during the period of delay, implying that in equilibrium, state 2 must back down at a rate higher than that of state 1. As a result, state 2 can build its reputation much faster. That is, it is easier for state 2 to convince the adversary about its resolve.

As the states’ resolve is not certain, there are two commitment devices that the flexible players can utilize to make their bluff credible. The first one is the cost of war and the
ability of generating audience costs, and the second one is the opportunity of mimicking the resolute type. If the “benefit-cost ratio of the crisis,” that is $\frac{v}{w}$, is high enough (more formally $z \leq \frac{v}{v+w}$), then the former commitment device is more effective. As we see in the compete information case, the threat of war gives the advantage to state 1 because 1 can generate higher audience costs. However, if the benefit-cost ratio of the crisis is sufficiently low, so that $z > \frac{v}{v+w}$, then it is too risky to use military intervention as a threat. Thus, the second commitment device becomes more effective. In this case, state 2 has the full advantage because 2 can build its reputation faster.

**Proposition 1.** The unique sequential equilibrium of the crisis game $G$ is characterized by the following conditions: For $i = 1, 2$,

1. $F_i(t) = 1 - \frac{va_i}{v+tc_j}$ for all $t \leq t^*$,
2. $a_i \in [0, 1]$ and $[1-a_i][1-a_2] = 0$,
3. $t^*$ solves $F_2(t^*) = 1 - z$ and $F_1(t^*) \leq 1 - z$, and
4. $Q_i(t) = 0$ for all $t < t^*$ and $Q_i(t) = 1 - F_i(t^*)$ for all $t \geq t^*$.

I defer the proof of this result to Appendix. Abreu and Gul (2000) analyze a continuous-time war of attrition game (with commitment types), which is a related and somewhat simpler version of the crisis game $G$, and characterize the unique sequential equilibrium by the following three properties. (i) at all times $t > 0$ player $i$ concedes at a constant hazard rate that makes the opponent indifferent between escalating and backing down, (ii) at most one player backs down with a positive probability at time zero, and (iii) there exists a finite time $t^*$ at which each player’s posterior probability of being the resolute type reaches 1 simultaneously and escalation stops.

The first property in our case is replaced with a decreasing hazard rate $\lambda_i(t) = \frac{c_j}{v+tc_j}$. Since the audience costs (of state $j$) increases with time, the instantaneous concession rate (of state $i$) must be bigger at earlier times of the escalation to make the opponent indifferent between yielding and escalating at all times. Note that the hazard rate depends upon only two parameters: the value of the prize and the opponent’s audience costs coefficient. Therefore, **higher values for the prize will make**
states’ concession rates much lower, and this prediction is consistent with intuition. Moreover, a state’s concession rate increases with the opponent’s sensitivity to audience costs. This implication is consistent with the idea that audience costs help states to signal their true preferences more credibly (for example, Fearon 1994 and Schultz 1999). Relative to their nondemocratic counterparts, democratic states (that are more sensitive to audience costs) are less likely to engage in bluffing behavior, and so the threats they choose to make are less likely to be imitative. As a result, the targets of their challenges should be less likely to resist.

Property (ii) —only one state can back down at time zero— implies the second condition in Proposition 1. This situation is intuitive because if \( i \) is planning to back down with some positive probability at time zero, then \( j \) can enjoy greater expected surplus by backing down right after time zero. Thus, in equilibrium, two states shall never back down with positive probabilities at time zero. If a state backs down at time zero, then the crisis game ends without any escalation. I call this peaceful initial resolution.

The condition (iii) is true in our case when the benefit-cost ratio of the crisis is small enough. In this case we have \( F_i(t^*) = 1 - z \) for \( i = 1, 2 \). However, for sufficiently small values of \( w \) (relative to \( v \)), flexible state 1 is indifferent between attacking and backing down at the time \( t^* \). Since equilibrium strategies, \( F_i \)'s, must be continuous over \((0, t^*)\) (implied by the properties (i) and (ii)), flexible state 1 will attack at time \( t^* \) even 1 is convinced that 2 is the resolute type. Therefore, in equilibrium, state 1’s posterior probability of being the resolute type does not reach 1 at time \( t^* \), that is \( F_1(t^*) < 1 - z \). As a result, in the equilibrium of the crisis game, \( t^* \) must solve \( F_i(t^*) = 1 - z \) for at least one of the states \( i \in \{1, 2\} \), as it is stated in the third condition of Proposition 1.

The third condition pins down the identity of the player who needs to back down at time zero as well as the probability of such a concession, and hence establishes the uniqueness of the equilibrium. Finally, the fourth condition implies that war is strictly inferior to backing down at all times \( t < t^* \).

The following three lemma solve the equilibrium values of \( t^* \) as a function of the primitives, and find the equilibrium strategies \( F_1(t) \) and \( F_2(t) \).

**Lemma 1.** The crisis game \( G \) ends by time \( t^* = \min\{t_1^*, t_2^*\} \) where for \( i, j \in \{1, 2\} \) and \( i \neq j \), \( t_i^* = \min\{w_{\tau_j}, \frac{v(1-z)}{z_c}\} \).

**Proof.** flexible leader of state \( i \) will not escalate the dispute once it is convinced that state \( j \) is the resolute type or backing down is equally costly with war for state \( j \). Given that \( j \) does not back down with positive probability at time zero, state \( i \) will be convinced that \( j \) is resolute by time \( \tau_j \) solving \( F_j(\tau_j) = 1 - \frac{v}{v + \tau_j c_i} = 1 - z \), implying \( \tau_j = \frac{v(1-z)}{z_c} \). War is equally costly with backing down for state \( j \) at time \( t \) satisfying \( t_c = w \). Therefore, \( i \)
will not escalate the crisis beyond time $t_j^* = \min\{\frac{w}{c_j}, \frac{v(1-z)}{z c_j}\}$. Similar arguments hold for state $j$.

When, for example $t_1^* < t_2^*$ and the conflict escalates until time $t_1^*$, flexible leader of state 2 ends the game at this time for sure. The reason for this is simple. First, recall that the resolute state 1 attacks once it is convinced that 2 is also resolute, implying that resolute 1 attacks no later than time $\frac{v(1-z)}{z c_i}$ which is greater than $t_1^*$. Thus, if $t_1^* = \frac{w}{c_i}$, then flexible leader of state 1 never backs down after this point, and so the optimal strategy for the flexible leader of state 2 is to back down immediately to escape from a possible war. If $t_1^* = \frac{v(1-z)}{z c_2}$, then 2 will be convinced that 1 is resolute at this time, and so 1 will never back down. Therefore, the best strategy for the flexible leader of state 2, once again, is to back down immediately and avoid war. As a result, the minimum of the arguments $t_1^*$ and $t_2^*$ determines the end of the escalation. Since players randomize the timing of backing down, escalation will continue with some positive probability until time $t^*$ and stop at this time with certainty.

Lemma 2. In equilibrium, if $t_i^* > t_j^*$ where $i, j \in \{1, 2\}$ and $i \neq j$, then we have

$$F_j(t) = 1 - \frac{v}{v + tc_i} \quad \text{and} \quad F_i(t) = 1 - \frac{v a_i}{v + tc_j}$$

where

$$a_i = \begin{cases} z + \frac{c_j z (1-z)}{c_i z}, & \text{if } \frac{w}{c_j} > \frac{v(1-z)}{z c_i} \\ z + \frac{zw}{v}, & \text{otherwise.} \end{cases}$$

Proof. Since $t_i^* > t_j^*$, we have $F_j(0) = 0$ implying $F_j(t) = 1 - \frac{v}{v + tc_i}$. Moreover, since $F_i(t_j^*) = 1 - \frac{v a_i}{v + tc_j} = 1 - z$ we have $a_i = z + \frac{c_j z^2}{v}$ where $t_j^* = \min\{\frac{w}{c_j}, \frac{v(1-z)}{z c_j}\}$. \hfill $\Box$

Lemma 3. In equilibrium, if $t_1^* = t_2^*$, then we have $F_i(t) = 1 - \frac{v}{v + tc_j}$ for $i, j \in \{1, 2\}$ and $j \neq i$.

Proof. Since $t_1^* = t_2^*$, we have $F_1(0) = F_2(0) = 0$ implying $F_i(t) = 1 - \frac{v}{v + tc_j}$ for $i = 1, 2$. \hfill $\Box$

It is important to note few observations implied by the equilibrium strategies. First, the crisis game never escalates beyond time $t^*$, which is the minimum of $t_1^*$ and $t_2^*$ where $t_i^* = \min\{\frac{w}{c_i}, \frac{v(1-z)}{z c_j}\}$. The first ratio $\frac{w}{c_i}$ is the time that state $i$ is indifferent between initiating war and backing down. The second ratio denotes the time that state $i$’s reputation would reach one if $i$ does not back down at time zero (i.e. $F_i(0) = 0$). Therefore, if $t_1^* < t_2^*$, then state 1 has an advantage. The reason for this is simple. Whether 1 is resolute or not, there is one thing 2 can be certain; if the game does not end before time $t_1^*$, state 1 will initiate an attack at that time. In equilibrium, flexible state 2 anticipates
this and finishes the escalation before time $t_1^*$. However, this implies that the second state’s reputation reaches one in equilibrium at the time $t_1^*$.

In more technical terms, $F_2(.)$ will reach $1 - z$ at time $t_1^*$. Since the equilibrium strategies must be continuous, state 2’s reputation reaches one at time $t_1^*$ only if 2 sets $F_2(0) > 0$. Thus, in equilibrium, state 2 must back down at time zero with some positive probability. As I will show next, the state who backs down at time zero with some positive probability will get expected surplus of zero, whereas the opponent will achieve positive surplus.

Second, the end of the crisis game depends on the value of $t^*$. Assuming that $t_1^* < t_2^*$, if $t_1^* = \frac{w}{c_1}$ and the game does not end before this time, then the flexible type of state 1 will attack at time $t_1^*$. That is, an equilibrium prediction of the model is that even the flexible actors may initiate war. However, if $t_1^* = \frac{v(1-z)}{zc_2}$, then the flexible types will never be involved in war.

In equilibrium, state $i$ is called strong if $t_i^* < t_j^*$ and weak otherwise. Equivalently, state $i$ is strong if and only if state $j$ backs down with positive probability at time zero, i.e $F_j(0) > 0$, and according to Proposition 1, at most one state can be strong in equilibrium. Since each state is indifferent between backing down and escalating until the time $t^*$, the equilibrium expected payoff of flexible state $i$ is the same at all times $t \in [0, t^*]$, and is equal to what state $i$ can achieve at time zero. Hence, state $i$’s equilibrium payoff in the crisis game (evaluated at time zero) is given by the equation (1) as

$$U_i = vF_j(0) + [-c_i(0)](1 - F_j(0)) = vF_j(0) \tag{2}$$

Note that, equilibrium payoff of the weak state is always 0, whereas it is (strictly) positive for the strong state. Since only one state can be strong in equilibrium (Proposition 1, condition 2), only one state can have positive expected surplus in equilibrium.

In what follows, I call the strong state (or the one with positive expected surplus) as the advantageous state in the dispute. Next proposition determines the identity of the advantageous state in the crisis game $G$.

**Proposition 2.** In the unique equilibrium of the game $G$, state 1 — the one which is more sensitive to audience costs — is advantageous (strong) if and only if the benefit-cost ratio of the crisis is large enough, that is $z \leq \frac{v}{v+w}$. State 2 is advantageous if and only if $z > \frac{v}{v+w}$.

**Proof.** Since $c_1 > c_2$, $\frac{w}{c_1} < \frac{w}{c_2}$ and $\tau_1 = \frac{v(1-z)}{zc_2} > \tau_2 = \frac{v(1-z)}{zc_1}$. Hence, state 1 is advantageous whenever $\frac{w}{c_1} < \frac{v(1-z)}{zc_1}$. The last inequality yields the desired inequality. However, if

\[14\] In equilibrium, both states are weak if $t_1^* = t_j^*$ holds.
$\frac{w}{c_1} > \frac{v(1-z)}{zc_1}$, then state 2 will be advantageous in equilibrium.

**Comments on Initial Results**

Note that being the advantageous state does not mean that this state will get the prize with certainty. In equilibrium, both states can get the prize or back down with positive probabilities. However, at any time $t < t^*$, it is more likely that the advantageous state will get the prize. Equilibrium behaviors can be grouped into two categories. The first one, that includes all the values of the parameters satisfying $z \leq \frac{v}{v+w}$, is a regime such that state 1 is advantageous. In this case, the conflict ends no later than $w/c_1$. The second category, where the set of parameters satisfy $z > \frac{v}{v+w}$, is the second regime where state 2 is advantageous. In this case, the escalation does not continue beyond the time $\frac{v(1-z)}{zc_1}$. Note that state 1’s sensitivity to audience costs negatively affects the length of the escalation, and this is true regardless of the regime. This observation is consistent with the empirical support of Russett (1995, pp 22). Therefore, when states can generate greater audience costs, fewer escalatory steps are needed credibly to communicate one’s preferences. Thus, crisis between democracies should see significantly fewer escalatory steps than crisis between authoritarian states (Fearon 1994).

Proposition 2 implies, in contrast with the conventional wisdom, that the ability of generating higher audience costs is not always better. In the first regime where the benefit-cost ratio is sufficiently large, greater audience costs benefit the states to signal their resolve more credibly and increases their expected surplus. However, in the second regime where the benefit-cost ratio of the crisis is sufficiently low, there is a significant trade-off between the ability of creating greater audience costs and diplomatic success.

If the uncertainty regarding the states’ resolve is negligibly small so that $z \approx 0$, then state 1 will be advantageous for almost all parameter values of $v$ and $w$, and greater audience costs will always help state 1 to enjoy greater expected surplus. On the other hand, if the level of uncertainty is large enough, then the state that is less sensitive to audience costs can become advantageous only if the benefit-cost ratio of the crisis is sufficiently low. The increase or decrease of the value of the benefit-cost ratio of a crisis may shift the regime. But, given the appropriate regime, higher values of $v$ or $w$ increase the length of escalation.

Probability of peaceful initial resolution is the sum of the states’ initial concessions, i.e. $F_1(0) + F_2(0)$. In regime 1, only the second state makes the initial concession. Therefore, $F_1(0) = 0$ and $F_2(0) = 1 - a_2$, which is equal to $1 - z - \frac{zw}{v}$ by Lemma 2. As a result,
higher benefit-cost ratio of the crisis — given that the regime does not change — increases the probability of peaceful initial resolution. That is, disputes with low cost of war or high value for the prize are more likely to settle without any escalation. And, if these disputes turn into public crises, then they are more likely to have less escalatory steps.

The probability that the flexible leader will initiate war in equilibrium is $Q_1(t^*)$. Recall that flexible states never initiate war in regime 2. A simple calculation shows that $Q_1(t^*) = \frac{c_1 v_j}{c_1 v_j + c_2 w}$. Therefore, probability of war increases as the value of the prize increases. That is, as the prize is larger, the weak state is less likely to dispute the advantageous state’s threat. But, if the crisis escalates, then the probability of war will be greater. Moreover, as the cost of war increases, the probability of war decreases. The last observation seems consistent with the Cuban missile crisis where the cost of war was immense.

A final observation in this section is consistent with the idea of democratic peace. Although the idea of democratic peace has circulated since Immanuel Kant, it was not scientifically evaluated until the 1960s. It relies on one of the most thoroughly tested observations in international politics, that democracies (for some appropriate definition of democracy), rarely, or even never, go to war with one another. As it is easy to verify, $Q_1(t^*)$ decreases as $c_1$ and $c_2$ takes values closer to one other. That is, war is less likely if the states’ sensitivities to audience costs are closer to one another.

4. Results of the Unconstrained Model

In this section, I allow the cases where states may have different valuations for the prize ($v_i$), war ($w_i$) and initial reputation ($z_i$). However, I retain the assumption that state 1 is more sensitive to audience costs ($c_1 > c_2$). More general version of Proposition 1 directly follows.

**Corollary 1.** The unique sequential equilibrium of the unconstrained crisis game $G$ is characterized by the following conditions: For $i = 1, 2$,

1. $F_i(t) = 1 - \frac{v_i a_i}{v_j + w}$ for all $t \leq t^*$,
2. $a_i \in [0, 1]$ and $[1 - a_1][1 - a_2] = 0$,
3. $t^* = \min\{t_1^*, t_2^*\}$, where $t_i^* = \min\left\{\frac{w_i}{c_i}, \frac{v_i(1 - a_i)}{z_i c_j}\right\}$, solves $F_i(t^*) \leq 1 - z_i$, and

---

15 For further discussion, see, for example, Lipson (2003), Schultz (1999) and Russett (1995).
4. \( Q_i(t) = 0 \) for all \( t < t^* \) and \( Q_i(t) = 1 - F_i(t^*) \) for all \( t \geq t^* \).

In line with the Lemmas in the previous section and Proposition 2, in equilibrium, state \( i \) is advantageous if and only if \( t^*_i < t^*_j \). Moreover, given that state \( i \) is advantageous and the game does not end before time \( t^*_i \), then the escalation ends with war only if \( t^*_i = \frac{w_i}{c_i} \). In case \( t^*_i = \frac{v_j(1-z_i)}{z_ic_j} \), the flexible type of state \( i \) never initiates war.

Given the equilibrium strategies, it is easy to verify that state \( i \)'s hazard rate is \( \frac{c_j}{c_j + c_{ij}} t \). If adversary is more sensitive to audience costs or values the prize less, then the state has advantage because it can build its reputation faster. Therefore, an important implication of the equilibrium is that an autocratic state (in the sense that its leader is less sensitive to audience costs), which values the prize more than its rivals, may have an advantage when the cost of war is significantly high for all parties of the dispute.\(^{16}\)

As noted earlier, NATO members, France and United Kingdom in particular, took very ambitious actions to end the Libya civil war in 2011 such as economic sanctions, no-fly zone and a military intervention in the end. However, the international community send many vague threats to Syrian President Bashar Assad. Therefore, an important question is that if Libya, why not Syria?

The model’s predictions provide an appealing answer. Valuation of the prize for the NATO members is lower in Syria and the cost of war is greater. Thus, as argued above, this makes Syrian President Bashar Assad currently stronger against NATO members. Europe was importing over 85\% of the Libya’s crude oil. The biggest buyers were Italy, Ireland, Spain, Portugal, Greece, and France.\(^ {17}\) Any instability in Libya and disruption of oil supply would increase the vulnerability of financially challenging European countries. Syria does not export oil to anyone.\(^ {18}\) Therefore, the West does not have an economic incentive to support the rebels in Syria.

As U.S. Secretary of State Hillary Clinton explicitly stated, the Assad regime is a more dangerous challenger than Gaddafi. Libya was geographically convenient to attack. NATO forces utilized bases in the southern Mediterranean such as Italy, Spain and France. There are no comparable bases near Syria except those in Turkey. However, Turkey is unlikely to ignite a firestorm on its own borders since it carries great risks: the neighboring state Syria is likely to counterattack. Libya’s neighbors were not militarily active participants in global conflicts. Syria’s tight relations with Hezbollah in Lebanon and Iran can change the balance of forces. Drawing Iran into the conflict in Syria has a

\(^{16}\)More formally, we should have \( t^* = \frac{v_j(1-z_i)}{z_ic_j} < \min\{\frac{w_i}{c_i}, \frac{w_j}{c_j}, \frac{v_j(1-z_i)}{z_ic_j}\} \).


high likelihood of drawing the Israelis in. Israel could see such a conflict as an excuse to
attack Iran, which it has indicated interest in doing anyway. This would make it diffi-
cult for the Arab world to oppose Syria since the Arab countries would not want to be
perceived as siding with Israel at Syria’s expense.

Finally, unlike Syria, Libya did not have a powerful sponsor, active weapons supplier
and mentor. The Russians, and to a lesser extent China and Iran, are actively supporting
Syria and rejecting any military intervention.\(^{19}\) Syria is Russia’s main remaining ally in
the Middle East, a key weapons client and host to its base at Tartus —Russia’s only
military base outside the former Soviet Union.\(^{20}\) According to some estimates, 10% of
Russia’s global arms sales go to Syria.\(^{21}\) CAST, a Moscow-based defense think tank,
reports that Russia sent Syria at least $960 million worth of heavy arms, which included
several missile systems, in 2011 and has some $4 billion in outstanding contracts.\(^{22}\)

The items mentioned above do not constitute the full list of benefits and losses of
the conflict in Syria. The main message is that, with all factors incorporated, Syria is
significantly riskier case than Libya.

A similar example is the United Kingdom’s attitude in two different cases: Abadan
(1951) and the Falkland Islands (1982) crises. The Abadan Crisis occurred after Iran
nationalized the Anglo-Iranian Oil Company (United Kingdom’s largest overseas asset
in 1950’s now known as British Petroleum). Initially British warships blockaded Abadan
and the British cabinet imposed a series of economic sanctions on Iran. However, Prime
Minister Clement Attlee opted instead to tighten the economic boycott. On the other
hand, the United Kingdom’s reaction in Falkland Island was more direct. United King-
doms’ management of these two crises seem consistent with the model’s prediction. Given
the war in Korea (between 1950-1953) and the cold war threat of the Soviet Union, the
risks of any military intervention in Iran were greater.

Although the current model does not allow states to change their values of the prize
\(v_i\), the cost of war \(w_i\) and sensitivity to audience costs \(c_i\), in reality, these parameters are
subject to change during the management of a crisis. An important conjecture directly
implied by the equilibrium analysis is that increasing its sensitivity for audience
costs may be a beneficial strategy for a democratic state only if its benefit-cost
ratio is sufficiently high. However, when this ratio is low, greater audience

\(^{19}\) Putin sees worsening conflict in Syria but rejects outside intervention, Nicholas Kulish, The New
York Times, 1 June 2012.

\(^{20}\) Russia may be preparing a second attempt at Syrian arms shipment, Miriam Elder, The Guardian,

\(^{21}\) Russian arms shipments bolster Syria’s embattled Assad, Richard Galpin, BBC News, 30 January
2012.

\(^{22}\) Russia boosts arms sales to Syria despite world pressure, Thomas Grove and Erika Solomon, Reuters,
21 February 2012.
costs has no help to the democratic state. On the contrary, sending strong threats or commitments (if these actions will increase \( c_i \)) may be a bad policy in these crises. The intuition behind this implication is as follows. Since the value of the prize is low (or the price of a military intervention is high), fighting for the prize is a big risk. Thus, the adversary will strongly believe that a strong threat by a democratic state is very likely to be a bluff. Since the democratic state is very likely to back down if the crisis escalates, then causing greater sensitivity to audience costs means suffering greater costs in case of backing down. Thus, in expectation, it should be more beneficial to take a much milder stance when the benefit-cost ratio is low.

On the other hand, if the states have the option of changing the benefit-cost ratio of the crisis, lengthier escalation could facilitate diplomatic success for democratic states because escalation may help them to buy some time to change these parameters. Since, democratic states can increase the likelihood of a lengthier escalation by reducing their sensitivity to audience costs, following a passive or shy management during a crisis where the benefit-cost ratio is low may be optimal for them.

The autocratic state, which is less sensitive to audience costs, also prefers to have lower sensitivity to audience costs when its benefit-cost ratio is sufficiently low. This conclusion is true because if the autocratic state becomes less sensitive to audience costs, then the democratic state’s hazard rate decreases. Thus, the democratic state can build its reputation on its resolve much slower. This implies that more escalatory steps are needed to convince the autocratic state that the democratic state is resolved. Thus, in equilibrium, democratic state prefers to back down before the crisis escalates with a greater probability.\(^{23}\) This would clearly increase the second state’s expected payoff in the crisis.

The above arguments promote various policy implications. If democratic states are facing an autocratic state that values the prize highly and the cost of war is very high for all sides, then the democratic states can or should decrease the cost of military intervention by eliminating some of the risks involved in such interventions. For example, Hillary Clinton explicitly stated that “Russia must be persuaded on Syria”. The international community gradually increases the pressure on Russia, China and Iran to make them play a more constructive role in resolving the crisis in Syria.\(^{24}\) Another strategy that is likely helping democratic states in a conflict with low benefit-cost ratio is to increase the value of the prize by convincing

\(^{23}\)In technical terms, this means \( F_i(0) \) will be higher.

their domestic audiences that military intervention or the escalation is worth it. During the Bush administration “war on terror,” “threat for our freedom,” or “threat for our national security” were the mottos frequently used to increase public support for war in Iraq and Afghanistan.

Equilibrium analyses indicate that both states might initiate war. Invasion of the Falkland Islands by the Argentine forces in 1982 can be given as an example where an autocratic state (Argentina) attacks first to its democratic opponent (the United Kingdom). The state that is less sensitive to audience costs may attack first when its cost of war is not too high relative to its valuation for the prize and the adversary’s valuation of the prize and war. That is, we should have \( t^* = \frac{w_2}{c_2} < \min\{\frac{w_1}{c_1}, \frac{v_2(1-z_2)}{z_2c_1}, \frac{v_2(1-z_1)}{z_1c_2}\} \). In the literature, it is usually assumed that democratic states have larger costs of war and higher sensitivities for audience costs (Fearon 1994, Schultz 1999, Russett 1995), which correspond to \( w_1 > w_2 \) and \( c_1 > c_2 \). Therefore, assuming that both states value the prize highly, the value of the ratio \( \frac{w_1}{c_1} \) determines the identity of the first state attacking in a conflict, not the ratio \( \frac{w_1}{w_2} \).

Finally, Schultz (1999) constructs an empirical test to discriminate between two sets of arguments. The first one, the institutional constraints perspective, claims that institutions promoting accountability and competition tend to increase the political risks associated with waging war, and thus democracies shall have higher costs of war. The second, the informational perspective, argues that democratic institutions help revealing information about the government’s political incentives in a crisis by increasing the transparency of the political process and by improving a government’s ability to send credible signals. Thus, democracies shall be more sensitive to audience costs.

Schultz (1999) focuses on the following divergent implications of these two approaches. The institutional constraints perspective implies that democratic states have a harder time convincing their targets that they are resolved. Hence, the target state should be more likely to resist their threats (longer escalation). The informational perspective implies that relative to their non-democratic counterparts, democratic states are less likely to engage in bluffing behavior, so that the threats they choose to make are more likely to be genuine. As a result, the targets of their challenges should be less likely to resist (shorter escalation). The empirical test supports the informational approach. However, Schultz adds: “Democratic institutions could serve two roles simultaneously: systematically increasing the political costs of war and facilitating information revelation. This possibility is consistent with the empirical results.”

Equilibrium analyses of the current model support Schultz’s last point. One implication of our model is that the benefit-cost ratio of the crisis determines whether the
institutional constraints arguments or informational arguments will be dominant. If in equilibrium war is a possibility for flexible states, which is the case when the prize is very valuable or when war is not too costly, then further increase in the cost of war increases the length of escalation (whereas the states’ sensitivity to audience costs has no impact of the length of escalation). That is, costlier wars for democratic states make their non-democratic counterparts more likely to resist the challenge as proposed by the institutional constraints perspective. However, if the price of war is high enough or the value of the prize is sufficiently low, so that war is not a possibility for flexible states, then higher sensitivity to audience cost reduces the length of escalation (whereas the cost of war has no impact on the length of escalation) as implied by the informational approach.

5. Concluding Remarks and the Related Literature

The implications of the model that is presented in this paper are consistent with abundantly available historical cases. The primary message of the model is that audience costs mechanism is not always helping leaders for diplomatic success. Leaders of states choose not to tie their hands by using the audience costs mechanism if the value of the good in dispute is low or if war is expected to be costly. In what follows, I will discuss why standard audience costs theories do not support this conclusion and explain why the informational uncertainty I study in this model is vital.

Fearon’s beautifully crafted model has its own limitations as all theoretical models have. But many scholars, unfortunately, fail to notice the limitations of this model and attribute various conjectures to it as if his model directly or indirectly implies them. Here I will present one example (a reasoning) that is usually associated with Fearon’s original arguments, and I will discuss why it is false. Some scholars believe that the original audience costs argument suggests that (1) leaders will avoid making threats that they do not expect to follow through on precisely because of the audience cost mechanism. Then, (2) when leaders are not resolved (and resolve is always relative to the stakes of the crisis) and may have their bluff called, and when those audience costs that are invoked if their bluff is called are high enough, they wont make public statements to generate audience costs.

According to the Fearon’s model, the first argument is correct but the second is not. In his model, Fearon assumes that a state’s audience costs grow according to a function $a(t)$, which depends only on time. There is no significant harm in assuming a simple functional form $a(t) = a \times t$ as Fearon does in his paper. In this representation, the
The leader’s sensitivity to audience costs is indicated by $a \in \mathbb{R}_{++}$, measuring the rate at which the leader’s audience costs grow. This variable is exogenous to the model and Fearon does not specify what factors will affect this coefficient. The leader’s accumulated audience costs at any time $t$ is indicated by $a \times t$. This cost will be materialized only if the leader backs down. Since audience costs function depends only on time, the leader will accumulate audience costs simply by following a hard line policy: He is not supposed to take any additional actions or make any public threat. This functional form, more importantly, implies that states have no power on the size of the cost they accumulate at any given time during the escalation. If the leader wants to minimize the cost that he will suffer, then backing down and resolving the conflict as early as possible is the only way. Thus, the first fallacy in the second statement above is the belief that Fearon’s model allows leaders to modify their audience costs once the crisis becomes public.

One may wonder and ask what is the harm of assuming that the leaders can change their audience costs by sending various messages or threats after the crisis becomes public? Can’t we suppose that dependence on time is just a simplification assumption? Allowing states to control their audience costs during the escalation would alter the entire dynamics of the crisis bargaining game and the equilibrium strategies. Fearon’s assumption is crucial because audience costs are irreversible once the leader challenges his opponent. Moreover, in equilibrium each state can anticipate, in expected terms, how long his opponent can escalate the crisis, and therefore chooses his optimal strategy based on this information. However, in an environment where audience costs are controllable during the escalation of a crisis, equilibrium dynamics will be more complicated because the states’ optimal strategies will depend on possible contingencies that cannot be expected in advance, such as the opponent’s choice of management style. Therefore, the second fallacy in the second statement above is the belief that the first argument —leaders will avoid making threats that they do not expect to follow through— will continue to hold even if states can manage and control their audience costs.

Nevertheless, Fearon occasionally mentions that states can take actions such as troop mobilizations, forceful diplomatic notes, and public threats to create audience costs. These actions are the factors that trigger the audience costs mechanism at the first place. However, he fails to clarify how exactly we shall incorporate these public threats into the model. There is only one way to incorporate public threats into the model without changing the equilibrium dynamics: The public threats and messages that states send at the beginning of the crisis trigger the audience cost mechanism and determine the size of the coefficient $a$. Once the crisis escalate, audience costs grow as a function of time $t$. 
only, i.e. \( a(t) = a \times t \).^{25}

The interpretation I provide in the previous paragraph is actually very appealing. A plausible extension of Fearon’s model would be the case where states can choose and determine their sensitivity to audience costs, i.e. \( a \), before the crisis escalate. Leventoglu and Tarar (2005) discuss how the coefficient \( a \) can vary by regime type and the leader’s domestic political situation. For example, a leader who is domestically secure and not facing elections would seem to face the lowest cost for violating a public commitment, and thus has lower value of \( a \). It is equally sensible to assume that stronger threats, such as troop deployment, would lead to a higher \( a \), and weaker public threats —such as mild diplomatic notes— would lead to lower \( a \)’s.

Fearon (1994) assumes that \( a \) is exogenous to the model. However, he argues that the states’ expected payoffs increase with this coefficient regardless of the states’ cost of war, valuation for the prize or the uncertainty about the opponent’s type. This is why he concludes in page 585 “... [it] provides a rationale for why, ex-ante, both democratic and authoritarian leaders would want to be able to generate significant audience costs in international contests.” That says, if tough public standing generates greater sensitivity to audience costs, then states will prefer to take tough public standing regardless of the benefit-cost ratio of the crisis.

Fearon’s model is not the only one that works against the main message of this paper. Leventoglu and Tarar (2005) provide the most related formal model that can be used to support our main point. Their main message is that public commitment may provide leverage to the states in a bargaining environment, but extreme commitments are not optimal. However, their main result (Proposition 1) does not account for our point. In their model, the audience costs function has two parts. One part is exogenous to the model, denoted by \( \phi \), and it indicates the state’s sensitivity to audience cost. That is, \( \phi \) is the counter part of the coefficient \( a \) in Fearon’s model. The second part is endogenous and it simply is the difference between what the leader publicly commits and what he actually receives. According to the equilibrium strategies, optimal demands that leaders will publicly commit increases with the coefficient \( \phi \). That is, the more sensitive the states are to the audience costs, the stronger and higher claims they will make in equilibrium.

---

25The second part of this claim is against what we usually observe in reality. That is, states try to manage the growth pattern of their audience costs by sending stronger or milder messages during the escalation. However, as argued above, changing this assumption will lead to different dynamics. The analysis of this more general version of the model is an important research project that must be executed for better understanding of the audience costs mechanism.
Why can’t original audience costs arguments support our main point?

The equilibria of Fearon (1994) are separating and Fearon underlines this fact various times in his paper. A leader of a state wants to separate himself from others that have higher costs for war (or lower resolve, in the sense of Fearon). Greater sensitivity to audience costs, i.e. \( a \), helps states to separate themselves from others. Thus, whether stakes are high or low, a state will always prefer greater sensitivity to audience costs, and it will do whatever it takes to generate this sensitivity. This conclusion is not specific to Fearon’s model, but a direct consequence of the audience costs mechanism.

If the cost of war for a state (call it state 1) is some \(-w\) where \( w > 0 \), then there is some time \( t^* \) such that \( w = at^* \) where \( a(t) = at \) is state 1’s audience costs function. Beyond this time \( t^* \), state 1 prefers attacking to backing down (regardless of the opponent’s type). However, in equilibrium states escalate the conflict means that the following two things hold: (1) States prefer backing down to attacking; (2) States are indifferent between backing down and escalating the conflict for a short period of time (observations 1-4 in the appendix of Fearon 1994). Therefore, state 1 will choose to attack earlier than state 2, that has a higher cost of war (or lower resolve), if the two states’ audience costs coefficients are the same. Since the lower resolved state 2 anticipates that it will prefer to back down over attacking if escalation reaches time \( t^* \), it drops out at the early stages of the crisis with a greater probability, making the high resolved state 1 advantageous. If the audience cost coefficient of state 1 is higher than its opponent’s sensitivity to audience costs, then the time that state 1 attacks in equilibrium, i.e. \( t^* \), will be lower. Therefore, state 2 will drop out of the escalation earlier even 2’s level of resolve is higher (or cost of war is lower) than that of state 1. This is why, regardless of their resolve, both states prefer to have higher sensitivity to audience costs.

The standard audience costs dynamics are still valid in our model. However, greater sensitivity to audience costs is not always better because leaders of the states have additional mechanism to increase their bargaining power, which is the ability of building false reputation about their resolve. States that are not resolved can build false reputation —on their resolve— only if they mimic the resolved states. That suggests that the equilibrium must be pooling. The unique equilibrium of the current model satisfies the properties of both separating and pooling equilibria depending on the benefit-cost ratio of the crisis. As discussed above, the standard audience costs theories, which define states’ resolve relative to their valuations for the stakes, induce pooling behavior suboptimal. In this regard, a different interpretation of resolve is crucial to attain our main point.
**Appendix**

**Proof of Proposition 1.** For $i = 1, 2$, let $\tau_i = \inf \{ t \geq 0 | F_i(t) = \lim_{k \to \infty} F_i(k) \}$ where $\inf \emptyset := \infty$. That is, $\tau_i$ denotes the time that state $i$’s reputation reaches one conditional on $i$ does not back down at time zero with positive probability. Also, let $\hat{t}_i = \frac{w_i}{c_i}$ denote the time that state $i$ is indifferent between backing down and attacking. Thus, in equilibrium, at least one of the flexible states finish the game at time $t^* = \min \{ \tau_1, \tau_2, \hat{t}_1, \hat{t}_2 \}$. Since backing down is more beneficial than attacking for both states until time $t^*$, we must have $Q_i(t) = 0$ for all $t < t^*$. Proofs of the following arguments directly follow from Hendricks, Weiss and Wilson (1988) and are analogous to the arguments in the proof of Proposition 1 in Abreu and Gul (2000) or Observations 1-4 in Fearon (1994). Therefore, I skip the details.

**Lemma A.1.** If state $i$’s strategy $F_i$ is constant on some interval $[t_1, t_2] \subseteq [0, t^*)$, then state $j$’s strategy $F_j$ (where $j \neq i$) is constant over the interval $[t_1, t_2 + \eta]$ for some $\eta > 0$.

**Lemma A.2.** For any state $i$, $F_i$ does not have a mass point over $(0, t^*)$.

**Lemma A.3.** $F_1(0)F_2(0) = 0$.

Therefore, according to Lemma A.1 and A.2, $F_i$ is strictly increasing and continuous over $[0, t^*)$. Therefore, the utility function of state $i$ given in Equation (1) is also continuous on $[0, t^*)$. Then, it follows that $D^i := \{ t | U_i(t, F_j, Q_j) = \max_{s \in [0, t^*)} U_i(s, F_j, Q_j) \}$ is dense in $[0, t^*)$. Hence, $U_i(t, F_j, Q_j)$ is constant for all $t \in [0, t^*)$. Consequently, $D^i = [0, t^*)$. Therefore, $U_i(t, F_j, Q_j)$ is differentiable as a function of $t$. Similarly, $F_i$ is differentiable because the utility function is differentiable on $[0, t^*)$. Differentiating the utility function and applying the Leibnitz’s rule, we get $F_i(t) = 1 - \frac{v_j a_i}{v_j+ c_j}$ where $a_i = 1 - F_i(0)$. By Lemma A.3, we know that $F_1(0)F_2(0) = 0$ implying condition $(ii)$. Optimality implies that $F_2(t^*) = 1 - z_2$ whereas $F_1(t^*) \leq 1 - z_1$ because it might be the case that $c_1t^* = w_1$. Therefore, $Q_2(t) = 1 - z_2$ and $Q_1(t) = 1 - F_i(t^*)$ for all $t \geq t^*$.

Q.E.D.

**References**


