

RESTLESS DYADS: REVISITING ONSET AND ESCALATION IN  
MILITARIZED INTERSTATE DISPUTES

by

OSMAN ZEKİ GÖKÇE

Submitted to the Faculty of Arts and Social Sciences in partial fulfillment of the  
requirements for the degree of Master of Arts in Political Science

Sabancı University

Spring 2012

© Osman Z. Gökçe  
2012

All rights Reserved

To my deary wife, Zeynep

# RESTLESS DYADS: REVISITING ONSET AND ESCALATION IN MILITARIZED INTERSTATE DISPUTES

OSMAN ZEKİ GÖKÇE

Political Science, M.A. Thesis, 2012

Thesis Supervisor: M. Emre Hatipoğlu

**Keywords:** Use of force, escalation, MID-IP, Heckman  
selection model

## Abstract

Modeling escalation of disputes constitutes a major cornerstone in international conflict studies. Many of these studies assume that incidents in a dispute follow a regular path where use of force is preceded by lower levels of hostile action such as threat or display of force. Therefore, these studies treat a dispute as having escalated if force was used. A close examination of the MID IP (Militarized Interstate Disputes Incident Level) dataset suggests inaccuracies may exist in this assumption. The MID IP dataset indicates that parties directly utilize force (i.e. without a preceding threat or display of force) in significant number of disputes. That about 40% disputes between 1993 and 2001 directly start with use of force at the MID Onset level echoes warnings made by Diehl (2006) and Dixon (1993). We identify cases in which the first action of a dispute is use of force “direct escalations.” This thesis examines whether this discrepancy poses a threat to the validity of empirical tests of escalation models. To that end, we replicate a comprehensive set of escalation models adopted from Braithwaite and Lemke (2011). More specifically, we compare the models with and without direct escalation cases in the sample of disputes. Results from Heckman selection models indicate that when direct escalations are excluded from the sample, being a joint democracy loses its pacifying effect for dyadic MID onset, although its pacifying effect increases for escalation of these disputes. Therefore, we can say that if democratic dyads try to communicate before involving direct use of force, they might find peaceful resolutions for their problems even at the escalation level. Further analysis suggests that territorial controversy and geographical contiguity significantly increase the likelihood of direct escalation. Finally, results also suggest that direct escalations may partially be an artifact of biased data collection; poorer/peripheral dyads carry a higher likelihood of experiencing a direct escalation.

DURMAK BİLMEZ DEVLETLER: ASKERİLEŞTİRİLMİŞ DEVLETLERARASI  
ANLAŞMAZLIKLARDA BAŞLANGIÇ VE KIZIŞMA İNCELEMESİ

OSMAN ZEKİ GÖKÇE

Siyaset Bilimi, Yüksek Lisans Tezi, 2012

Tez Danışmanı: M. Emre Hatipoğlu

**Anahtar Kelimeler:** Güç kullanımı, kızışma, MID-IP, Heckman  
seçim modeli

**Özet**

Uluslararası çatışma çalışmalarında anlaşmazlıkların kızışmasını modellemek çok önemli bir yer tutmaktadır. Bu çalışmaların çoğundaki modellemeler, anlaşmazlıklardaki olayların tehdit veya güç gösterisi gibi düşük seviyelerden güç kullanımı veya savaş gibi daha ciddi seviyelere doğru düzenli bir yol izledikleri varsayımına dayanır. Halbuki MID-IP veri setindeki sonuçlar bu varsayımın çoğu zaman gözlemlenemediğini ortaya koymuştur. 1993-2001 yılları arasındaki askerileştirilmiş devletlerarası anlaşmazlıkların başlangıç düzeylerini baz alırsak, bu anlaşmazlıkların %40'ının direkt güç kullanımı gibi ciddi seviyelerde başladığını görmekteyiz. Bu empirik gözlem bize Diehl (2006) ve Dixon (1993) makalelerinde geçen yaygın varsayım üzerine olan uyarıları hatırlatmaktadır. Analizlerimizde direkt güç kullanımı ile başlayan anlaşmazlıklar "direkt kızışmalar" olarak tanımlanmıştır. Bu tez varsayım ve gözlem arasındaki bu çelişkinin kızışma modellemelerindeki empirik testlerin geçerliliğini ne denli etkilediğini incelemektedir. Bu amaçla, kızışma modeli kullanan çalışmalar arasında kapsamlı ve güncel olarak gördüğümüz Braithwaite and Lemke (2011) makalesindeki modeli tekrarladık. Heckman seçim modeli sonuçları direkt kızışma ile başlayan anlaşmazlıkları örneklemiden çıkardığımızda demokrasinin başlangıç safhasındaki anlaşmazlık azaltıcı etkisinin zayıfladığını, fakat ilerleyen seviyelerde kızışma azaltıcı etkisinin arttığını göstermektedir. Böylelikle, eğer demokratik devletler direkt güç kullanımı yerine daha barışçıl bir şekilde iletişime geçseler aralarındaki anlaşmazlık daha fazla kızışmadan çözülebilir diyebiliriz. Analiz sonuçlarımız ayrıca bölgesel anlaşmazlıkların ve coğrafi yakınlığın direkt kızışma olasılığını artırıcı faktörler olduğunu ortaya koymuştur. Sonuçlarımıza göre direkt kızışmaların çok gözlemlenmesinin kısmi nedenlerinden biri de yanlış veri toplama olabileceğidir.

## **Acknowledgements**

I am particularly grateful to my academic advisor Emre Hatipođlu for including me in his project team, reading various drafts of my writings and whose detailed comments have helped me remove my errors and improve my arguments. He rigorously taught me how to become a good researcher and assistant, and how to learn from, and overtime minimize my mistakes. I would also like to thank other committee members Özge Kemahliođlu and Çađla Aydın who were very accommodating and whose questions and insightful remarks taught me a lot.

Three people deserve special mention here. Throughout this challenging academic year, two of my friends, İlker Aslan and Gülnur Kocapınar have helped me with their sincere friendship and valuable academic endowment. I also thank Mustafa Cevat Akşit for his encouragement and promotion of the merits of being an academician.

I wish to record my most sincere gratitude to my family who has given their support while I completed both this M.A. degree and the thesis. First, among them are my lovely wife, Zeynep, and beloved son Ömer Selim. I appreciate my wife many sacrifices in more ways than I will ever be fully able to express. I also owe much to my parents, Ömer and Firdevs (my altruistic and perceptive mother), and my brother, Mahmut, who deserve special thanks for their altruistic behavior during my whole life.

Finally, I am grateful to Sabancı University and my parents for assisting me financially during my graduate study.

## TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	<b>1</b>
1.1. Steps to War: Disaggregating Stages of Conflict .....	2
<b>LITERATURE REVIEW</b> .....	<b>4</b>
2.1. Escalation Theory .....	4
2.2. Factors Affecting Escalation Probability .....	6
2.3. What is missing in the Literature? .....	8
<b>DATA AND DESCRIPTION OF DIRECT ESCALATION</b> .....	<b>11</b>
3.1. Data .....	11
3.2. Description of Direct Escalation.....	13
<b>DETERMINANTS OF DIRECT ESCALATION</b> .....	<b>17</b>
4.1. Analysis of the Results.....	19
<b>HOW DIRECT ESCALATIONS AFFECT REGRESSION MODELS: A REPLICATION OF BRAITHWAITE AND LEMKE (2011)</b> .....	<b>21</b>
5.1. Analysis of the Results.....	24
<b>CONCLUSION</b> .....	<b>26</b>
<b>REFERENCES</b> .....	<b>28</b>
<b>APPENDIX</b> .....	<b>35</b>

## LIST OF TABLES

TABLE 1: Descriptive Statistics: Disputes Starting with Direct Use of Force (Direct Escalations).....	35
TABLE 2: Determinants of Direct Escalation.....	40
TABLE 3: Selection Models of Dispute Onset and Escalation (Reciprocated).....	41
TABLE 4: Selection Models of Dispute Onset and Escalation (Use of Force).....	42
TABLE 5: Selection Models of Dispute Onset and Escalation (Mutual Use of Force)...	43
TABLE 6: Selection Models of Dispute Onset and Escalation (Fatalities>0).....	44
TABLE 7: Selection Models of Dispute Onset and Escalation (Fatalities>250).....	45
TABLE 8: Selection Models of Dispute Onset and Escalation (Fatalities>999/War)....	46

## **CHAPTER 1**

### **INTRODUCTION**

Modeling escalation processes of international disputes constitutes a major cornerstone in international conflict studies. In both theoretical and empirical work, these studies tend to assume that incidents in a dispute follow a regular path where use of force is preceded by lower levels of hostile action such as threat or display of force. Therefore, these studies treat a dispute as having escalated if force was used. However, a close examination of the MID-IP (Military Interstate Disputes Incident Data) dataset<sup>1</sup> suggests that inaccuracies may exist in this assumption. The MID-IP dataset indicates that states directly utilize force (i.e. without a preceding threat or display of force) in a significant number of disputes. Those about more than 40% disputes between 1993 and 2001, at the MID Onset level, directly start with use of force as a beginning hostility level. Very few studies warned regarding this possibility of direct use of force. Furthermore, to the best of my knowledge, none have incorporated this possibility in their empirical analyses. This thesis gives a preliminary descriptive framework for the cases beginning with direct use of force and examines whether the discrepancy between what conflict studies have assumed and what we observed in MID-IP dataset poses a threat to the validity of empirical tests of escalation models.

---

<sup>1</sup> A “militarized incident is defined as a single military action involving an explicit threat, display, or use of force by one system member state towards another system member state” (Ghosn et al., 2004).

## 1.1. Steps to War: Disaggregating Stages of Conflict

Conflict constitutes the cornerstone of international relations studies, because conflict is seen as a steps-to-war process. Much of these studies historically have been focusing on the determinants of war. With the 1990s, scholars have started looking at militarized conflicts that stop or otherwise end before they evolve into full-blown international wars. Such a focus enabled scholars to a) look at many more cases, b) in a related way, got rid of the arbitrary definition of what distinguishes war from lower levels of international conflict, but also c) allowed scholars to gauge whether and how correlates of war and peace affect different stages of interstate conflict with respect to their onset, duration, severity and end.

While the steps-to-war approach has immensely advanced our understanding of international conflict, two prominent scholars have briefly questioned the validity of the *orderly, step by step* escalation among conflict stages assumption. This thesis aims to elaborate on this questioning of the validity. Echoing Dixon (1993) and Diehl (2006), disputes may not follow their regular path, and interestingly may ignore the initiation phase altogether and immediately reach the level of use of force. We call cases in which the first action of a dispute is use of force “direct escalations.”

Achieving progress in clear understanding of escalation processes can be possible by extending the internal validity of the escalation concept. In this thesis, to set the stage for future work on such matters, I offer a broad empirical analysis of direct escalations in which I scrutinize how they are characterized, what kind of causes triggers them, how they affect conventional empirical regression models in international conflict studies, and what main determinants of direct escalations are.

My argument is that if the previous studies tend to assume that incidents in a dispute follow a regular path where use of force is preceded by lower levels of hostile action such as threat or display of force, eliminating the direct escalation cases from the dataset should not change the impact of the conventional explanatory variables upon the escalation process. To see whether my argument is valid, I will replicate one of the recent and comprehensive studies on escalation by including/excluding the direct escalation cases in regression models.

The next section discusses the previous studies on escalation processes. Then, I conceptualize and describe direct escalations. In this section, I also present descriptive

analyses of escalations to see their frequency and geographical distribution vis-à-vis “regular” militarized interstate disputes. In the same section, I also analyze escalation trends and outcomes of the disputes starting with the direct escalation. Secondly, I focus on the determinants of the direct escalation. Thirdly, I discuss the influence of the direct escalations in conventional regression models exploring causes of escalation through partly replicating Braithwaite and Lemke (2011), both with and without the cases of the direct escalations. Finally, I conclude my thesis by describing what our findings suggest and how they might illuminate a way for future research, and empirical models testing escalation processes.

## **CHAPTER 2**

### **LITERATURE REVIEW**

#### **2.1. Escalation Theory**

Escalation process has been a central topic for interstate conflict studies for years. In many of these studies, escalation process has been associated with arms races (Richardson, 1960; Intriligator and Brito, 1984), deterrence (Brams and Kilgour, 1987; Zagare, 1992), and escalation in war (Smoke, 1977; Wittman, 1979; Pillar, 1983), among a number of international crisis situations (Schelling, 1960, 1966; Holsti, 1972; Lebow, 1981; Leng, 1980, 1993; Siverson and Miller, 1993; Brecher, 1994). A crisis is usually characterized by two contending states, where both parties decide whether or not to use coercive pressure against an opponent (Lockhart, 1979). The opponent, in turn (or simultaneously), decides to counter this coercion. This back and forth between the two parties eventually passes a threshold, above which the crisis is defined as having escalated into a militarized conflict. Despite an extensive focus on the factors affecting states' decisions whether or not to escalate, and outcomes of the escalation processes, very few studies, according to Carlson (1995), have dealt with systematic and theoretical framework to identify the kinds of escalation strategies which are more probably to adopt in conflict.

Considerable part of the early research endeavored to answer the question of escalation process accompanied by the bargaining process (Schelling, 1960, 1966; Kahn, 1965; Young, 1968; Snyder, 1972; Smoke, 1977). According to Schelling (1960, 1966), leading an opponent to take a step back by exploiting its fear about the future in case of further escalation is one of the impacts of escalation. Determining factor here is the ability of tolerating risks (or imposed costs), which characterizes escalation process as a competitive risk taking game (Schelling, 1960; Kahn, 1965; Powell, 1987, 1988; Maoz,

1985, 1990; Geller, 1990). However, under what conditions states select different levels of escalation to attain their goals throughout the bargaining process is weakly specified in a theoretical framework.

Some of the case studies on escalation have directly attempted to identify the kinds of escalation strategies that actors apply in conflict (Ikle, 1971; Smoke, 1977; Snyder and Diesing, 1977; Pillar, 1983; Haig, 1984). The main discussion of these studies is about what kinds of escalatory actions (low or high escalation) is more likely to render the opponent conceding. On the one hand the low escalatory actions have relatively low cost, and they might lead to counterescalation of the opponent by insufficient attempt to isolate the tolerance of the opponent for the escalation (Haig, 1984; Patchen, 1988). On the other hand, despite their better chance to exceed the opponent's cost threshold, high escalatory actions might bring some extra price for the unexpected concession which was quite unnecessary to secure the outcome (Bonoma, 1975). Therefore, early literature does not seem to have a theoretical convergence on explaining escalation behavior.

According to Snyder and Diesing (1977), high escalation can more probably produce counterescalation than do a concession under specified conditions. Lockhart (1979) suggests that low levels of escalatory actions works for a state if it has less resources and if it identifies the issue of dispute as insignificant. Brecher (1994), on the contrary, argues and shows that low and gradual escalatory behavior is more probable if a state has more resources than its opponent.

Relative military capabilities of actors and the issue salience appear as two prominent factors affecting escalation behavior and patterns (Gochman and Leng, 1983; Gochman and Maoz, 1984; Siverson and Miller, 1993). Relative military capabilities are important because they function as the main way of imposing costs on an opponent in a crisis. Although Brecher (1994) theoretically disagrees, many empirical studies show that parties with relatively equal capabilities are more likely to go to war with one another than are parties with disparate capabilities (Bremer, 1992; Werner and Lemke, 1996; Organski and Kugler, 1980). Additionally, many of the studies demonstrate that if the issue at stake is salient and parties highly value it, then they are more willing to escalate the dispute to the higher levels to impose a demand (Gochman and Leng, 1983; Maoz, 1983; Wilkenfeld, 1991; Brecher, 1994; Hensel, 1996). I will discuss the issue salience soon in detail.

One main reason for the inconsistency in the abovementioned findings may be due to the fact that research in conflict escalation is guided by different assumptions and different theoretical frameworks. Many of these studies lack rigorous theoretical framework specifying the key variables to interact and studying on the conditions leading states to choose different escalation patterns. Moreover, these studies have focused on explaining the conditions under which states escalate to the extreme; for instance, a war. However, preferences of states over escalation patterns remain unclear (Carlson, 1995).

Using formal models to understand escalation processes elucidates how behavior and attitude of the parties change during crisis, and why weaker party does not always surrender against costs imposed by the stronger side. Under specified conditions, a stronger party can misperceive its bargaining position and back down. Alternatively, a weaker side can obtain what it wants by bluffing a willingness to tolerate the risks of escalation (Powell, 1987; Morrow, 1989; Lalman, 1990; Zagare, 1992).

To sum, escalation strategy of the parties is mainly conditioned on two factors: a) party's own perceptions of the other party's capabilities, b) the issue at stake. Manipulation over escalation rate that can be sent to the opponent can show how the parties are willing to bear escalation costs. Although escalation causes costs on both parties, the logic is to make not being conceded more costly for the opponent (Cross, 1969; Pillar, 1983; Morgan, 1990, 1994). Escalation is one of the means to make a situation costly for the opponent. According to Schelling (1966) escalation is the coercive way of bargaining in which the future concerns of greater cost imposition leads states to give in.

## **2.2. Factors Affecting Escalation Probability**

Before concluding this chapter I want to identify the most widely accepted explanatory variables affecting the likelihood of conflict escalation in various dimensions that the previous studies both theoretically and empirically demonstrated. Firstly, democratic peace phenomenon has been one of the important parts of interstate conflict and escalation processes literature. In their seminal research, Maoz and Abdolali (1989) claims that the likelihood of escalation to war is very low, or almost none, in conflict that the democratic states engaged in. Some of the empirical research also verify this claim by using MID

hostility scale of jointly democratic dyads (Maoz and Russett, 1993; Hart and Reed, 1999). Most recently, Maoz (2008) shows that democracies inherently engage in militarized disputes with each other less than would be expected by chance meaning that an independent effect of political system type does still matter. Moreover, Senese (1997) finds that the pacifying effect of being joint democracies is more visible at lower levels of conflict rather than higher ones. Once democracies pass the initial threshold and enter into a conflict, MIDs between democracies escalate to uses of force more frequently. From a similar vein, Prins and Sprecher (1999) have demonstrated that the likelihood of MID reciprocation and escalation is higher for democratic targets when an initiator is a non-democratic.

Some of the conflict literature has been devoted to explain the effects of domestic politics upon conflict and escalation processes through using different escalation measures (Bueno de Mesquita and Lalman, 1992; Schultz, 2001; Palmer et al., 2004; Partell, 1997; Fearon, 1994; Eyerman and Hart, 1996; Partell and Palmer, 1999). Across each of these studies, democracy is observed as having a pacifying effect upon the escalation of hostilities between states.

Secondly, the issue at stake between parties is the other important factor for escalation of hostilities in a conflict. The earliest studies show that if the issue is territorial integrity and regime stability, parties in a conflict are more likely to escalate to war (Gochman and Leng, 1983; Leng and Singer, 1988; Vasquez and Henehan, 2001). However, some other studies demonstrate that the mere territorial integrity does not lead to escalation, but with other conditions it does. Senese (1996) shows that contiguity and the presence of territorial dissonances do not increase the observed levels of hostility; however, if force is used in territorial conflicts, higher levels of fatalities occur. Rather than escalating to war, territorial issues give any parties more incentive to reciprocate dispute actions (Hensel, 1996). Moreover, Ghosn et al. (2004) find that territorial conflicts are more likely to cause greater fatalities than is the case when territorial integrity is not at stake. Other than joint democracy, the second most important issue for escalation seems to be territorial integrity. We can say that territorial issues might be a case of “war due to issue indivisibilities,” as Fearon (1995) indicates. As a result, territorial conflicts are very difficult to resolve in peaceful and bargaining manner.

Thirdly, under the tenets of power transition theory, a number of studies argue that satisfaction with the status quo affects the onset and escalation phases of conflicts (Organski and Kugler, 1980; Lemke and Reed, 1996; Lemke, 2002). Others similarly argued that the level of dissimilarity in foreign policy preferences among two states may increase the chances of conflict between them (Gartzke, 2001). Consequently, if both states are satisfied with current international order, then they have less incentive to fight one another.

Fourthly, researchers have also argued the relationship between power preponderance and conflict processes. However, these theoretical and empirical arguments are discrepant; for instance, Waltz (1979) claimed that power preponderance increases the likelihood of war, whilst some others have countered this claim and said that power preponderance decreases the probability of both conflict (Kugler and Lemke, 1996) and escalation to war (Moul, 1988).

Lastly, a series of studies have attempted to explain the effect of joint alliance membership on the probability of conflict and escalation processes (Bueno de Mesquita, 1981; Bremer, 1992). Like the claims on power preponderance, the results on the impact of joint alliance membership are mingled. However, in multivariate models of escalation joint alliance appears to reduce the probability of war between allies if both are not more militarized (Bremer, 1992; look at also Siverson and Starr (1990) for an alternative explanation and bivariate model).

To sum, according to literature, five variables such as, joint democracy, territorial disagreement, status quo satisfaction, power preponderance, and joint alliance membership are expected to correlate with escalation processes. However, joint democracy and territorial controversy seem to have consistent impact on escalation probability implying that these factors frame a general character for the escalation process.

### **2.3. What is missing in the Literature?**

As indicated in the Introduction, the previous studies tend to assume that incidents in a dispute follow a regular path where use of force is preceded by lower levels of hostile action such as threat or display of force, and treat a dispute as having escalated if force was used.

Nevertheless, thanks to MID-IP dataset, considerable number of inaccuracies is observed in the real world which can shake the assumption by its roots. The MID-IP dataset indicates that states directly utilize force (i.e. without a preceding threat or display of force) in a significant number of disputes. Those about more than 40% disputes between 1993 and 2001 directly start with use of force as a beginning hostility level (at the MID Onset level). Very few studies have made warnings regarding this possibility of direct use of force. Firstly Dixon (1993) indicated this probability of direct use of force by saying that:

“... I draw (the framework) from Bloomfield and Leiss (1969) by assuming that conflicts are dynamic situations that evolve over time (see also Alker and Sherman, 1982; Sherman, 1993). This evolutionary process should not be thought of as continuous movement along some single or fixed trajectory. Most conflict situations consist of relatively static periods of contention punctuated by sporadic transitions marking discernible shifts in levels of antagonism and severity. In the international arena, we usually characterize the severity of conflicts with reference to disputant parties' reliance on military force (Bloomfield and Leiss, 1969; Gochman and Maoz, 1984). *This process need not follow a preordained series of steps or threshold levels. To be sure, some interstate grievances emerge with such severity that military hostilities are initiated almost immediately, but this is relatively rare.*” (emphasis mine)

In his presidential speech to the Peace Science Society, Diehl (2006) articulates the same possibility:

“[Escalation] begins when two or more actors have already passed the initiation stage and now are at risk of escalating their conflict to war. Research in this phase typically analyzes all crises or disputes to determine which go to war and under what conditions. *Some analyses look more broadly at all possible combinations of states or only politically relevant dyads and thereby ignore the initiation phase altogether...* In any event, studies in this phase typically use war/no war as the dependent variable. Many of the most prominent works in international conflict research concentrate on this phase (e.g., Vasquez, 1993; Bueno de Mesquita, 1981).” (emphasis mine)

What Diehl means by the initiation phase is the first phase of conflict in which two or more states enter a conflictual relationship. This relationship occurs after a contingent level of violence is passed somehow during a crisis. However, operationalization of this threshold might be quite difficult in terms of standardizing the disagreement levels between parties, thereby determining the initiation point might be discretionary. Therefore, many of the studies on interstate typically assume that conflict initiation occurs when threat or display of force is observed by one side (Ghosn et al., 2004).

## CHAPTER 3

### DATA AND DESCRIPTION OF DIRECT ESCALATION

#### 3.1. Data

Most of the interstate conflict studies have used MID datasets for their research on escalation processes. Therefore, empirical research tends to be somehow standardized in terms of dataset employment. For my empirical analyses of direct escalations, I also use Dyadic Militarized Interstate Dispute (MID version 3) dataset and MID Incident Level dataset (MID-IP), to indicate escalation factors and to identify cases of direct escalations respectively.

Before delving into detailed description direct escalations, distinguishing between terms of dispute and incident would be very useful. A “militarized incident is defined as a single military action involving an explicit threat, display, or use of force by one system member state towards another system member state” (Jones et al., 1996, p.169). So, incidents are the militarized actions occurring between states and they constitute interstate dispute: “Militarized incidents provide the building blocks from which each MID is constructed” (Jones et al., 1996, p.169). Each MID includes at least one incident so that a typical dispute can consists of more than one incident. What define incidents are the actions undertaken by interstate members. Four main categories of these actions are; threats of force, displays of force, uses of force, interstate war. Each incident consists of only one type of actions and if an event consists of two or more types of actions, each is coded as a separate incident (Ghosn et al., 2004).

As indicated before, we call cases in which the first action of a dispute has hostility level of use of force or more “direct escalations.” At the first stage of my empirical work, I use MID-IP dataset. Identifying cases of direct escalation is very simple in MID-IP dataset

because it has standardized coding scheme across cases and enables to observe every single incident in a MID. Among the cases of direct escalation, no interstate war is observed between the dyads at the onset; thus, all of the cases begin with uses of force in terms of hostility level. When we look at actions classified as use of force, clash<sup>2</sup>, attack<sup>3</sup>, and seizure<sup>4</sup> are the most common actions at the onset with percentages of 31, 29, and 26 respectively.

After completing identification of direct escalations by using the MID-IP dataset, I incorporate them into comprehensive dataset of non-directed dyads for the years 1993-2001. For further analysis, I employ this dyadic MID dataset. The number of observations in the dataset is 158405, among which 622 bilateral MIDs took place. However, we need to be aware of that if MID protracts more than a year, then occurrence of MID is also coded for each extra year. For example, the MID between the US and North Korea (with a MID Number of 4087) lasts for six years which means six of 622 bilateral MIDs are between the US and North Korea. What we concern while coding direct escalation is the onset of MIDs; in other words, the year that a dispute began (the first year)<sup>5</sup>. Of the full set of 622 MIDs (1993-2001), 352 (57% of the total) are MID onsets, and 137 (22% of the total and 39% of the MID onsets) are direct escalations. In the remaining part of this section, I will discuss the descriptive statistics of these 137 direct escalation cases. Table 1 in the Appendix part shows the descriptive variables of each dyadic directly escalated observation. The coding scheme of this table is very consistent with Jones et al. (1996) and Ghosn et al. (2004). While doing this discussion, I will also refer to the literature for the descriptive and explanatory variables I use throughout the thesis.

---

<sup>2</sup>“Outbreak of military hostilities between regular armed forces of two or more system members, in which the initiator may or may not be clearly identified” (Jones et al., 1996, p.173).

<sup>3</sup> “Use of regular armed forces of a state to fire upon the armed forces, population, or territory of another state. Within this incident type, the initiator can be clearly identified and its action is not sanctioned by the target” (Jones et al., 1996, p.173).

<sup>4</sup> “Capture of material or personnel of official forces from another state, or the detention of private citizens operating within contested territory. Seizures must last at least twenty-four hours to be included” (Jones et al., 1996, p.173).

<sup>5</sup> Data for MID onsets are described by Ghosn et al. (2004).

### 3.2. Description of Direct Escalation

Empirical findings have consistently showed that presence of major power in a dispute characterizes dyads as more dangerous and war-prone (Bremer, 1992; Moul, 2003). For this study, I employ Small and Singer's (1982) operationalization for identifying Major Powers. The states that are not included in this list are coded as minor powers<sup>6</sup>. According to the literature, dyads consisting exclusive of minor powers are expected to have less probability to escalate MID (Bremer, 1992). Interestingly though, of the total 137 direct escalation cases in my dataset, 103 take places between minor powers and only seven occurs between major powers. This result might imply that major powers are much more cautious of directly employing force in international crises with each other, perhaps due mainly to much higher expected costs for both sides. Yet, minor pairs do not seem to behave in a prudent manner and more frequently engage in a direct use of force at the onset level.

To explain the patterns of escalation through variations in regime types has been another popular scholarly trend in international conflict literature. Numerous studies have shown sharing democratic norms and institutions among members of the dyad significantly reduced war-proneness as well (Maoz and Abdolali, 1989; Bremer, 1992), different escalation definitions (Maoz and Russett, 1993; Hart and Reed, 1999), and different levels of conflict (Senese, 1997). For my thesis, I use Jagger and Gurr's (1995) Polity IV dataset, which comprises the Polity score of countries' democracy levels in order to generate "Joint Democracy" variable. The Polity score is an aggregate index that scores a country's political institutions on several dimensions with higher scores corresponding to more democratic structures. The final score ranges from -10 (totally autocratic) to 10 (full democratic). From the Polity score, I create a dichotomous variable that equals to one if both members of a dyad have democracy scores of six or greater. Although there is broad agreement that joint democracy is expected to affect MID Onset negatively, its effect on escalation is more controversial (Reed, 2000). Simplistic expectation from impact of joint democracy on escalation is that it would decrease the probability of escalation because democracies are conceived as centers of nonviolent dispute resolution (Dixon, 1994), and communicate their level of resolve more credibly at the outset of a crisis (Partell and Palmer, 1997). However,

---

<sup>6</sup> Major powers are the U.S., Russia, China, Japan, France, the U.K., Germany, and Japan.

efforts to find nonviolent dispute resolution may be a strong pacifying effect on MID Onset stage. However, democratic dyads can make escalation among the two more likely if a crisis succeeds to materialize despite such pacifying effects. Reed (2000) empirically shows by using censored probit estimation that although joint democracy and joint satisfaction with the status quo are found to have robust pacifying effects on the onset of conflict, the results suggest that they are unrelated to the escalation of disputes to war. If that is the case, our expectation might be that joint democracy has negative influence on MID Onset and on direct escalations however it has positive influence on escalation. Nevertheless, Kinsella and Russett (2002) suggest that joint democracy might have no relationship with escalation due to controlling for its prior impact on MID Onset.

Statistics show that democratic peace might have an impact on direct escalations. Out of 137 direct escalations, only 35 cases (26% of the total) are between joint democracies. These descriptive statistics tentatively suggest that when a democracy has a conflict with another democracy, it might behave much more prudently or peacefully.

Contiguity is another factor often used to explain the onset of interstate war (Bremer, 1992). I use Stinnett et al.'s (2002) contiguity definition to generate a dummy variable which is equal to one if the dyad members share a land border or separated by fewer than 125km of water. According to this definition, contiguity seems to have also a major impact on direct escalations. 81 percent of the direct escalations (111 cases out of 137) take place between contiguous states. Hypothetically, it is very likely that contiguous states might direct use of force one another because as distance between two states increases, the projection of the military power decreases<sup>7</sup>.

Although joint alliance has mixed effect on the likelihood of conflict and escalation process in some studies (Bueno de Mesquita, 1981), in multivariate models of escalation it appears to reduce the probability of war between allies if both are not more militarized (Bremer, 1992). For my research, I use Gibler and Sarkees's (2004) defense pacts data in order to see the effect of alliance on direct escalations. Defense pacts indicate whether

---

<sup>7</sup> Some of the recent studies find that rather than a pure distance between conflicting parties, the quality of contiguity is also important. As Braithwaite (2006) shows, type of terrains between countries in terms of how

parties of the dyad both join in a treaty of alliance providing security guarantees of mutual assistance in the incidence either party is attacked. This type of alliance is the highest degree of common security interests which is very powerful to make parties avoid MID and escalation. When we look at alliance types of the states involving direct escalation, 62 percent of the total (77 cases out of 137) has no agreement before a conflict began. However, 38 cases interestingly share at least one defense pact at the outset of the conflict (30% of the total). Although this amount is not as large as the number of having no agreement, it is still considerable because defense pact shows the highest degree of common security interests, and is very effective to make allied states avoid MID and escalation.

To identify the issues at stake for direct escalations I look at revision types of both parties. In MID dataset, the main issues for both sided underlying each incident are identified very clearly under the name of “revisionist type” (Ghosn et al., 2004). When we look at the results, approximately 28% of the total cases do not have a specific type of an issue. The most common issue type is territorial ones. Territorial issues are “situations where the actors are attempting to gain control over a piece of territory that they claim but do not possess.” A number of scholars identify territorial integrity and regime stability as vital issues which more probably lead to conflict and escalation to war (Gochman and Leng, 1983; Leng and Singer, 1988). Almost 31 percent of the direct escalations occur due to territorial conflicts which are also aligned with the literature. Therefore, territorial issues are one of the most important indicators of conflict escalation. The second most common type relates to issues on policy imposition (25% of the total). Policy issues are “cases when the actor seeks to change the policy behavior of the target<sup>8</sup>.” Surprisingly, the cases based on regime issues which the desire of the actor is to change the government of the target are very few compared to the other types. Only 5 percent of the total directly escalated conflicts are originated from regime issues.

In order to analyze escalation trends of the disputes beginning with direct escalations, I compare the first and the highest actions in the disputes. Only 11 of 137 cases

---

easily borders can be passed and whether borders include vital places in terms of resources and strategy also influence conflict behavior of the states. For this study, however, I do not address this debate.

<sup>8</sup> We can learn roles of the states (e.g. which state is an initiator or a target) from Table 1 by looking at Role A column for Country 1 and Role B column for Country 2.

end with a higher level of action compared to the MID onset among which only one dispute escalates to war. However, in 72 cases (53% of the total) target states do not even reciprocates. Therefore, concluding that direct escalations end with worse consequences (e.g. war) might not be true based on these results.

Lastly, I look at overall dispute outcome and MID settlement of the directly escalated cases. Of the total 137 directly escalated disputes, outcome of 90 cases (66%) is stalemate<sup>9</sup>, and only that of 9 cases end with a victory<sup>10</sup> for side A. Moreover, 71 percent of these disputes do not culminate with any type of settlement meaning that “none of the pre-conditions that fueled the conflict are resolved nor is there any agreement between the parties that the dispute should be terminated. No settlement is identified when none of the conditions of negotiated settlement are present; there is no evidence of any attempt to impose a resolution of the conflict, and no evidence of any unconditional surrender. Basically no settlement denotes the lack of any formal or informal effort which successfully resolves or terminates a dispute (Jones et al., 1996).” As a consequence, using force at the very beginning of a conflict does not increase the chance of having victory over a target state through taking the advantage of imposing high cost at the beginning and causing fearful circumstances for the target state, as well as not lead to resolution of a problem as quickly as possible between both sides. On the contrary, this kind of attempt in the first incident seems to cause protraction of a conflict.

---

<sup>9</sup> “A stalemate is defined by the lack of any decisive changes in the pre-dispute status quo and is identified when the outcome does not favor either side in the dispute. Stalemates usually are produced when there was no alteration of the status quo. However, they can occur even if the status quo has changed so long as net balance results in a draw” (Jones et al., 1996, p.180).

<sup>10</sup> “A victory is defined by the favorable alteration of the status quo by one state through the use of militarized action which imposes defeat upon the opponent. It denotes the attainment of a tangible piece of territory, the significant change in an adversary's foreign policy, or the successful down-fall of another state's political regime by force. A victory can be identified whenever one or more state(s) are able to secure a favorable change through the application of successful military actions which directly leads to a forced alteration of the pre-dispute status quo” (Jones et al., 1996, p.180).

## CHAPTER 4

### DETERMINANTS OF DIRECT ESCALATION

To see how the variables that we have discussed are significant to explain whether an incident occurs as direct escalation, and to what extent my classification of MID (MID with/without direct escalation) is reliable, I run an ordered probit estimation. My dependent variable, “Ordered MID Level,” is equal to zero if no MID occurs, equal to 1 if MID occurs without direct escalation, and equal to 2 if we observe direct escalation in a MID. This kind of an order assumes that as Ordered MID Level increases severity of a MID increases in terms of the first incident. In addition to aforementioned predictors of direct escalation in chapter 3, I add some other explanatory variables such as, joint satisfaction, power preponderance, total GDP per capita of the dyads, and peace years of the dyads until a new dispute begins. The way of operationalization of these variables is as follows<sup>11</sup>:

**Power status of the combatants:** “Minor-Minor” status which is equal to 1 when both dyad members are Minor Powers based on Small and Singer’s (1982) list indicating Major Powers. The states that are not included in this list are coded as minor powers. According to the literature, minor pairs are expected to have less probability to escalate MID (Bremer, 1992).

**Regime type:** “Joint Democracy” variable based on Jagger and Gurr’s (1995) Polity IV dataset which comprises scaled information of countries’ democracy levels. This variable is a dichotomous variable equal to one if both dyad members have democracy scores of six or greater. Simplistic expectation from impact of joint

---

<sup>11</sup> Names and ways of operationalization of these variables are the same as what Braithwaite and Lemke (2011) do in their study. I intentionally choose this way for the sake of consistency and easy comparison of the results in the replication section.

democracy on interstate conflict is that it would play a pacifying role because democracies are conceived as centers of nonviolent dispute resolution.

**Power Parity:** When we look at power parities between the dyads, power preponderance is more contributory to peace in a dyad than power parity (Moul, 1988; Bremer, 1992; Kugler and Lemke, 1996). However, its impact is not as considerable as that of others. To generate “Power Preponderance” we use COW’s *Composite Index of National Capability* (CINC) score which was first described by Singer et al. (1972). We calculate the share of dyadic capabilities possessed by the stronger member of the dyad. Thus, 0.5 indicates that perfect equality within the dyad whereas 1 indicates that the stronger state preponderates its power.

**Degree of Support on the Existing Status Quo:** “Joint Satisfaction” is our other independent variable referring to satisfaction of the dyads from international system. It is a dichotomous variable equal to one if both parties in dyads have positive tau-b alliance portfolio similarity scores with the international system’s hegemonic state. For example, according to tau-b scores, these states are the UK for the period 1919-1945 and the US for the period 1946 onwards. Based on Organski and Kugler’s argument on power transition, the expectation is that when both parties in dyads are jointly satisfied with the international system, they might have a kind of inherent resemblance so that they can avoid having conflict with each other and find some kind of easier solutions for their problems compared to parties that are not jointly satisfied.

**Alliance:** According to Bremer (1992), having treaties is also the factor to reduce the probability of war between allies if both are not more militarized. In order to see the effect of alliance we use Gibler and Sarkees’s (2004) defense pacts data. “Allied” is a dichotomous variable equal to one if the MID occurs between the states having a defense pact with one another. Defense pacts indicate whether parties of the dyad both join in a treaty of alliance providing security guarantees of mutual assistance in the incidence either party is attacked. This type of alliance is the highest degree of common security interests which is very powerful to make parties avoid MID and escalation.

**Geographical position:** We use Stinnett et al.’s (2002) “Contiguity” definition to generate a dummy variable which is equal to one if the dyad members are

directly contiguous or separated by fewer than 125km of water. We expect a positive impact from contiguity on both MID onset and direct escalation incentive.

**The issue type at stake:** Territorial issues are one of the most important inducing predictors of conflict escalation. We generate the variable of “Territory” from MID dataset. It is again a dichotomous variable equal to one if the MID occurs due to joint disagreement about territory. Territorial issues can be classified as an “issue of indivisibilities” (Fearon, 1995). So, positive relationship between territorial dispute and conflict might be expected.

**Economic development level of the dyads:** Economic development can be a sign of the level of news availability in sources or in databases due maybe to its impact on communication and media advancement, data collection quality, or increasing the focus of database compilers. Therefore, as economic development increases all these attributes are positively affected which may turn into fewer observations of direct escalation, and being more informed about lower levels of a dispute. I use total GDP per capita of the dyads as a proxy variable based on Gleditsch Expanded Trade dataset (v 4.1). For the sake of convenient representation of results, I divide the variable by 1000. Moreover, because Gleditsch’s dataset is not available for the year of 2001, I run the regression without the observations taking place in 2001. My expectation is negative relationship between economic conditions and conflict.

**Duration dependence:** Lastly, to control for duration dependence, we have included Carter and Signorino’s (2010) cubic polynomial specification of “Peace Years.”

#### 4.1. Analysis of the Results

Table 2 shows the estimation results of the ordered probit regression. Recall that the observations taking place in 2001 are excluded due to data availability in Gleditsch’s dataset; thus, total number of observations drops to 137455.

First of all, the threshold parameters (Cut1 and Cut2) appear to be statistically significantly different from each other, justifying my three-part categorization. The model demonstrates that latent ordered MID level variable is increasing in contiguity, territorial controversy, and interestingly, having an alliance. For instance, if a dispute is motivated by

territorial controversy, his ordered probit-odds of being in a direct escalation category would increase by 2.1 times while the other variables in the model are held constant at their mean. The relevant regressors are highly statistically significant. Although we expect this relationship from the variables of contiguity and territorial issues, observing a similar relationship from alliance is quite interesting. Hypothetically, when both parties in dyads have defense pact with one another, they might have less probability of having high degree MIDs because defense pact shows the highest degree of common security interests, and is very effective to make allied states avoid MID and escalation. Maybe, more conflict-prone dyads might have much tendency to establish stronger alliances in order to decrease the likelihood of having severe conflicts in the future which might be insufficient due to their inherent hostile backgrounds and attitudes to each other.

On the contrary, joint democracy, joint satisfaction, power preponderance, being minor pairs, economic conditions of dyads, and duration of peace have negative relationship with our dependent variable meaning that they decrease the probability of observing higher levels of MID, and so direct escalation, as I expected. However, only joint satisfaction is statistically insignificant. Theoretically, if states are jointly satisfied with the international system, they might have a kind of inherent resemblance so that they can avoid having conflict with each other and find some kind of easier solutions for their problems compared to parties that are not jointly satisfied. The possible reason of this insignificance might be due to the fact that rather than classifying states according to level of their tau-b scores, I only consider whether dyads have positive tau-b alliance portfolio similarity scores with the international system's hegemonic state; thus, the variable might lose its sensitivity to explain the variation in the dependent variable.

Lastly the negative and significant relationship between economic conditions of a dyad and the probability of direct escalation is worth noting. As indicated before, this variance might stem from data availability and/or differences in data quality. Our result might suggest that empirical patterns are not consistent across the world and that less-developed countries are disproportionately likely to be neglected from standard data-based research (Lemke, 2003).

## **CHAPTER 5**

### **HOW DIRECT ESCALATIONS AFFECT REGRESSION MODELS: A REPLICATION OF BRAITHWAITE AND LEMKE (2011)**

In this section I replicate the model proposed by Braithwaite and Lemke (2011) with a non-directed dyadic MID dataset (1993-2001)<sup>12</sup>. My intent is to see whether the results remain robust when the directly escalated dispute onsets are excluded from the dataset. I have one theoretical and one statistical justification for this scholarly endeavor. The theoretical one is that direct escalations, by definition, are the cases not conforming to the assumptions of escalation dynamics. They have different dynamics and predictors, so that we should consider these cases differently than other MIDs. Therefore, omitting them from estimations might change the results observed in the previous research. The statistical justification is that if the direct escalations have the same escalation dynamics with other MIDs, then the omission of these cases would be missing at random; thus, replication results would remain the same. To see which justification matters for direct escalations, we do replicate Braithwaite and Lemke (2011) which is the most recent study examining escalation dynamics. Before going into the replication, I should briefly summarize what Braithwaite and Lemke do in their study.

The main argument of Braithwaite and Lemke (2011) is to examine escalation simultaneously with its six different measures proposed by the previous studies, and to observe whether variety of these measures lead to generalizable estimation results. They demonstrate few robust relationships across different measures of escalation. Braithwaite and Lemke (2011) indicate that escalation is generally modeled as non-controversial

phenomenon which in fact causes variations in empirical results verifying the theoretical argument. According to them, careful description of escalatory behavior is quite important to understand escalation. However, despite a broad analysis of escalatory patterns, this study also overlooks direct escalations in their description of escalatory behavior.

To explain several phenomena, conflict escalation studies have used variety of measures: the highest action of a dispute on the MID hostility scale (Maoz and Russett, 1993; Hart and Reed, 1999); mutual use of force of two sides or being involved in a COW war (Bueno de Mesquita and Lalman, 1992; Schultz, 2001); occurrence of a reciprocation of the target side (Prins and Sprecher, 1999; Schultz, 2001); considerable levels of battle fatalities (Palmer et al., 2004). Based on these studies, Braithwaite and Lemke (2011) compile six different measures of escalation<sup>13</sup>. The first escalation measure (Reciprocated) is based on whether the target state reciprocates the initiator's action. The second measure (Use of Force) is whether a use of force took place during a dispute. Their third measure of escalation is a "Mutual Use of Force" taking a value of one if both parties used force during the dispute. Our final three measures of escalation are based on different levels of fatalities in MIDs. "Fatalities > 0" takes a value of one in disputes where at least one combatant died. "Fatalities > 250" indicates more substantial loss-of-life situations and takes a value of only if at least 250 soldiers died during the MID. And finally, fatalities more than 1000 indicate battle fatality threshold specifying the dispute as an interstate war. The last measure is the most used measure of escalation in the past empirical studies (Wallace, 1979; Diehl, 1983; Senese and Vasquez, 2008). The very innovation of Braithwaite and Lemke (2011) is the examination of all six measures of escalation at the same time.

However, in order to estimate the impact of independent variables on escalation process, we need to understand their impact on the onset of the disputes in the first place. The previous studies concerned very little with the problems related to selection-bias (Braithwaite and Lemke, 2011). Since combatants select themselves into conflict, these dyads involved in the escalation stages do not constitute a random sample which, in fact,

---

<sup>12</sup> Note that Braithwaite and Lemke (2011) also use the same data set but the previous version of it. Moreover, they have much more observations, around 500000; due to the larger time span (1815-1995) than we have.

<sup>13</sup> I also use these measures without any change or exception.

leads to selection bias in a sample. Statistical analysis of escalation without paying attention to the prior phase of conflict, such as onset, probably yields biased results (Reed, 2000).

To address the potential for selection bias in such cases, Reed (2000) and Lemke and Reed (2001) employed Heckman-Two Step models. This model unites the phases of conflict in a single estimator. They treat the first phase or stage of their model as dyadic involvement in a dispute. The second stage is treated as the escalation to war. Reed (2000) shows that although joint democracy and joint satisfaction with the status quo are found to have robust pacifying effects on the onset of conflict, the results suggest that they are unrelated to the escalation of disputes to war which strengthens the suspicions on selection-bias.

For the replication, the dependent variable of the first stage is MID Onset. For each of the nearly 159000 observations this variable equals one only in dyad years in which a dispute began. Data for MID onsets are described by Ghosn et al. (2004). The second dependent variable, Escalation, is recorded for those 344 observations in which a MID occurred. After the omission of direct escalations this value drops to 215. Dyad years without MIDs are censored and excluded from calculation of the independent variables' influences on escalation. Information on escalation is described in Ghosn et al. (2004).

For the most part, I employ the same explanatory variables with Braithwaite and Lemke (2011). To explain Escalation, I use Joint Democracy, Joint Satisfaction, Power Preponderance, and Allied. Yet, Heckman (1979) indicates that adding more predictors in analysis of the first stage (MID Onset) is statistical necessity. If these extra predictors in the first stage are strongly correlated with MID Onset and uncorrelated with escalation, then we can make healthier inferences. Therefore, I add Contiguity, Minor-Minor status, and cubic polynomial specification of Peace Years as extra predictors of MID Onset<sup>14</sup>.

---

<sup>14</sup> Unlike Braithwaite and Lemke (2011), I could not add the independent variables of Territorial Claim and Rivalry to the first stage estimation. The reason for not including Territorial Claim is that this dataset is only available for the period 1919-1995 (Huth and Allee, 2002); thus, it does not conform to our time period 1993-2001 as whole. The same problem exists in Rivalry data (Thompson, 2001). Although Klein, Goertz, and Diehl (2006) compile new data covering the years until 2002, I do not integrate their data because their way of operationalization of rival states is different.

## 5.1. Analysis of the Results

Tables 3-8 show the estimation results for six different escalation measures. Each table consists of estimates both with and without direct escalations cases. Except for the estimates in the table of War, the results are calculated properly to be able to make inferences<sup>15</sup>.

At the first view, most of the independent variables have similar impacts and significance levels as Braithwaite and Lemke (2011) found. In the first state estimation, contiguity, minor-minor status, joint democracy, power preponderance, and peace years have all expected impacts on MID Onset in both my study and Braithwaite and Lemke's study. While contiguity increases the probability of having MID Onset, being minor or jointly democratic pairs, having power preponderance over the other side, and peaceful past decrease this probability. For the second stage, both studies do not have consistently significant estimates, except joint democracy in my estimation. Moreover, both studies have statistically significant and negative selection parameter, rho, showing that unobservable factors of both stages are negatively correlated with one another and analysis of escalation cannot be separated from analysis of conflict onset. This situation also suggests that employing such estimators is appropriate in the analysis of escalation.

When we look one of the most important predictors of escalation processes, joint democracy has negative and significant impact on the dependent variables at both stages. Therefore, the straightforward Democratic Peace expectation that joint democracy will make both onset and escalation less likely is confirmed at my empirical analysis. I think the Democratic Peace seems to tell a more convincing story about conflict onset than it does about escalation because at the onset level it is always significant across different escalation measures.

However, when we compare the estimation results of with and without direct escalations, decreases in both value and significance of joint democracy in the first stage estimation after the omission of direct escalations draws our attention. On the contrary, in

---

<sup>15</sup> Improper results in the table of war are quite normal because the employed escalation measure here is restrictive and leads to produce fewer escalation cases.

the second stage estimation we observe increases in both value and significance level of joint democracy after the omission of direct escalations. Especially, the escalation-pacifying effect of joint democracy on mutual use of force (the second stage) seems reasonably more effective and significant after we exclude direct escalations which is inconsistent with Senese (1997). Such a result is quite interesting because of the total omission of 137 cases, only 25 are joint democracies. This kind of observation in joint democracy is quite important to make inferences about direct escalations, their dynamics, and status compared to other MID escalations because joint democracy is a cornerstone predictor identifying escalation dynamics. If the role of this predictor changes somehow with respect to the situation of direct escalations, then we might say that, (1) direct escalations might not have the same dynamics with the other MID escalations implying that they might be conceptually different, (2) we might not comfortably assume that all MIDs have the similar escalatory patterns, and (3) the omission of the direct escalations may not be missing at random.

The results associated with joint democracy appeared in the second stage estimation of different escalation measures (increase in both absolute value of the coefficients and significance level) also suggest that if democratic dyads try to communicate before involving direct use of force, they might find peaceful resolutions for their problems even at the escalation level. These findings fall well in line with arguments highlighting normative advantages democratic dyads employ in resolving conflicts that have already arisen – if one gives peace a chance, democratic dyads are more likely to dissolve a conflict before it escalates (Maoz and Russett, 1993).

## CHAPTER 6

### CONCLUSION

This thesis attempted to propose two important contributions to the literature:

1) Direct escalations might conceptually diverge from other MID escalations, and they might have different dynamics. My replication showed that, without direct escalations, a canonical model on escalation gives varying estimates for joint democracy estimate which has been the most consistent variable across many international conflict studies in terms of being escalation pacifier. Claiming that all MIDs have the similar escalatory patterns is quite hard after these results, implying that the omission of the direct escalations might not be missing at random. Additionally, statistically significant threshold parameters (Cut1 and Cut2) in ordered probit model demonstrates that MID without direct escalation and MID with direct escalation categories should not be collapsed into one category.

2) The onset of direct escalations can be predicted by conventional explanatory variables used in conflict studies. Contiguity, territorial issues (as promoters), being jointly democratic, power status, power preponderance of one party, and having peaceful past (as pacifiers) are the most significant and effective predictors of the onset of direct escalations. Although joint satisfaction has a pacifier impact on direct escalations, it is not as significant as the others. Additionally, observing many cases of direct escalation may be due to the fact that members in a dyad are not well-developed in communication and media, and data collection, or they do not have enough priority in the eyes of database compilers because of their economic backwardness.

Finally, we might suggest that if democratic dyads sit and talk before involving direct use of force at the very beginning of a dispute, they might find peaceful resolutions for their problems even at the escalation level. Perhaps development along this thesis could

explain why direct escalations are different than other MIDs, what predict these cases, and to what extent Democratic Peace seems tell a more convincing story about conflict onset or about escalation.

## REFERENCES

- Bonoma, T. V. (1975) *Conflict: Escalation and deescalation*. Beverly Hills, CA: Sage.
- Braithwaite, A. (2006) "The geographic spread of international conflicts." *Journal of Peace Research*, 43:5, 507-522.
- Braithwaite, A., D. Lemke (2011) "Unpacking escalation." *Conflict Management and Peace Science*, 28:2, 111-123.
- Brecher, M. (1994) *Crises in world politics: Theory and reality*. Oxford, UK: Pergamon.
- Bremer, S. A. (1992) "Dangerous dyads: Interstate war, 1816-1965." *Journal of Conflict Resolution*, 36:2, 309-41.
- Brams, S. J., and D. M. Kilgour (1987) "Threat escalation and crisis stability: A game-theoretic analysis." *American Political Science Review*, 81:3, 833-850.
- Bueno de Mesquita, B. (1981) *The war trap*. New Haven, CT: Yale University Press.
- Bueno de Mesquita, B., and D. Lalman (1992) *War and reason*. New Haven, CT: Yale University Press.
- Carlson, J. C. (1995) "A theory of escalation and international conflict." *The Journal of Conflict Resolution*, 39:3, 511-534
- Cross, J. (1969) *The economics of bargaining*. New York: Basic Books.
- Diehl, P. (1983) "Arms races and escalation: A closer look." *Journal of Peace Research*, 20:3, 205-212.
- Diehl, P. F. (2006) "Just a phase? Integrating conflict dynamics over time." *Conflict Management and Peace Science*, 23:3, 199-210.
- Dixon, W. (1993) "Democracy and the management of international conflict." *Journal of Conflict Resolution*, 37:1, 42-68.
- Dixon, W. J. (1994) "Democracy and the peaceful settlement of international conflict." *American Political Science Review*, 88:1, 14-32.

- Eyerman, J., and R.A. Jr. Hart (1996) "An empirical test of the audience cost proposition: Democracy speaks louder than words." *Journal of Conflict Resolution*, 40:4, 597-616.
- Fearon, J. D. (1994) "Domestic political audiences and the escalation of international disputes." *American Political Science Review*, 88:3, 577-592.
- Fearon, J. D. (1995) "Rationalist explanation for war." *International Organization*, 49:3, 379-414.
- Gartzke, E. (2001) "Democracy and the preparation for war: Does regime type affect states' anticipation of casualties?" *International Studies Quarterly*, 45:3, 467-484.
- Geller, D. S. (1990) "Nuclear weapons, deterrence, and crisis escalation." *Journal of Conflict Resolution*, 34:2, 291-310.
- Ghosn, F., G. Palmer, and S. Bremer (2004) "The Militarized Interstate Dispute data sets, version 3.0: Procedures, coding rules, and description." *Conflict Management and Peace Science*, 21:2, 133-154.
- Gibler, D., and Meredith S. (2004) "Measuring alliances: The Correlates of War Formal Interstate Alliance dataset, 1816–2000." *Journal of Peace Research*, 41:2, 211-222.
- Gleditsch, K. S. (2002) "Expanded Trade and GDP Data", *Journal of Conflict Resolution* 46:5, 712-24.
- Gochman, C. S., and R. J. Leng (1983) "Realpolitik and the road to war: An analysis of attributes and behavior." *International Studies Quarterly*, 27:1, 97-120.
- Gochman, C. S., and Z. Maoz (1984) "Militarized interstate disputes: Patterns, processes and procedures, 1816-1976." *Journal of Conflict Resolution*, 28:4, 585-616.
- Haig, A. (1984) *Caveat*. London: Weidenfeld & Nicolson.
- Hart, R., and W. Reed (1999) "Selection effects and dispute escalation: Democracy and status quo evaluations." *International Interactions*, 25:3, 243-264.
- Heckman, J. J. (1979) "Sample selection bias as a specification error." *Econometrica*, 47:1, 153-161.

- Hensel, P. (1996) "Charting a course to conflict: Territorial issues and interstate conflict, 1816-1990." *Conflict Management and Peace Science*, 15:1, 43-74.
- Holsti, O. R. (1972) *Crisis escalation war*. Montreal: McGill-Queens University Press.
- Huth, P., and T. Allee (2002) *The democratic peace and territorial conflict in the 20th century*. New York: Cambridge University Press.
- Ikle, F. C. (1971) *Every war must end*. New York: Columbia University Press.
- Intriligator, M. D., and D. L. Brito (1984) "Can arms races lead to the outbreak of war?" *Journal of Conflict Resolution*, 28:1, 63-84.
- Jagers, K., and T. R. Gurr (1995) "Transitions to democracy: Tracking democracy's third wave with the Polity III data." *Journal of Peace Research*, 32, 469-482.
- Jones, D., S. Bremer, and J. D. Singer (1996) "Militarized interstate disputes, 1816-1992: Rationale, coding rules, and empirical patterns." *Conflict Management and Peace Science*, 15:2, 163-213.
- Kahn, H. (1965) *On escalation: Metaphors and scenarios*. New York: Praeger.
- Kinsella, D., and B. Russett (2002) "Conflict emergence and escalation in interactive international dyads." *Journal of Politics*, 64:4, 1045-1068.
- Klein, J. P., G. Goertz, and Paul F. Diehl (2006) "The New Rivalry Dataset: Procedures and patterns." *Journal of Peace Research*, 43:3, 331-348.
- Kugler, J., and D. Lemke (1996) *Parity and war*. Ann Arbor, MI: University of Michigan Press.
- Lalman, D. (1990) "The anticipation of interstate conflict." *International Interactions*, 15:3/4, 243-254.
- Lebow, R. N. (1981) *Between peace and war*. Baltimore, MD: Johns Hopkins University Press.
- Lemke, D. (2002) *Regions of war and peace*. New York: Cambridge University Press.
- Lemke, D. (2003) "African Lessons for International Relations Research." *World Politics*, 56:1, 114-138.

- Lemke, D., and S. Werner (1996) "Power parity, commitment to change, and war." *International Studies Quarterly*, 40:2, 235-260.
- Lemke, D., and W. Reed (1996) "Regime types and status quo evaluations: Power transition theory and the democratic peace." *International Interactions*, 22:2, 143-164.
- Leng, R. J. (1980) "Influence strategies and interstate conflict." In *The correlates of war. Vol. 2, testing some realpolitik models*, edited by J. David Singer, 124-57. New York: Free Press.
- Leng, R. J. (1993) "Reciprocating influence strategies in interstate crisis bargaining." *Journal of Conflict Resolution*, 37:1, 3-41.
- Leng, R., and J. D. Singer (1988) "Militarized interstate crises: The BCOW typology and its applications." *International Studies Quarterly*, 32:2, 155-173.
- Lockhart, C. (1979) *Bargaining in international conflicts*. New York: Columbia University Press.
- Maoz, Z. (1983) "Resolve, capabilities, and the outcomes of interstate disputes." *Journal of Conflict Resolution*, 27:2, 195-229.
- Maoz, Z. (1985) "Decision-theoretic and game-theoretic models of international conflict." In *Dynamic models of international conflict*, edited by Urs Luterbacher and Michael D. Ward, 76-111. Boulder, CO: Lynne Rienner.
- Maoz, Z. (1990) *Paradoxes of war: The art of national self-entrapment*. Boston: Unwin Hyman.
- Maoz, Z., and N. Abdolali (1989) "Regime types and international conflict, 1816-1976." *Journal of Conflict Resolution*, 33:1, 3-35.
- Maoz, Z., and B. Russett (1992) "Alliance, contiguity, wealth, and political stability: Is the lack of conflict among democracies a statistical artifact?" *International Interactions*, 17:3, 245-267.
- Maoz, Z., and B. Russett (1993) "Normative and structural causes of the democratic peace." *American Political Science Review*, 87:3, 624-638.
- Morgan, T. C. (1990) "Power, resolve and bargaining in international crises." *International Interactions*, 15:3/4, 279-302.

- Morgan, T. C. (1994) *Untying the knot of war: A theory of bargaining in international crises*. Ann Arbor: University of Michigan Press.
- Morrow, J. D. (1989) "Capabilities, uncertainty, and resolve: A limited information model of crisis bargaining." *American Journal of Political Science*, 33:4, 941-972.
- Moul, W. (1988) "Balances of power and the escalation to war of disputes among the European great powers." *American Journal of Political Science*, 32:2, 241-275.
- Organski, A.F.K., and J. Kugler (1980) *The war ledger*. Chicago: University of Chicago Press.
- Palmer, G., T. London, and P. Regan (2004) "What's stopping you? The sources of political constraints on international conflict behavior in parliamentary democracies." *International Interactions*, 30:1, 1-24.
- Partell, P. (1997) "Escalation at the outset: An analysis of targets' responses in militarized interstate disputes." *International Interactions*, 23:1, 1-35.
- Partell P., and G. Palmer (1999) "Audience Costs and Interstate Crises: An Empirical Assessment of Fearon's Model of Dispute Outcomes." *International Studies Quarterly*, 43:2, 389-405.
- Patchen, M. (1988) *Resolving disputes between nations: Coercion or conciliation?* Durham, NC: Duke University Press.
- Pillar, P. R. (1983) *Negotiating peace: War termination as a bargaining process*. Princeton, NJ: Princeton University Press.
- Powell, R. (1987) "Crisis bargaining, escalation, and MAD." *American Political Science Review*, 81:3, 717-735.
- Powell, R. (1988) "Nuclear brinkmanship with two-sided incomplete information." *American Political Science Review*, 82:2, 155-178.
- Powell, R. (1989) "Nuclear deterrence and the strategy of limited retaliation." *American Political Science Review*, 83:2, 503-519.
- Prins, B., and C. Sprecher (1999) "Institutional constraints, political opposition, and interstate dispute escalation." *Journal of Peace Research*, 36:3, 259-287.

- Reed, W. (2000) "A unified statistical model of conflict onset and escalation." *American Journal of Political Science*, 44:1, 84-93.
- Richardson, L. F. (1960) *Arms and insecurity: A mathematical study of the causes and origins of war*. Pittsburgh, PA: Boxwood.
- Schelling, T. C. (1960) *The strategy of conflict*. Cambridge, MA: Harvard University Press.
- Schelling, T. C. (1966) *Arms and influence*. New Haven, CT: Yale University Press.
- Schultz, K. (2001) *Democracy and coercive diplomacy*. New York: Cambridge University Press.
- Senese, P. (1996) "Geographical proximity and issue salience: Their effects on the escalation of militarized interstate conflict." *Conflict Management and Peace Science*, 15:2, 133-162.
- Senese, P. (1997) "Between dispute and war: The effect of joint democracy on interstate conflict escalation." *Journal of Politics*, 59:1, 1-27.
- Signorino, C., and J. Ritter (1999) "Tau-b or not tau-b: Measuring the similarity of foreign policy positions." *International Studies Quarterly*, 43:1, 115-144.
- Singer, J. D., S. Bremer, and J. Stuckey (1972) "Capability distribution, uncertainty, and major power war, 1820-1965." In *Peace, War, and Numbers*, ed. Bruce Russett, 19-48. Beverly Hills, CA: Sage.
- Siverson, R., and H. Starr (1990) "Opportunity, willingness, and the diffusion of war, 1815-1965." *American Political Science Review*, 84:1, 47-67.
- Siverson, R. M., and R. A. Miller (1993) "The escalation of disputes to war." *International Interactions*, 19:1/2, 77-97.
- Small, M., and J. D. Singer (1982) *Resort to arms: International and civil wars, 1816-1980*. Beverly Hills, CA: Sage.
- Smoke, R. (1977) *War: Controlling escalation*. Cambridge, MA: Harvard University Press.
- Snyder, G. H. (1972) "Crisis bargaining." In *International crises: Insights from behavioral research*, edited by Charles F. Hermann, 217-56. New York: Free Press.

- Snyder, G. H., and P. Diesing (1977) *Conflict among nations: Bargaining, decision making and system structure in international crises*. Princeton, NJ: Princeton University Press.
- Stinnett, D., J. Tir, P. Schafer, P. Diehl, and C. Gochman (2002) "The Correlates of War Project Direct Contiguity data, version 3.0." *Conflict Management and Peace Science*, 19:2, 59-67.
- Thompson, W. (2001) "Identifying rivals and rivalries in world politics." *International Studies Quarterly*, 45:4, 557-586.
- Vasquez, J., and M. Henehan (2001) "Territorial disputes and the probability of war, 1819-1992." *Journal of Peace Research*, 38:2, 123-138.
- Wallace, M. (1979) "Arms races and escalation: Some new evidence." *Journal of Conflict Resolution*, 23:1, 3-16.
- Waltz, K. (1979) *Theory of International Politics*. Reading, MA: Addison-Wesley.
- Wilkenfeld, J. (1991) "Trigger-response transitions in foreign policy crises, 1929-1985." *Journal of Conflict Resolution*, 35:1, 143-69.
- Wittman, D. (1979) "How war ends: A rational model approach." *Journal of Conflict Resolution*, 23:4, 743-763.
- Young, O. R. (1968) *The politics of force: Bargaining during international crises*. Princeton, NJ: Princeton University Press.
- Zagare, F. C. (1987) *The dynamics of deterrence*. Chicago: University of Chicago Press.
- Zagare, F. C. (1992) "NATO, rational escalation, and flexible response." *Journal of Peace Research*, 29:4, 435-454.

# APPENDIX

**Table 1: Descriptive Statistics: Disputes Starting with Direct Use of Force (Direct Escalations)**  
(Dyadic Interstate Conflicts)

<i>Year</i>	<i>Country A</i>	<i>Country B</i>	<i>JointDemoc.</i>	<i>Contig.</i>	<i>Allied</i>	<i>FirstAct</i>	<i>High.Act.A</i>	<i>High.Act.B</i>	<i>Rev.TypeA</i>	<i>Rev.TypeB</i>	<i>Outcome</i>	<i>Settle</i>	<i>RoleA</i>	<i>RoleB</i>
1997	USA	CAN	1	1	1	15	0	15	0	2	7	2	3	1
1996	USA	CUB	0	1	4	16	0	16	0	2	5	3	3	1
1993	USA	HAI	0	0	1	13	13	7	3	2	1	2	1	3
1997	USA	RUS	0	1	4	15	15	0	2	0	5	3	1	3
2000	USA	RUS	1	1	4	15	15	0	2	0	7	2	1	3
1998	USA	SUD	0	0	4	16	16	0	2	0	5	3	1	3
1993	USA	IRQ	0	0	4	16	16	0	4	0	5	3	1	3
1994	USA	IRQ	0	0	4	15	15	0	2	0	7	2	1	3
1998	USA	AFG	0	0	4	16	16	0	4	0	5	3	1	3
1993	CAN	HAI	0	0	1	13	13	0	3	0	1	2	1	3
1993	HAI	ARG	0	0	1	13	0	13	0	3	1	2	3	1
1993	HAI	UKG	0	0	4	13	0	13	0	3	1	2	3	2
1993	HAI	NTH	0	0	4	13	0	13	0	3	1	2	3	2
1993	HAI	FRN	0	0	4	13	0	13	0	3	1	2	3	1
1996	TRI	VEN	1	1	1	16	0	16	0	2	5	3	3	1
1997	TRI	VEN	1	1	1	15	0	16	0	2	5	3	3	1
1999	TRI	VEN	1	1	1	15	0	15	0	2	5	3	3	1
2000	BLZ	GUA	1	1	1	15	7	15	1	1	5	3	3	1
1995	HON	NIC	1	1	1	15	17	17	2	2	5	4	3	1
1997	HON	NIC	1	1	1	15	15	16	2	2	5	3	3	1
2000	HON	NIC	1	1	1	17	17	17	2	2	6	1	1	3
1997	SAL	NIC	1	1	1	15	15	0	2	0	8	3	1	3
1994	NIC	COL	1	1	1	15	15	0	2	0	8	3	1	3
2001	NIC	COL	1	1		15	0	15	0	2	7	1	3	1
1994	COL	VEN	1	1	1	15	0	15	0	1	7	3	3	1
1997	COL	VEN	1	1	1	16	0	16	0	4	6	1	3	1
2000	COL	VEN	1	1	1	16	0	16	0	4	5	3	3	1

Continued on the next page

Table 1 – continued from the previous page

<i>Year</i>	<i>Country A</i>	<i>Country B</i>	<i>Joint Dem.</i>	<i>Contig.</i>	<i>Allied</i>	<i>FirstAct</i>	<i>High.Act.A</i>	<i>High.Act.B</i>	<i>Rev.TypeA</i>	<i>Rev.TypeB</i>	<i>Outcome</i>	<i>Settle</i>	<i>RoleA</i>	<i>RoleB</i>
1995	ECU	PER	0	1	1	17	17	17	1	1	5	3	1	3
1996	ECU	PER	0	1	1	17	17	17	1	1	5	3	3	1
1998	ECU	PER	0	1	1	14	14	11	1	1	6	1	1	3
1996	CHL	UKG	1	0	4	15	0	15	0	2	7	4	3	1
2000	UKG	YUG	1	0	4	15	0	15	0	2	7	3	3	1
1997	POL	RUS	0	1	4	15	0	15	0	4	7	1	3	1
1993	ALB	MAC	1	1	4	17	17	17	1	1	5	3	1	3
1997	ALB	MAC	1	1	4	17	17	17	2	2	5	3	1	3
1994	ALB	GRC	1	1	4	16	17	17	2	1	5	3	3	1
1997	ALB	GRC	1	1	4	16	0	16	0	4	6	1	3	1
2000	CRO	YUG	1	1	4	15	7	15	3	1	5	3	3	1
1993	CRO	BOS	0	1	1	17	17	17	1	1	6	1	1	3
1994	CRO	BOS	0	1	1	17	17	17	1	1	6	1	1	3
1996	CRO	BOS	0	1	1	15	15	0	2	0	7	2	1	3
1993	CYP	TUR	1	1	4	16	16	0	1	0	5	3	1	3
1996	CYP	TUR	1	1	4	16	16	16	1	1	5	3	3	1
1996	BUL	KZK	0	0	4	15	0	15	0	4	7	2	3	1
1993	RUS	GRG	0	1	4	17	17	17	1	1	2	2	1	3
1997	RUS	GRG	0	1	2	14	14	0	2	0	6	1	1	3
1999	RUS	AZE	0	1	2	15	0	15	0	2	7	4	3	1
1998	RUS	NOR	0	1	4	15	0	15	0	2	7	4	3	1
1996	RUS	TUR	0	0	4	16	0	16	0	1	5	3	3	1
2000	RUS	TUR	1	0	4	16	17	17	4	4	5	3	3	1
1994	RUS	AFG	0	0	4	16	16	0	4	0	5	3	1	3
1993	RUS	CHN	0	1	4	15	0	15	0	4	7	3	3	1
1994	RUS	CHN	0	1	4	16	0	16	0	4	5	3	3	1
1993	RUS	JPN	0	1	4	15	16	7	1	4	5	3	1	3
1996	RUS	JPN	0	1	4	15	15	0	1	0	4	1	1	3
2000	RUS	JPN	1	1	4	16	16	0	2	0	5	3	1	3
2000	LIT	EQG	0	0	4	15	0	15	0	2	7	1	3	1
1993	ARM	AZE	0	1	4	17	17	17	1	1	5	3	1	3

Continued on the next page

Table 1 – continued from the previous page

<i>Year</i>	<i>Country A</i>	<i>Country B</i>	<i>Joint Dem.</i>	<i>Contig.</i>	<i>Allied</i>	<i>FirstAct</i>	<i>High.Act.A</i>	<i>High.Act.B</i>	<i>Rev.TypeA</i>	<i>Rev.TypeB</i>	<i>Outcome</i>	<i>Settle</i>	<i>RoleA</i>	<i>RoleB</i>
1996	ARM	AZE	0	1	2	17	17	17	1	1	5	3	1	3
1998	ARM	AZE	0	1	2	17	17	17	1	1	5	3	1	3
2000	ARM	AZE	0	1	2	16	16	0	1	0	5	3	1	3
2001	ARM	AZE	0	1		16	16	0	1	0	5	3	1	3
1994	ARM	IRN	0	1	4	16	16	0	4	0	5	3	1	3
2001	NOR	AUL	1	0		15	0	15	0	4	5	3	3	1
1993	MLI	NIR	1	1	1	17	17	17	2	2	5	3	3	1
2000	BEN	NIG	0	1	1	14	0	14	0	1	5	3	3	1
1993	NIR	CHA	0	1	4	17	17	17	4	4	8	3	3	1
1996	CDI	GUI	0	1	1	14	0	14	0	1	5	3	3	1
1993	CDI	NIG	0	0	1	17	17	17	2	2	8	3	3	1
2001	GUI	SIE	0	1		16	16	11	2	2	5	3	1	3
2001	LBR	SIE	0	1		15	0	15	0	4	7	4	3	1
1997	SIE	NIG	0	0	1	14	17	17	3	3	1	2	3	1
1995	CAO	NIG	0	1	4	17	17	17	1	1	5	3	1	3
1996	CAO	NIG	0	1	4	17	17	17	1	1	5	3	1	3
1998	CAO	NIG	0	1	4	17	17	17	1	1	5	3	1	3
2001	CAO	CEN	0	1		14	0	14	0	1	5	3	3	1
1995	NIG	CHA	0	1	4	14	14	0	1	0	5	3	1	3
1993	CON	DRC	0	1	4	15	0	15	0	4	7	1	3	1
1997	CON	DRC	0	1	4	16	0	16	0	0	5	3	3	1
1995	CON	ANG	0	1	4	17	17	17	4	4	5	3	3	1
1997	CON	ANG	0	1	4	17	17	17	3	3	1	3	3	1
1996	DRC	RWA	0	1	4	17	17	17	1	1	5	3	1	3
1998	DRC	RWA	0	1	4	17	20	20	2	2	5	3	1	3
1994	DRC	ZAM	0	1	4	14	14	0	0	0	3	4	1	3
1999	UGA	RWA	0	1	4	17	17	17	1	1	5	1	1	3
2000	UGA	RWA	0	1	4	17	17	17	1	1	5	1	1	3
1994	UGA	SUD	0	1	4	15	17	17	2	2	5	3	1	3
1999	KEN	ETH	0	1	1	17	17	17	1	2	6	1	3	1
1998	ETH	ERI	0	1	4	17	20	17	1	1	6	1	3	1

Continued on the next page

Table 1 – continued from the previous page

<i>Year</i>	<i>Country A</i>	<i>Country B</i>	<i>Joint Dem.</i>	<i>Contig.</i>	<i>Allied</i>	<i>FirstAct</i>	<i>High.Act.A</i>	<i>High.Act.B</i>	<i>Rev.TypeA</i>	<i>Rev.TypeB</i>	<i>Outcome</i>	<i>Settle</i>	<i>RoleA</i>	<i>RoleB</i>
1994	ETH	SUD	0	1	4	17	17	17	1	1	5	3	1	3
1997	ETH	SUD	0	1	4	17	17	17	2	2	5	3	1	3
1996	ERI	SUD	0	1	4	17	17	17	2	2	6	1	1	3
1997	ERI	YEM	0	1	4	15	15	0	1	0	5	3	1	3
1999	ERI	YEM	0	1	4	15	15	0	2	0	8	4	1	3
2001	ANG	ZAM	0	1		16	16	16	1	2	8	4	1	3
1993	SUD	EGY	0	1	1	15	15	0	1	0	5	3	1	3
1994	SUD	EGY	0	1	1	15	15	0	1	0	5	3	1	3
1995	SUD	EGY	0	1	1	17	17	17	1	1	5	3	3	1
1996	SUD	EGY	0	1	1	16	0	16	0	1	5	3	3	1
1996	IRN	TUR	0	1	4	16	0	16	0	2	5	3	3	1
1999	IRN	TUR	0	1	4	16	0	16	0	2	5	3	3	1
1993	IRN	IRQ	0	1	4	16	16	12	2	2	5	3	1	3
1994	IRN	IRQ	0	1	4	16	16	0	2	0	5	3	1	3
1996	IRN	IRQ	0	1	4	16	16	11	2	2	5	3	1	3
1997	IRN	IRQ	0	1	4	16	16	15	2	2	5	3	1	3
1999	IRN	IRQ	0	1	4	16	16	0	2	0	5	3	1	3
1998	IRN	AFG	0	1	4	15	17	17	3	2	5	4	3	1
1999	IRN	AFG	0	1	4	16	16	0	3	0	5	3	1	3
1995	TUR	IRQ	0	1	4	14	14	0	0	0	5	3	1	3
1999	TUR	IRQ	0	1	4	14	14	0	2	0	5	3	1	3
2001	TUR	IRQ	0	1		16	16	0	2	0	5	3	1	3
1993	IRQ	KUW	0	1	1	17	17	17	1	1	5	3	1	3
1996	IRQ	KUW	0	1	1	16	17	17	1	1	5	3	3	1
1997	SAU	YEM	0	1	1	17	17	17	1	1	8	3	1	3
1999	TAJ	UZB	0	1	2	16	0	16	0	4	5	3	3	1
1999	KYR	UZB	0	1	2	14	0	14	0	4	5	3	3	1
1999	CHN	MON	0	1	4	16	16	0	4	0	5	3	1	3
1995	CHN	TAW	0	1	4	16	0	16	0	1	5	3	3	1
1993	CHN	PRK	0	1	1	17	17	17	2	2	5	3	3	1
1995	CHN	PRK	0	1	1	16	0	16	0	4	5	3	3	1

Continued on the next page

Table 1 – continued from the previous page

<i>Year</i>	<i>Country A</i>	<i>Country B</i>	<i>Joint Dem.</i>	<i>Contig.</i>	<i>Allied</i>	<i>FirstAct</i>	<i>High.Act.A</i>	<i>High.Act.B</i>	<i>Rev.TypeA</i>	<i>Rev.TypeB</i>	<i>Outcome</i>	<i>Settle</i>	<i>RoleA</i>	<i>RoleB</i>
1997	CHN	PRK	0	1	1	17	17	17	4	4	8	3	3	1
1995	CHN	PHI	0	0	4	15	15	15	1	1	5	3	1	3
2001	PRK	JPN	0	0		17	17	17	1	0	5	3	3	1
1999	ROK	JPN	1	1	4	15	0	15	0	2	7	3	3	1
1993	IND	PAK	1	1	2	17	17	20	1	1	5	3	3	1
2000	IND	PAK	0	1	2	17	17	17	1	1	5	3	1	3
2001	IND	PAK	0	1		17	17	17	1	1	5	3	3	1
1995	IND	BNG	1	1	2	17	17	17	4	4	5	3	3	1
1999	MYA	THI	0	1	4	17	17	17	1	1	5	3	1	3
2001	MYA	THI	0	1		17	17	17	2	2	5	3	1	3
1995	THI	DRV	0	0	4	17	17	17	1	1	5	3	3	1
1996	CAM	DRV	0	1	4	14	11	14	1	1	1	2	3	1
1999	DRV	PHI	0	0	4	16	16	0	1	0	5	3	1	3
2000	PHI	PAL	1	0	4	16	0	16	0	2	5	3	3	1
2001	INS	NEW	1	0		17	17	17	2	2	5	3	3	1
1993	PNG	SOL	1	1	4	17	17	17	1	1	5	3	1	3
1996	PNG	SOL	1	1	4	16	16	16	1	1	5	3	1	3

**Table 2:** Determinants of Direct Escalation

	(1) Ordered MID Level
Ordered MID Level (No MID=0, MID w/o Direct Escalation=1, Direct Escalation=2)	
Contiguity	1.30*** (0.046)
Territory	2.09*** (0.11)
Joint Democracy	-0.39*** (0.054)
Joint Satisfaction	-0.046 (0.093)
Both Minors	-0.73*** (0.055)
Power Preponderance	-1.23*** (0.13)
Allied(Defense Pact=1)	0.17** (0.077)
Total GDPperCap of Dyads	0.0060*** (0.0020)
PeaceYears	-0.067*** (0.0039)
PeaceYears.Sq	0.0011*** (0.000086)
PeaceYeara_Cube	-4.30*** (0.44)
Cut1	0.73*** (0.13)
Cut2	1.52*** (0.14)
<i>N</i>	137455
Chi-Squared	3093.7

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

**Table 3:** Selection Models of Dispute Onset and Escalation (Reciprocated)

	(1)	(2)
	w/ Direct Escalations	w/o Direct Escalations
Escalation (Reciprocated)		
Joint Democracy	-0.24 (0.17)	-0.42* (0.23)
Joint Satisfaction	0.34* (0.18)	0.68*** (0.24)
Power Preponderance	0.27 (0.47)	0.80 (0.60)
Allied(Defense Pact=1)	0.37** (0.18)	0.56** (0.25)
Constant	0.083 (0.39)	-0.051 (0.55)
Onset		
Contiguity	1.47*** (0.049)	1.27*** (0.058)
Both Minors	-0.74*** (0.056)	-0.81*** (0.065)
Joint Democracy	-0.16*** (0.052)	-0.097 (0.059)
Joint Satisfaction	-0.030 (0.066)	-0.11 (0.081)
Power Preponderance	-1.06*** (0.15)	-1.27*** (0.18)
Allied(Defense Pact=1)	0.14* (0.073)	0.059 (0.093)
PeaceYears	-0.052*** (0.0042)	-0.051*** (0.0049)
PeaceYears_Sq	0.00079*** (0.000090)	0.00075*** (0.00010)
PeaceYears_Cube	-3.08*** (0.45)	-2.77*** (0.50)
Constant	-1.15*** (0.15)	-1.01*** (0.17)
Rho	-0.34*** (0.10)	-0.52*** (0.15)
<i>N</i>	158397	158268
<i>Censored</i>	158053	158053
<i>Uncensored</i>	344	215
Chi-Squared	11.5	18.5

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

**Table 4:** Selection Models of Dispute Onset and Escalation (Use of Force)

	(1) w/ Direct Escalations	(2) w/o Direct Escalations
Escalation (Use of Force)		
Joint Democracy	-0.35** (0.16)	-0.81*** (0.29)
Joint Satisfaction	0.30 (0.18)	0.45* (0.26)
Power Preponderance	0.35 (0.46)	0.15 (0.67)
Allied(Defense Pact=1)	0.54*** (0.19)	0.63** (0.27)
Constant	0.40 (0.38)	-0.21 (0.61)
Onset		
Contiguity	1.47*** (0.049)	1.27*** (0.059)
Both Minors	-0.75*** (0.056)	-0.81*** (0.066)
Joint Democracy	-0.16*** (0.052)	-0.097 (0.059)
Joint Satisfaction	-0.030 (0.066)	-0.11 (0.081)
Power Preponderance	-1.06*** (0.15)	-1.27*** (0.18)
Allied(Defense Pact=1)	0.14* (0.073)	0.057 (0.093)
PeaceYears	-0.052*** (0.0042)	-0.051*** (0.0049)
PeaceYears_Sq	0.00080*** (0.000090)	0.00074*** (0.00010)
PeaceYears_Cube	-3.13*** (0.45)	-2.75*** (0.50)
Constant	-1.15*** (0.15)	-1.02*** (0.17)
Rho	-0.33*** (0.098)	-0.27* (0.16)
<i>N</i>	158397	158268
<i>Censored</i>	158053	158053
<i>Uncensored</i>	344	215
Chi-Squared	17.6	13.8

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

**Table 5:** Selection Models of Dispute Onset and Escalation (Mutual Use of Force)

	(1) w/ Direct Escalations	(2) w/o Direct Escalations
Escalation (Mutual Use of Force)		
Joint Democracy	-0.26 (0.19)	-0.84** (0.37)
Joint Satisfaction	0.014 (0.20)	0.54* (0.29)
Power Preponderance	0.25 (0.53)	1.31 (0.81)
Allied(Defense Pact=1)	0.36* (0.20)	0.38 (0.31)
Constant	-0.53 (0.44)	-1.16 (0.76)
Onset		
Contiguity	1.47*** (0.049)	1.28*** (0.058)
Both Minors	-0.74*** (0.057)	-0.80*** (0.066)
Joint Democracy	-0.16*** (0.052)	-0.096 (0.059)
Joint Satisfaction	-0.031 (0.066)	-0.11 (0.081)
Power Preponderance	-1.06*** (0.15)	-1.26*** (0.18)
Allied(Defense Pact=1)	0.14* (0.073)	0.054 (0.093)
PeaceYears	-0.052*** (0.0042)	-0.051*** (0.0049)
PeaceYears_Sq	0.00079*** (0.000090)	0.00074*** (0.00010)
PeaceYears_Cube	-3.07*** (0.45)	-2.74*** (0.49)
Constant	-1.15*** (0.15)	-1.03*** (0.17)
Rho	-0.22* (0.11)	-0.45** (0.21)
<i>N</i>	158397	158268
<i>Censored</i>	158053	158053
<i>Uncensored</i>	344	215
Chi-Squared	5.19	10.9

Standard errors in parentheses  
\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

**Table 6:** Selection Models of Dispute Onset and Escalation (Fatality>0)

	(1)	(2)
	w/ Direct Escalations	w/o Direct Escalations
Escalation (Fatalities>0)		
Joint Democracy	-0.76*** (0.21)	-1.55*** (0.48)
Joint Satisfaction	-0.23 (0.21)	0.23 (0.31)
Power Preponderance	0.35 (0.54)	0.45 (0.81)
Allied(Defense Pact=1)	0.31 (0.20)	0.39 (0.32)
Constant	-0.73 (0.45)	-1.07 (0.73)
Onset		
Contiguity	1.47*** (0.049)	1.28*** (0.059)
Both Minors	-0.75*** (0.057)	-0.81*** (0.066)
Joint Democracy	-0.16*** (0.052)	-0.096 (0.059)
Joint Satisfaction	-0.032 (0.066)	-0.11 (0.081)
Power Preponderance	-1.07*** (0.15)	-1.27*** (0.18)
Allied(Defense Pact=1)	0.14* (0.073)	0.055 (0.093)
PeaceYears	-0.052*** (0.0043)	-0.050*** (0.0049)
PeaceYears_Sq	0.00079*** (0.000091)	0.00073*** (0.00010)
PeaceYears_Cube	-3.06*** (0.45)	-2.68*** (0.50)
Constant	-1.14*** (0.15)	-1.02*** (0.17)
Rho	-0.049 (0.11)	-0.060 (0.18)
<i>N</i>	158397	158268
<i>Censored</i>	158053	158053
<i>Uncensored</i>	344	215
Chi-Squared	18.5	11.6

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

**Table 7:** Selection Models of Dispute Onset and Escalation (Fatality>250)

	(1)	(2)
	w/ Direct Escalations	w/o Direct Escalations
Escalation (Fatalities <sub>i</sub> >250)		
Joint Democracy	-1.00*** (0.32)	-5.15 (538.7)
Joint Satisfaction	-0.12 (0.26)	0.55 (0.37)
Power Preponderance	1.07 (0.70)	0.76 (1.08)
Allied(Defense Pact=1)	0.37 (0.23)	0.13 (0.43)
Constant	-1.75*** (0.57)	-2.43*** (0.93)
Onset		
Contiguity	1.47*** (0.049)	1.28*** (0.059)
Both Minors	-0.75*** (0.057)	-0.81*** (0.066)
Joint Democracy	-0.16*** (0.052)	-0.095 (0.059)
Joint Satisfaction	-0.032 (0.066)	-0.11 (0.081)
Power Preponderance	-1.07*** (0.15)	-1.27*** (0.18)
Allied(Defense Pact=1)	0.14* (0.073)	0.055 (0.093)
PeaceYears	-0.052*** (0.0043)	-0.050*** (0.0049)
PeaceYears_Sq	0.00079*** (0.000090)	0.00072*** (0.00010)
PeaceYears_Cube	-3.07*** (0.45)	-2.64*** (0.50)
Constant	-1.14*** (0.15)	-1.02*** (0.17)
Rho	-0.087 (0.14)	0.16 (0.23)
<i>N</i>	158397	158268
<i>Censored</i>	158053	158053
<i>Uncensored</i>	344	215
Chi-Squared	14.9	3.15

Standard errors in parentheses

\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$

**Table 8:** Selection Models of Dispute Onset and Escalation (Fatality>999 or War)

	(1)	(2)
	w/ Direct Escalations	w/ Direct Escalations
<hr/>		
Escalation (War)		
Joint Democracy	-0.42 (0.44)	-30.7 (.)
Joint Satisfaction	0.77** (0.35)	1.32*** (0.47)
Power Preponderance	1.87 (1.24)	1.23 (1.61)
Allied(Defense Pact=1)	-5.21 (1077.8)	-7.65 (.)
Constant	-3.34*** (1.04)	-3.48** (1.36)
<hr/>		
Onset		
Contiguity	1.47*** (0.049)	1.28*** (0.059)
Both Minors	-0.75*** (0.057)	-0.81*** (0.066)
Joint Democracy	-0.16*** (0.052)	-0.096 (0.059)
Joint Satisfaction	-0.032 (0.066)	-0.11 (0.081)
Power Preponderance	-1.07*** (0.15)	-1.27*** (0.18)
Allied(Defense Pact=1)	0.14* (0.073)	0.055 (0.093)
PeaceYears	-0.052*** (0.0043)	-0.050*** (0.0049)
PeaceYears_Sq	0.00079*** (0.000091)	0.00072*** (0.00010)
PeaceYears_Cube	-3.06*** (0.45)	-2.65*** (0.50)
Constant	-1.13*** (0.15)	-1.02*** (0.17)
<hr/>		
Rho	-0.060 (0.24)	0.17 (0.37)
<hr/>		
<i>N</i>	158397	158268
<i>Censored</i>	158053	158053
<i>Uncensored</i>	344	215
Chi-Squared	7.93	.
<hr/>		

Standard errors in parentheses  
\*  $p < .1$ , \*\*  $p < .05$ , \*\*\*  $p < .01$