DYNAMICS OF CIVIL WAR UNDER THE THREAT OF THIRD-PARTY INTERVENTION

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DYNAMICS OF CIVIL WARS UNDER THE POSSIBILITY OF THIRD-PARTY INTERVENTION

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ABSTRACT

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The legitimacy of a third-party intervention into a civil conflict derives from the recent re-conceptualization of state sovereignty. However, practical implications of third-party intervention still need to be studied. This thesis focuses on "moral hazard" as one of the most significant practical implication of the third-party intervention. Moral hazard occurs when a rebel group perceives the intervention as an insurance and escalates the violence within the conflict in order to get international attraction and external intervention so that it ends up being successful.

The aim of this thesis is to examine how the dynamics of a civil conflict between a government and region elite, who demands a higher share from the resources in dispute and start a rebellion, changes when there is a third-party who could intervene in behalf of the region elite if the government uses brutal violence in order to suppress rebellion, by using a three-player extensive game model. The unique equilibrium derived from the model suggests, along with some other implications, ability of the region elite to manipulate the government in order to change the level of violence within the conflict. By that ability, the model indicates, humanitarian intervention is open to possibility of moral hazard since the region elite can escalate the violence in order to attract intervention whenever the expected payoff from the intervention is high enough.

ÖZET

ÜÇÜNCÜ TARAF MÜDAHELESİ TEHDİDİNDE İÇ SAVAŞ DİNAMİKLERİ

Enes Şafak

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Keywords: Üçüncü taraf müdahelesi, insani müdahele, iç savaş, ahlaki tehlike, oyun teorisi

Bir iç savaşa yapılan üçüncü taraf müdahelesi, meşruitiyetini egemenliğin yeniden tanımlanmasından almakta. Yine de üçüncü taraf müdahelesinin pratik etkileri çalışmaya açık. Bu tez, üçüncü taraf müdahelesinin en önemli etkilerinden biri olan "ahlaki tehlike" üzerine odaklanıyor. "Ahlaki tehlike" isyancı bir grubun müdaheleyi bir sigorta olarak algılayarak, uluslararası düzeyde dikkat çekip dış müdahelenin yardımıyla başarılı olmak için çatışmadaki şiddet seviyesini artırması durumunda gerçekleşir.

Bu tezin amacı üç oyunculu bir dinamik oyun modeli kullanarak, bir hükümet ve söz konusu kaynaktan daha fazla pay isteyerek isyan çıkaran bölgesel bir elit arasındaki iç savaş dinamiklerinin, hükümetin kullandığı şiddet seviyesini artırması durumunda müdahele ederek bölgesel elitin yanında yer alacak bir üçüncü tarafın varlığından nasıl etkileneceğini incelemek. Modelden elde edilen eşsiz denge, başka bir takım önermelerle birlikte, bölgesel elitin çatışamının şiddetini artırmak için hükümeti manipule edebilme yeteneği olduğunu gösteriyor. Bu yetenek bölgesel elitin müdaheleden beklenen karşılık yeterince yüksek olduğunda çatışmanın şiddetini artırarak "ahlaki tehlike" yaratabileceğini gösteriyor.

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CHAPTER 1

INTRODUCTION

The aim of this study is examining the dynamics of a civil conflict between a government and a rebellious group over the share of a certain resource when there is a possibility of third-party intervention. In the model, government implements a certain level of violence in order to suppress the rebellion; however, higher levels of violence can create international attraction to the conflict and cause an intervention for humanitarian purposes. The threat of intervention is aimed to keep the level of violence below some level and if the government fails to respect this level intervention punishes the government and compensates the loss of the rebellious group. In that regard, the aim of the intervention is not changing the share in the behalf of the third-party but to protect populations from brutal violence implemented by the government. The study examines the behavior of the government and the rebellious group against the possibility of such intervention.

The end of the Cold War establishes an environment in which armed violence occur more often within states while bipolar international system did not allow for such tensions since they have the chance to spread out and threaten the system. A strict structure was imposed to states belonging to the developing world during the Cold War and internal issues within these states were suppressed so that the great powers did not have to deal with conflicts belonging to their allies. The end of this structure encouraged the rebellious groups all over the world, demanding higher political and fiscal benefits as well as a desire to have more authority on the functioning of a certain region or the whole country. Meantime, the international community embraced the idea of human rights and its universality which encouraged United Nations or certain international coalitions in some cases to intervene into civil wars

in the name of humanitarian purposes. However, whether the external intervention to armed violence within a state can be justified by humanitarian concerns or it is a violation of state sovereignty raised some disagreements.

The external intervention was controversial in all cases whether it is implemented or not. In Rwanda, the international community did not take required actions in order to prevent ethnic crimes and was criticized for the unwillingness even if the intervention is realized after the brutal violence is already happened. In Kosovo, on the other hand, the intervention of NATO against the Serbian forces raised questions about the legitimacy of such an intervention and the boundaries of state sovereignty. In Bosnia, the intervention of the United Nations failed to protect civilians and large number of people were killed during the peace missions. The intervention decision must be evaluated in a case by case nature, however certain measures related with the legitimacy of the intervention was required to be determined.

In 2001, The International Commission on Intervention and State Sovereignty (International Commission on Intervention and State Sovereignty [ICISS], 2001) published a report on humanitarian intervention called "Responsibility to Protect" in order to prepare a justified base for actions in the name of humanitarian purposes (ICISS, 2001). The report starts with the idea that the sovereignty of a state inside its territories does not mean complete control without any accountability but it implies some responsibilities on the state structure as a requirement for the respect and non-intervention into its sovereignty. According to the basic principles of the report, the primary responsibility of the state as a sovereign entity is the protection of its people and their rights and if a state fails to protect its people "as a result of internal war, insurgency repression or state failure, and the state in question is unwilling or unable to halt or avert it, the principle of non-intervention yields to the international responsibility to protect." (p. XI). The prominent part of this responsibility is the prevention of such instances by the international community before any action that can be regarded as intervention. Even when the intervention becomes a necessary action, the international community should consider less coercive measures first. In the report, the military intervention is justified in two cases: large scale loss of life and large scale ethnic cleansing. The loss of life does not necessarily include genocidal intent, but it has to be as an act of state or failure of a state institution to protect its citizens. The ethnic cleansing can be carried out by killing, forced expulsion, acts of terror or rape. If these circumstances are realized or there is a strong suspect of realizing, the international community should take the responsibility to protect and intervene into the situation.

The UN embraced the idea of the responsibility to protect in 2005 World Summit with the votes from General Assembly. The 138th and 139th articles of the resolution A/RES/60/1 states "the responsibility to protect populations from genocide,

war crimes, ethnic cleansing and crimes against humanity" (p. 30). The resolution acknowledges the responsibility of each state to protect its citizens from such crimes and responsibility of the international community to encourage and help states in this way. If this responsibility is failed to be satisfied, then the international community, through the United Nations and UN Security Council, should be prepared to take necessary collective actions in a timely and decisive manner until the peace is established.

The international community and the UN Security Council cannot always agree on whether the reasons for an intervention are realized or not. Yet, the UN decision to embrace the idea of responsibility to protect puts forward the required justification for external intervention into the civil wars. However, the practical issues about the external intervention are still questionable. In most cases, the timing of the intervention is not enough to prevent crimes against humanity. The decision to intervene by the UN or authorization of an international coalition with this duty takes significant time and debate within international community and most of the international players approve such an intervention after some serious crime has been already committed. The intervention is realized after the footage of brutal violence is published through the media all over the world and international public opinion demands an end to the conflict. Even if the intervention saved people from brutal violence, whether it can sustain a long-term peace is another question. Another recently raised question about the humanitarian intervention is related with the actions of the groups that are suffered from the high level of violence. It is argued that these groups might be encouraged by the possibility of an intervention that will punish the government and take the risk of brutal violence in order to reach their political aims if they think that the success is impossible otherwise.

The thesis continues as follows. In Chapter 2 we review the literature about the extended deterrence theory in which a state can be discouraged to attack another state if the latter one has a committed defender to protect her in case of war. Here, the possibility of humanitarian intervention is hoped to deter governments from committing violence against its people and encourage them to fulfill their responsibility against the people as a sovereign. Next, we the present moral hazard literature which argues that the humanitarian intervention can increase the violence as a cause of moral hazard instead of putting a threat in order to limit the level of violence. Chapter 3 propose a three-player intervention model in order to examine the changing dynamics of an internal conflict when there is a possibility of third-party intervention with complete information. Chapter 4 solves the same model with incomplete information over the preference of the third-party. In Chapter 5, we look at the Kosovo war as a case study to the model and the thesis concludes with Chapter 6.

CHAPTER 2

LITERATURE REVIEW

2.1: Extended Deterrence Theory

Extended deterrence theory defines a situation in which a possible attacker relinquishes its decision to attack to a possible target since the target has a credible defender who would intervene into the conflict and fight along the target. In this context, the deterrence of the defender against aggressive behavior to herself is extended to another party who may lack such a deterrence power in order to discourage possible attackers (Huth & Russett 1984, Fearon 1994). The essence of the theory depends on the assumption that the possible attacker would insist in her decision if there would not be a possible intervener around. The existence of the defender or possible intervener changes the expected outcome of the possible attacker by decreasing the probability of winning the war or increasing war-related costs (Smith 1996). In that way, getting into a war by taking the risk of intervention is not beneficial for the attacker anymore.

Most of the literature examines the credibility of the intervener as essential for the extended deterrence by arguing that if the intervention threat is not credible, the attack is inevitable. Therefore, in order to have a bilateral war between the attacker and the defender, the attacker must calculate the credibility of the intervener correct. Otherwise, an attack might turn into a multilateral war (Werner 2000). Therefore, a possible attacker never chooses a target who is believed to have a credible defender but she turns to targets who cannot benefit from the extended-deterrence of a third

party. As a result, Fearon (1994) argues, instances of peace is not only dependent on the existence of non-aggressive actors but it can happen because of deterred aggressive actors; creating a biased sample over bilateral wars.

The primary focus of the theory was the influence of the defender on the actions of the possible attacker by changing the expected payoff she can get as a result of an aggressive behavior. However, the influence does not happen only in one direction according to Werner (2000). She argues that the action of the attacker can also influence the decision of the possible intervener. She defines a two-player model in which an attacker makes a demand and opens a war to a target state and the defender decides whether to intervene or not into the conflict. The model assumes that the defender is hurt from a loss to the attacker as much as the target. Therefore the stakes of war directly affects the well-being of the defender and it takes the stakes of war -the demand from the attacker- into calculation while giving the intervention decision. When the attacker chooses stakes of war low enough for the third-party to bear war costs, then the attacker can avoid intervention and the war stays bilateral. Therefore, she argues that the decision of intervention does not depend only on exogenous factors like the war cost or the influence on the probability of winning but it also depends on the stakes of war. In this way, the attacker can manipulate the third-party, and vice versa.

In previously mentioned works, including Werner's model, the target is assumed to lack the capability of acting strategically. It has no influence on the strategic interaction between the attacker and the defender. In that regard, Yuen (2009) argues that two-player models are insufficient for explaining the issue. Her three-player model generates some interesting results in which the target state can manipulate the attacker and the defender in certain ways.

2.2: Moral Hazard in Humanitarian Intervention

The humanitarian intervention is a widely used concept after the end of the Cold War. As we discussed in the Introduction, the international community embraced the idea of "responsibility to protect" in order to protect civilian lives from large scale death and ethnic cleansing when a sovereign state fails to do so. This idea encourages the international community to support other states to satisfy the requirements of sovereignty but also claims a threat to the ones who fail or do not intend to satisfy this responsibility. In this regard, the idea of "responsibility to protect" can

be considered as a form of extended-deterrence implemented by the international community against the states who intend to commit brutal violence against its own citizens. The possibility of the intervention is hoped to discourage those states to take criminal actions and lower the level of violence in a possible conflict within a state.

However, the moral hazard literature related with such interventions has gained recent attention. Kuperman (2008a) argues that the probability of the humanitarian intervention encourages the sub-state actors to rebel to the government whose retaliation could generate international awareness and some kind of intervention to the conflict which increases the chances of rebel groups to be successful. States on the other hand take extreme measures in order to end the conflict before any intervention is implemented. However, when the intervention occurs, some rebellions might have success with the help of third-parties and this situation can encourage other rebel groups to take similar actions in order to increase government violence. In this scenario, the threat of humanitarian intervention creates a moral hazard problem and encourages the outbreak of higher levels of violence while the intention is exactly opposite.

Economic theory admits that moral hazard can arise in almost every assurance when the insured agent can behave recklessly as a result of decreasing risk of loss. As Kuperman puts forward, the threat of humanitarian intervention can be considered as an insurance for the rebellious groups, protecting them from brutal violence or at least punishing the government as a result of this violence. This insurance can encourage some rebellious groups to reject the terms offered by the government by hoping that better terms can be reached by the intervention. In some cases, they can manipulate the government in a way that increases the level of violence within the conflict so that the humanitarian intervention realizes and compensates the loss of the rebellions.

A very simple solution to this phenomenon could be abandoning the intervention whenever the rebels are found guilty of the high level of violence or increasing level of death-poll. Rowlands & Carment (1998) argues that the international community cannot choose this option for two reasons. First, it might be unable to distinguish the responsible actors of violence since it does not hold certain information over the acts of rebellious groups but has to rely on what is shown to the international world. This argument is supported by Belloni (2006) as well. He uses the term "CNN effect", arguing that evidences of brutal violence are distributed to worldwide media in order to create a public opinion which could force international powers to intervene into the conflict (p. 329). He also quotes from Gberie who says that armed violence pays if it is calibrated on a carefully choreographed ethnic and racial appeal (as cited in Belloni, 2006, p. 335). Second, the international community might be unable

to exclude those who are responsible from the violence from benefits even if they belong to rebel groups. The intervener might stick to the aim of protecting civilian life no matter who escalates the violence (Rowlands & Carment, 1998).

Some authors, on the other hand, argue that the existence of the intervention threat does not increase the level of violence within the conflict, but changes the dynamics of a possible settlement. According to Grigorian (2005), as long as the intervention threat is public, the government should calculate the expected utility and possible losses in case of intervention and behave accordingly instead of being manipulated by armed rebellion. He also states that explicit or implicit encouragement of third-party for ethnic radicalization should not be counted as moral hazard since the concept requires an action from rebellions in contrast to third-party intention. In that regard, the only intention of the third-party must be cease of violence or relative punishment in order to have a moral hazard situation. Cetinyan (2002) proposes a three-player model within this context and argues that the government and the ethnic group in minority do not necessarily fight with each other. More importantly, the intervention threat does not have any influence on the outbreak of a war or the level of violence. Instead, the existence of such a threat changes the expected payoffs of the parties; therefore changes the matters of the settlement. However, the result of his model depends on complete information in which both the government and the minority can estimate the decision of the intervener and its effects on the conflict beforehand. Cetinyan argues that the outbreak of violence is related with information asymmetries and commitment problems. In that sense, the government might increase the level of violence if it does not hold complete information over the rebellious groups and the intervener or believes that the intervention threat is not credible enough.

Another important reason behind the brutal act of the government in spite of intervention threat is proposed by Nzelibe (2008), saying that the government might lack the capability of selective violence. The incompetency of the state in differentiating rebels from the civilian members of the minority might result in a non-selective and indiscriminative violence against the people as a whole. The government might find herself in a situation in which she has to act brutally in order to suppress the rebellion. Since the other option is refraining from the conflict and accepting demands from the rebellious group, the government might take the risk of intervention. Besides, in that way the government might signal other possible rebellions by not avoiding the war even though a settlement might be more beneficial in the short-run.

The literature above argues that the possibility of intervention increases the expected payoff of rebel groups from the intervention significantly. As a result, they manipulate the government and take the risk of extreme violence in order to attract international awareness and cause a humanitarian intervention. Such

"suicidal rebellion" (Kuperman, 2008b) might be the only way to be successful with the help of intervention. Even though this could be true mathematically, how rebel or minority groups can take the risk of extreme violence or even genocide is still a question. Nzelibe (2008) argues that the reason behind this inconceivable risk might be an agency problem between rebel leaders and the people. First, rebel leaders might be after a personal benefit from the intervention in form of international recognition or post-war authority; or they might believe that human loss is not an issue in order to be successful. Second, they might avoid punishment from the government in the arbitrary and chaotic nature of indiscriminative violence which might create an environment for rebel leaders to escape from government retaliation while keeping armed rebellion. Lastly, indiscriminative violence against the minority might encourage the masses to support the rebel leaders since the brutal violence might create a need for revenge from the government. The leaders might escalate the violence from the government in order to mobilize the masses against the government.

Previously mentioned literature assumes that the payoff of the intervener and the target is highly correlated in most cases. This correlation can be considered necessary in the extended deterrence theory since the interest of the intervener to the conflict comes from its alliance with the target state whose well-being increases the payoff of the intervener as well. In Werner (2000) and Yuen (2009), the benefit target gets from her share of the resources in dispute is equal to the benefit of the intervener/defender gets when the target controls this share. The payoffs they end up with differ only via costs they must bear during the war. However, using the same concept for a model related with humanitarian intervention might lead to misdirection. In Cetinyan (2002), however, third-party has a certain desired distribution over the resources between the government and the rebellious group and its payoff changes according to degree the result mimic this distribution.

In our study, the third-party looks at the level of violence within the conflict and intervenes only if this level reaches some certain threshold determined by the intervention cost of the third-party. The third-party gets disutility from the violence and intervenes at a point in which the level of violence implemented by the government against rebellious group reaches an unacceptable degree. In that regard, third-party gets no benefit from the distribution of the resources between government and rebellious group and has no desire to affect this distribution. The only purpose of the intervention threat is to prevent violence to reach a brutal level that creates irrevocable damage against civilians and to punish the government in case of intervention. Our model indicates that, with the sole purpose of decreasing the level of violence, intervention threat from the third-party might create moral hazard situation and indirectly cause an increase in the level of violence.

CHAPTER 3

THE INTERVENTION MODEL WITH COMPLETE INFORMATION

The game consists of three decision makers, namely the region elite (R), the government (G), and the potential intervener (I). First (at $t = 1$), R demands a change in the status-quo in her favor and declares the demand level, $x \in [0, \bar{x}]$. If the demand level is zero, it means the region elite does not take the risk of conflict and does not want any change in the status-quo. This demand does not necessarily mean higher share of territory or independence on certain land. It could be regarded as more autonomy on the region, higher share from taxes or cultural demands like education in mother tongue etc. The demand level is assumed to be bounded above with an arbitrarily high number $\bar{x}$ which, for example, might correspond to independence or highest amount of war compensation.

Then, (at $t = 2$) G decides in which way she responds to the demand of the R. Since the object of analysis in this study is the political violence between the government and the region elite (and how the possibility of a third party intervention shapes it), we interpret the declaration of x as a hostile act on the part of the region elite and specifically focus on environments where the government responds the regional elite's demand x with some sort of opposition. Even though the government chooses not to respond the demand with violence, it does not necessarily mean that the government concedes to the demand without any challenge. In that case, the government engages into the conflict by solely political means and there is still a possibility that the government may still achieve staying in status-quo. At this node, the government decides on the level of violence $a \in [0, 1]$. A higher level of violence generates a higher probability for the government to win the conflict and

to successfully suppress the rebellion. However, higher levels of violence can cause global attraction to the issue and result in third-party intervention to the conflict.

In the last stage of the game ($t = 3$), the third-party decides whether to intervene or not to the conflict because of humanitarian reasons, after observing the level of violence the government uses and the war cost it must bear in a multilateral war. Formally the third-party decides on dummy a variable $\alpha \in \{0, 1\}$, which gets the value of 1 in case of intervention and 0 otherwise.

The game has three generic outcomes. It could end with status-quo if the region elite does not issue any demand, it could stay as a bilateral war if the third-party chooses not to intervene and it could create a multilateral war if the third-party intervenes.

3.1: Payoffs

Payoffs of the region elite and the government depends on the demand level x, the level of violence a and the intervention decision by the third-party in addition to the following exogenous parameters. First one is the probability of elite to be successful in a political conflict that does not include any violence $p \in [0, 1]$. This probability is a constant parameter and indicates the probability of elite to get the demand as a result of a solely political conflict in which the government chooses zero level of violence. Second is the third-party division after intervention $x_u \in [0, \bar{x}]$. The division determines the amount of change from the status-quo in favor of the region elite once the intervention is realized and it is known by all parties before the game has started. Considering x_u as a personal act of the third-party against the government might be misleading in real life examples. Rather it should be considered as the change in status-quo after an intervention is realized. In most cases, third-party intervention forces both sides to sit on a table and make a settlement which generally gives more shares to the region elite related to status-quo. In some other cases, third-party intervention finds government officials guilty of humanitarian crime and members of the minority group gets empty seats in the bureaucracy. Even though there is no pre-determined third-party division, previous examples of humanitarian intervention and their results can be used to determine such parameter. Chapter 5 will give a good example of this as the end of the Bosnia War with Dayton Peace Agreement created the perception of the result of intervention is settlement table which might end up with independence. Therefore, we continue to

use term third-party division in order to refer to this situation. The third-party uses this division as a punishment to the government as a response to brutal violence against the region elite if the conflict ends up with the intervention and expects that the government is discouraged to use higher levels of violence since it would mean certain loss for the government. In that sense, higher x_u means higher punishment to the government once the conflict ends up with intervention. Last ones are war cost parameters for region elite and government ($r \in [0,1]$ and $g \in [0,1]$ respectively). Both are constant numbers within this range and getting into linear war cost of the parties.

We assume that the third-party division is higher than the cost parameter of the region elite, formally $x_u > r$. This assumption is used in order to provide an environment in which the region elite gets better off than the status-quo in case of intervention even though the government implements highest possible level of violence ($a = 1$). With this assumption we discard cases in which the region elite gets worse off than the status-quo even with the intervention and consider a situation in which the region elite prefers intervention to the status-quo. This assumption is consistent with the intention behind the study which examines the behavior of the region elite and the government when there is an outside option for the elite instead of a bargaining game only with the government. When this assumption is violated, the elite might prefer bilateral war to intervention for some instances. However, such preference does not allow us to examine the effect of third-party intervention threat completely. Therefore, we maintain this assumption throughout the study and look for cases in which the region elite prefers intervention to the status-quo.

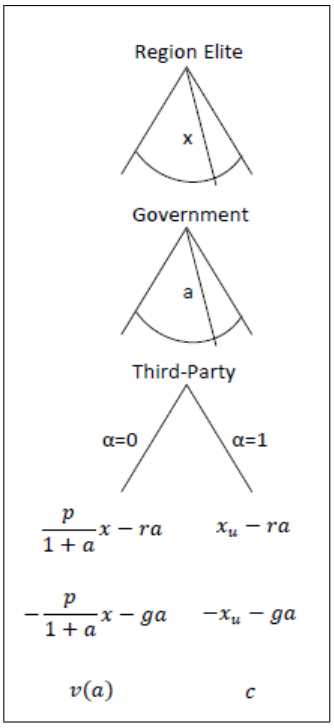
The probability of region elite to win the conflict in case of no intervention is a function depending on p and decreasing with the level of violence by the government. Formally,

$$\begin{aligned} P(region\ elite\ wins|p,a) &= \frac{p}{1+a} \\ P(government\ wins|p,a) &= 1 - \frac{p}{1+a} \end{aligned}$$

Moreover, both parties must bear the cost of war which is an increasing linear function of the level of violence depending on the cost parameter of the party. Therefore, in case of no intervention, the region elite and the government get following payoffs

$$\begin{aligned} u_r(x,a,\alpha &= 0) = \frac{p}{1+a}x - ra \\ u_g(x,a,\alpha &= 0) = -\frac{p}{1+a}x - ga \end{aligned}$$

If the third-party decides to intervene, then both region elite and government



: **Figure 3.1:** The Intervention Model with Complete Information

get exogenously determined shares and bear the cost of war. In that case

$$\begin{aligned} u_r(x, a, \alpha &= 1) = x_u - ra \\ u_g(x, a, \alpha &= 1) = -x_u - ga \end{aligned}$$

The third-party gets disutility from the violence if it does not intervene to the conflict. This is represented by the function $v(a)$ which is decreasing with level of violence and becomes zero when the government chooses $a = 0$. If the third-party intervenes to the conflict, then it has to bear a constant war cost $c \in \mathbb{R}_-$, which is a negative real number.

$$\begin{aligned} u_t(\alpha &= 0|x, a) = v(a) \\ u_t(\alpha &= 1|x, a) = c \end{aligned}$$

Figure 3.1 represents the extensive form game; actions and expected payoffs of the players.

3.2: Equilibrium

In the literature, main reason behind an intervention is generally seen as information asymmetry over the characteristics of the third-party. When the government does not know the exact level the intervention will be implemented, it might increase the level of violence believing that the intervention is a remote possibility. Otherwise, some argue, the government can calculate her expected payoff from the intervention and settle an agreement with rebellion without provoking any intervention or keep the level of violence at a lower level and sustain bilateral war. This idea depends on the underlying assumption that the government always prefers bilateral war over intervention. By that assumption, the government avoids a level of violence that will bring intervention for sure. This assumption is violated in our model, if third-party division is not that hurting for the government. If x_u is low enough, the government might prefer intervention and choose higher levels of violence in order to suppress region elite more effectively while enduring slight punishment.

In this section we use backward induction in order to solve the game and find Subgame Perfect Nash Equilibria of the game. In that regard, we put forward certain conditions that satisfy the underlying assumption about the preference of the government. When the assumption is satisfied we expect to find equilibiria with non-intervention. We also look at cases in which the assumption is not satisfied and check whether there is any SPNE or not.

The violence threshold for the intervention, a^*, can be found by equating above payoffs of the third-party, $v(a^*) = c$. The third-party intervenes whenever the government chooses a higher violence level than the threshold and does not intervene otherwise. If the level of violence within the conflict is equal to a^*, then the third-party is indifferent between intervening or not. Therefore the government faces an additional trade-off when deciding on the level of violence. More brutal violence increases the probability of winning the conflict but it can also cause an intervention in addition to increasing war cost.

At $t = 3$, the third-party decides whether to intervene or not according to her war cost and the level of violence chosen by the government. In accordance with the intervention threshold which satisfies $v(a^*) = c$, the best response function of the third-party is as follows:

$$B_t(x, a) = \begin{cases} \alpha = 0 & \text{if } a < a^* \\ \alpha = 1 & \text{if } a > a^* \\ \alpha = \{0, 1\} & \text{if } a = a^* \end{cases}$$

We solve the game in two subsections; in the first one, third-party does not intervene when it is indifferent and in the second subsection the third-party intervenes when it is indifferent. In both cases, we first implement the underlying assumption for government to prefer bilateral war to multilateral war in any circumstances. In order to satisfy this assumption, we put some constraint over the third-party division x_u, and look for equilibria with this constraint. Then, we disregard the assumption and check whether there is any other equilibrium or not.

3.2.1: Non-intervention at a^*

In this case the optimal choices of the government and the region elite can be calculated for a situation in which the government avoids intervention. At $t = 2$, the government must choose a level of violence that does not exceed the threshold a^* in order not to generate an intervention. For this range, the government tries to maximize the following objective function

$$\max_{a\in[0,a^*]} -\frac{p}{1+a}x - ga$$

In that case, the optimal choice for the government depending on demand level and non-intervention is as follows

$$a(x,0) = \begin{cases} 0 & \text{if } x \in [0, \frac{g}{p}] \\ \sqrt{\frac{px}{g}} - 1 & \text{if } x \in [\frac{g}{p}, \frac{g}{p}(1+a^*)^2] \\ a^* & \text{if } x \in [\frac{g}{p}(1+a^*)^2, \bar{x}] \end{cases}$$

Above choices of the government generates 3 ranges for the region elite, at $t = 1$.

Range 1 $x \in [0, \frac{g}{p}]$

For a demand level in this range the government chooses $a(x, 0) = 0$ which generates the following objective function for the region elite

$$\max_{x\in[0,\frac{g}{p}]} px$$

The region elite maximizes its expected utility in this range at $x = \frac{g}{p} = x_1^*$. Corre-

sponding payoff from this choice is

$$u_r^*(x_1^*, 0, 0) = g$$

Range 2 $x \in [\frac{g}{p}, \frac{g}{p}(1+a^*)^2]$

For a demand level in this range the government chooses $a(x,0) = \sqrt{\frac{px}{g}} - 1$ which generates the following objective function for the region elite

$$\max_{x \in [\frac{g}{p}, \frac{g}{p}(1+a^*)^2]} \frac{p}{1+a_g(x,0)}x - ra_g(x,0)$$

The optimal demand level for the region elite in this range depends on the relationship between cost parameters of the government and the region elite. If $g > r$, then the objective function is an increasing concave function and gets its maximum value at the end of the range. If $g < r$, then the objective function is a decreasing convex function and gets its maximum value at the beginning of the range. If both parameters are equal to each other, then the region elite gets a constant payoff from any demand level from this range. Formally,

$$x_2^* = \begin{cases} \frac{g}{p} & \text{if } g < r \\ \frac{g}{p}(1+a^*)^2 & \text{if } g > r \\ x \in [\frac{g}{p}, \frac{g}{p}(1+a^*)^2] & \text{if } g = r \end{cases}$$

We let $\frac{g}{p} = x_{21}^* = x_1^*$ and $\frac{g}{p}(1+a^*)^2 = x_{22}^*$ for future notation. Expected utilities from these choices are as follows

$$\begin{aligned} u_r(x_{21}^*, a_g(x_{21}^*, 0), 0 | g &< r) = g \\ u_r(x_{22}^*, a_g(x_{22}^*, 0), 0 | g &> r) = g + (g-r)a^* \\ u_r(x, a_g(x,0), 0 | g &= r) = r = g \end{aligned}$$

Range 3 $x \in [\frac{g}{p}(1+a^*)^2, \bar{x}]$

For a demand level in this range the government chooses $a(x,0) = a^*$ which generates the following objective function for the region elite

$$\max_{x \in [\frac{g}{p}(1+a^*)^2, \bar{x}]} \frac{p}{1+a^*}x - ra^*$$

The region elite maximizes its expected utility in this range at $x = \bar{x}$. Corresponding payoff from this choice is

$$u_r^*(\bar{x}, a^*, 0) = \frac{p}{1+a^*}\bar{x} - ra^*$$

Next, we will look at optimal choice of the region elite in three conditions for cost parameters of the government and the region elite.

Condition 1 ($g > r$)

$$x^* = \bar{x}$$

Condition 2 ($g = r$)

$$\begin{array}{ll} x^* = \bar{x} & \text{if } \frac{p}{1+a^*}\bar{x} - ra^* > g \\ x^* \in \{\bar{x}\} \cup [x_1^*, x_{22}^*] & \text{if } \frac{p}{1+a^*}\bar{x} - ra^* = g \\ x^* \in [x_1^*, x_{22}^*] & \text{if } \frac{p}{1+a^*}\bar{x} - ra^* < g \end{array}$$

Condition 3 ($g < r$)

$$\begin{array}{ll} x^* = \bar{x} & \text{if } \frac{p}{1+a^*}\bar{x} - ra^* > g \\ x^* \in \{\bar{x}, x_1^*\} & \text{if } \frac{p}{1+a^*}\bar{x} - ra^* = g \\ x^* = x_1^* & \text{if } \frac{p}{1+a^*}\bar{x} - ra^* < g \end{array}$$

Above conditions imply that there are three optimal choices for the region elite according to the values of exogenous parameters. Following three pairs represent the optimal choice of the region elite and the government if the latter avoids intervention in any circumstances

$$(\bar{x}, a^*) \tag{1}$$

$$(x, \sqrt{\frac{px}{g}} - 1) \ \forall x \in [x_1^*, x_{22}^*] \tag{2}$$

$$(\frac{g}{p}, 0) \tag{3}$$

We look at the minimum outcomes for the government from these pairs so that we can put a constraint on x_u in order to prevent the government from choosing a level of violence that generates intervention, i.e. $\alpha = 0$. For the second row expected utility of the government depending on x is

$$-2\sqrt{pgx} + g$$

which decreases in the demand level. Therefore, the government gets the minimum

expected utility if the region elite chooses the maximum demand level in this range. Followings are the minimum expected utilities the government can get from possible pairs of optimal choices in case of non-intervention.

$$\begin{aligned} u_g(\bar{x}, a^*) &= -\frac{p}{1+a^*}\bar{x} - ga^* \\ u_g(x_{22}^*, \sqrt{\frac{px}{g}} - 1) &= -g - 2ga^* \\ u_g(x_1^*, 0) &= -g \end{aligned}$$

Now we look at the expected utility of the government in case of intervention in order to make a comparison between expected payoffs from intervention and no intervention cases. The objective function of the government in that case is as follows

$$\max_{a \in (a^*, 1]} -x_u - ga$$

Since the expected utility of the government does not depend on the demand level in this case, she gets higher expected utility as the level of violence gets lower. Since the third party does not intervene at a^*, the government chooses a level in the range $(a^*, 1)$. In that case the expected value of the government is from intervention can get following values

$$u_g(x, a, 1) \in (-x_u - g, -x_u - ga^*)$$

The government is never tempted by the intervention if the minimum expected utility she can get if she avoids the intervention is higher than the maximum expected utility that can be generated from the intervention. This condition is satisfied if

$$-x_u - ga^* \leq \min\{-\frac{p}{1+a^*}\bar{x} - ga^*, -g - 2ga^*\}$$

which forces the following constraint over the third-party division

$$x_u \geq -\max\{-\frac{p}{1+a^*}\bar{x}, -g - ga^*\}$$

This condition ensures that there is at least one SPNE in which the third-party does not intervene to the conflict for this case. If the condition is not satisfied, the government can deviate from the strategy that brings non-intervention by increasing the level of violence and cause intervention. However, the government does not have a best response to the intervention decision of the third-party since she tries to minimize the level of violence within the set of $(a^*, 1]$. Therefore, if the condition is

not satisfied, then there is no SPNE in this case.

3.2.2: Intervention at a^*

A similar methodology is implemented for this case as well. In order to avoid intervention, the government must choose the level of violence in the set $[0, a^*)$. The optimal choice of the government in case of non-intervention is as follows:

$$a(x, \alpha = 0) = \begin{cases} 0 & \text{if } x \in [0, x_1^*] \\ \sqrt{\dfrac{px}{g}} - 1 & \text{if } x \in [x_1^*, x_{22}^*) \end{cases}$$

If the region elite chooses a demand level $x = x_{22}^*$, expected utility of the government gets its maximum value at $a = a^*$, however the government cannot choose this level in no intervention case since the strategy set is openly bounded above. For higher demand levels, the government faces with the same issue as well. Therefore, for demand levels $x \geq x_{22}^*$, there is no equilibrium which includes no intervention decision by the third-party.

Range 1 $x \in [0, x_1^*]$

The first range generates the same decisions with the first case in which the third-party does not intervene when it is indifferent. In this range the demand level that gives highest expected utility to the region elite is $x = x_1^*$ and

$$u_r^*(x_1^*, 0, 0) = g$$

Range 2 $x \in [x_1^*, x_{22}^*)$

This range also generates similar results with the first case except when $g > r$. If this condition is applied, expected utility of the region elite gets its maximum value at $x = x_{22}^*$, however the elite cannot choose this level since the strategy set is openly bounded above. Therefore, the optimal choice for the region elite in this range is

$$x_2^* = \begin{cases} x_1^* & \text{if } g < r \\ x \in [x_1^*, x_{22}^*) & \text{if } g = r \end{cases}$$

Possible pairs of optimal choices, depending on the values exogenous parameters get, are as follows if the government avoids intervention in any circumstances:

$$(x_1^*, 0)$$

$$(x, \sqrt{\frac{px}{g}} - 1) \forall x \in [x_1^*, x_{22}^*)$$

The region elite gets the same expected utility from both pairs but expected utility of the government changes according to the chosen demand level. For the first pair, the expected utility of the government is

$$u_g(x_1^*, 0) = -g$$

For the second pair, the expected utility of the government depending on x is

$$-2\sqrt{pgx} + g$$

which decreases in the demand level. Therefore the expected utility of the government in this range has a lower bound in which the demand level is x_{22}^*

$$u_g(x, \sqrt{\frac{px}{g}} - 1 | x \in [x_1^*, x_{22}^*)) < -g - 2ga^*$$

Clearly, the second pair gives lower expected utility to the government.

In case of intervention, the government can maximize her expected utility by choosing the lowest level of violence that causes third-party intervention. In that case the expected utility of the government from intervention becomes

$$u_g(x, a^*, 1) = -x_u - ga^*$$

The government is never tempted by the intervention if the maximum expected utility she can get from the intervention is lower than the minimum expected utility she can derive if she avoids intervention. This condition is satisfied if

$$-x_u - ga^* \leq -g - 2ga^*$$

which forces the following constraint over the third-party division

$$x_u \geq g + ga^*$$

This condition ensures that there is a SPNE in which the third-party does not intervene to the conflict for this case. If the condition is not satisfied, then the government can deviate to a^* and cause intervention since it is more beneficial for herself.

3.3: Analysis

If both conditions for x_u are satisfied, the game has multiple SPNE in which the third-party does not intervene and has no SPNE with intervention. As mentioned earlier, conditions on third-party division correspond to the underlying assumption in the literature and lead government to prefer bilateral war over intervention. If this condition is satisfied, the government never implements a level of violence that can generate third-party intervention even if the demand level of the region elite is very high. Since the government knows the true value of intervention threshold, she is not manipulated by the region elite in case of complete information. In that regard, the model is compatible with Cetinyan (2002) whose study suggests that the possibility of intervention does not necessarily contributes to violence but it changes the terms of the agreement or the stakes at bargaining. If the government never yields intervention, then she never resorts to brutal violence.

The third-party division can be considered as a punishment for the brutal violence the government has implemented and if the standard of this punishment is high, then the government never implements brutal violence against the region elite. In order to prevent governments from resorting to extreme violence, international community must make credible threats to the government who intends to implement brutal violence in order to suppress the rebellion. The conditions on x_u ensures that the punishment is high enough for government to avoid intervention in any circumstances.

If the conditions on x_u is not satisfied, there is a SPNE in which the government chooses a^* in response to certain demand level and the third-party intervenes. This equilibrium implies that, if the punishment to the government is not high enough, she can prefer intervention to bilateral war for some instances and stick with the level of violence that generates intervention.

In the next chapter, we look at information asymmetries and the effects of the possibility of intervention on the dynamics of the conflict between the region elite and the government.

CHAPTER 4

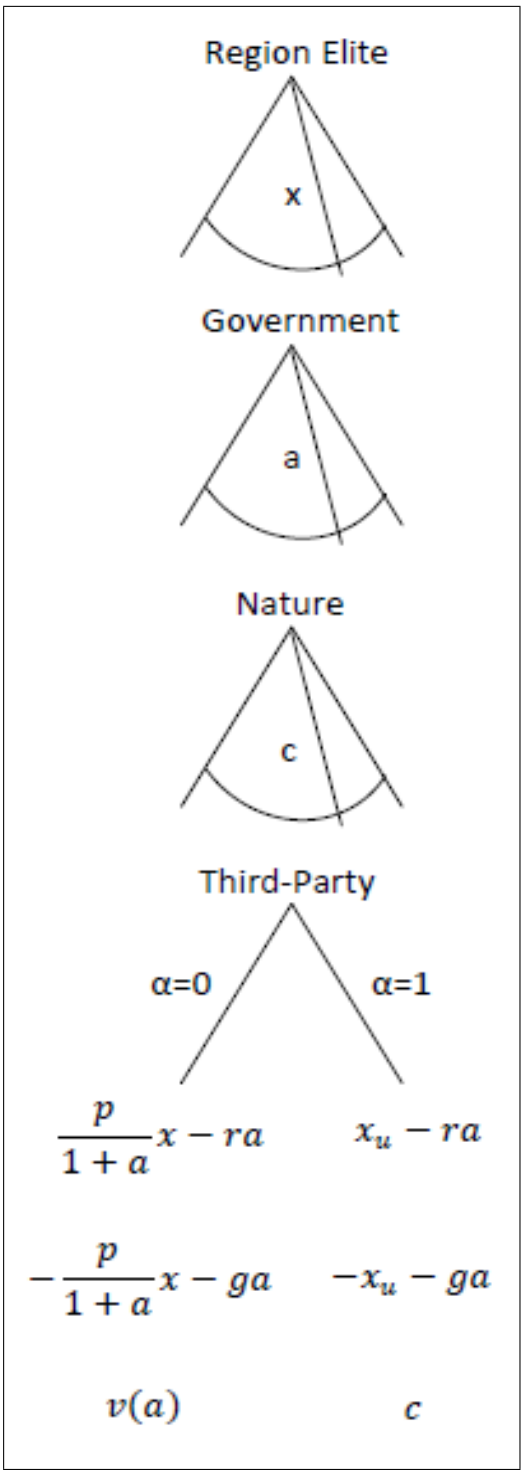
THE INTERVENTION MODEL WITH INCOMPLETE INFORMATION

4.1: The Model

In case of incomplete information, both the region elite and the government lack certain information over the war cost of the third-party. The extensive form game is represented in Figure 4.1 by adding the decision of the nature before the decision node of the third-party. Since both parties do not know the cost of the third-party, they do not know the true value of intervention threshold as well. The threshold a^* is assumed to be uniformly distributed over $[0, 1]$ for simplicity. At the boundaries, the decision of the third-party is certain: it does not intervene in the minimum level of violence and it certainly intervenes if the level of violence gets to its maximum.

We solve the model by backward induction while keeping the true value of a^* unknown for the region elite and government. Since a^* is uniformly distributed in $[0, 1]$, every level of violence generates a probability equal to itself for the true threshold to be lower than the chosen level. So, if the government chooses the level of violence as a, it means that third-party will intervene to the conflict with probability of a. Both region elite and the government adjust their expected payoffs accordingly.

At $t = 3$, the third-party decides whether to intervene or not into the conflict and the decision depends on the true value of parameter c and function v. As it was



: **Figure 4.1:** The Intervention Model with Incomplete Information

in the complete information, best response of the third-party is as follows

$$B_t(x,a) = \begin{cases} \alpha = 0 & \text{if } a < a^* \\ \alpha = 1 & \text{if } a > a^* \\ \alpha = \{0,1\} & \text{if } a = a^* \end{cases}$$

Since the region elite and the government do not know the true value of c and a^*, they make their decision according to their belief about a^*. Since a^* is uniformly distributed in $[0,1]$, every level of violence generates a probability equal to itself for the true threshold to be lower than the chosen level. So, if the government chooses the level of violence as a, it means that third-party will intervene to the conflict with probability of a. Both region elite and the government adjust their expected payoffs accordingly.

At $t = 2$, the government chooses a level of violence a_g, and faces an intervention with probability a_g, and does not face any intervention with probability $1 - a_g$. When the expected utility of the government is written accordingly, she tries to maximize the following objective function:

$$\max_a (1-a)(-\frac{p}{1+a}x - ga) + a(-x_u - ga)$$

which is a concave function and maximized at

$$a(x) = -\frac{1}{g+x_u}\left(g + x_u - \sqrt{2}\sqrt{px\,(g+x_u)}\right)$$

The optimal level of violence depends on x and can take values from the interior of the strategy set of the government if the demand level falls in a certain range. When the demand level is out of this range, the level of violence takes values at the boundaries. Therefore, the optimal choice of the government at this node is the following

$$a(x) = \begin{cases} 0 & \text{if } x \leq \dfrac{g+x_u}{2p} = x_1^* \\ 1 & \text{if } \bar{x} \geq x \geq \dfrac{2(g+x_u)}{p} = x_2^* \\ -\dfrac{1}{g+x_u}\left(g + x_u - \sqrt{2}\sqrt{px\,(g+x_u)}\right) & \text{if } x_1^* < x < x_2^* \end{cases}$$

The optimal level of violence gets 0 when the demand level is equal to x_1^* and for every demand below this demand level, the government responds with solely political means by choosing the minimum level of violence and faces a zero probability for the intervention. Demand levels in this range are not high enough for government to oppose in a way that increases the probability of intervention. Similarly, the optimal

level of violence becomes 1 when the demand level is equal to x_2^* and for every demand above this level, the government chooses the maximum level of violence and intervention becomes certain.

Once the decision of the government is determined, we look at the decision of the region elite in order to find the Subgame Perfect Nash Equilibrium of the game. At $t = 1$, the region elite has a similar objective function since the probability of intervention is determined by the level of violence the government chooses. Therefore, the region elite can expect an intervention from the third-party by probability a_g. Hence, its objective function is as following

$$\max_x (1 - a(x))(\frac{p}{1 + a(x)}x - ra) + a(x)(x_u - ra(x))$$

Above we found the best response of the government according to demand level chosen by the region elite. Therefore, we will look at three cases in which the region elite finds out the demand level that maximizes the expected utility in that range. Next step, would be comparing these utilities and choose the one that gives the highest benefit.

Case 1 $x \in [0, x_1^*]$

In order to make the government to choose zero level of violence the demand must be between 0 and x_1^*. For such a demand level, the government chooses the minimum level of violence and both parties know that there will not be an intervention for sure. In that case the objective function reaches its maximum value at $x = x_1^*$. The utility driven from these choices is

$$u_R(x_1^*; 0, 0) = \frac{g + x_u}{2}$$

Case 2 $x \in [x_2^*, \bar{x}]$

In order to make the government to choose the maximum level of violence, the demand must be higher than x_2^*. When the government chooses the maximum level of violence, the intervention is certain and the payoff of the region elite is the same for every demand level since she gets the third-party division while suffering the war cost from the level of violence. Formally, the utility of the region elite in this case is

$$u_R(x \in [x_2^*, \bar{x}], 1, 1) = x_u - r$$

Therefore all $x \in [x_2^*, \bar{x}]$ is and optimal action for the region elite.

Case 3 $x \in [x_1^*, x_2^*]$

For the next range, a demand level between x_1^* and x_2^* makes the government to choose

$$a(x) = -\frac{1}{g + x_u}\left(g + x_u - \sqrt{2}\sqrt{px\left(g + x_u\right)}\right)$$

In that case, the objective function of the region elite reaches its maximum point at

$$x^* = \frac{1}{p\left(g + x_u\right)}\left(\frac{1}{2}\sqrt{2}g - \frac{1}{2}\sqrt{2}r + \sqrt{2}x_u\right)^2$$

The utility driven from these choices is

$$u_R(x^*; a(x^*), \alpha) = \frac{1}{2\left(g + x_u\right)}\left(g^2 + 2gx_u + r^2 - 2rx_u + 2x_u^2\right)$$

When we compare the utilities of the region elite in different cases, the utility driven from the last case is higher than other cases. Therefore the region elite makes a demand equal to x^* and the government responds respectively with $a^*(x^*)$. The third-party decides whether to intervene or not according to the level of violence.

The choices of the region elite, the government and the third-party driven from the equilibrium found by backward induction are as follows:

$$\begin{aligned}
x^* &= \frac{1}{p\left(g + x_u\right)}\left(\frac{1}{2}\sqrt{2}g - \frac{1}{2}\sqrt{2}r + \sqrt{2}x_u\right)^2 \\
a(x^*) &= -\frac{1}{g + x_u}\left(g + x_u - \sqrt{2}\sqrt{px\left(g + x_u\right)}\right) = \frac{x_u - r}{x_u + g} \\
\alpha &= \begin{cases} 1 & \text{if } a(x^*) > a^* \\ 0 & a(x^*) < a^* \\ \{0, 1\} & \text{if } a(x^*) = a^* \end{cases}
\end{aligned}$$

4.2: Analysisand Comparative Studies

The equilibrium of the three-player model with incomplete information generates several implications. Throughout the analysis, we give numerical examples and some comparative analysis for each implication and then put forward the general case as a proposition. In these numerical examples, we look at the affect of a change in a parameter to the choices of the region elite and the government. Therefore, each example except the first one includes three parameters with assumed values and a relationship between another parameter and a choice.

Proposition 1 *In the equilibrium, both region elite and the government are not certain about the intervention decision of the third-party.*

In order to have certain information over the intervention decision, the level of violence within the conflict must be at the boundaries; minimum level for no intervention and maximum level for intervention. In the equilibrium the level of violence chosen by the government becomes

$$a_g = \frac{x_u - r}{x_u + g}$$

The third-party division is assumed to be higher than the cost parameter of the region elite, as explained previously; and all parameters above are higher than zero. Therefore, the equilibrium level of violence is never at the boundaries of $[0, 1]$.

The government chooses boundary levels only if the demand of the region elite does not fall into the set (x_1^*, x_2^*). However, the region elite never maximizes its expected utility in these ranges, therefore the level of violence does not get its minimum and maximum values. Therefore, both parties have to act according to expectations about the intervention derived from the distribution of the intervention threshold.

Next, in a numerical example we will look at how the government responds to a change in the demand off the region elite. In this example, we assume that the third-party division $x_u = 1.5$, the probability of the region elite to be successful in a conflict without any violence $p = 0.5$, cost parameter of the government $g = 0.3$ and cost parameter of region elite $r = 0.4$. With these values, the relationship between the demand level and the level of violence is as follows:

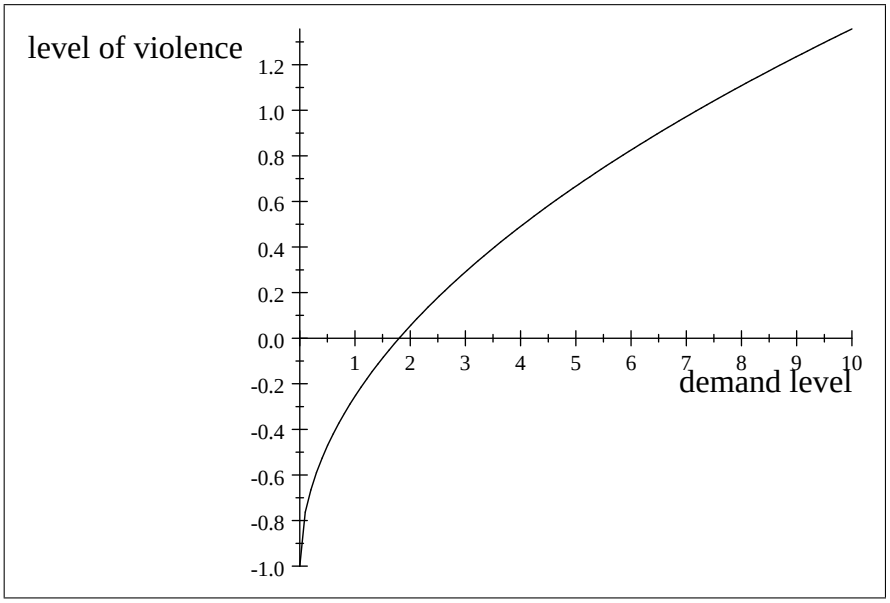


Figure 4.2: An increase in the demand increases the level of violence

The graph above represents a positive relationship between two variables, indicating that the level of violence increases with the demand level. For assumed parameters, the government chooses the minimum level of violence if the demand is less than or equal to 1.8, and chooses the maximum level of violence if the demand is higher than or equal to 7.2. Between these two values, the level of violence increases as the region elite increases her demand. As the demand from the region elite increases, the expected utility of the government decreases if the probability of winning the war stays the same. Therefore, the government increases the level of violence by some degree in order to respond to that decrease even though it increases the war cost related with the level of violence and the probability of getting an intervention from the third-party.

Proposition 2 *The region elite can manipulate the government to choose higher levels of violence by increasing the demand level at first stage.*

This can be seen from the derivative of the level of violence in respect to the demand level

$$\frac{d}{dx}(a_g(x)) = \frac{1}{2}\sqrt{2}\frac{p}{\sqrt{px\,(g+x_u)}} > 0$$

The positive derivative for the inner solution indicates that the government responds to higher demands with higher levels of violence. In the equilibrium the region elite never makes a demand high enough for government to choose the maximum level of violence, yet the government seems to have the courage to respond in that way if the demand ever reaches above a certain threshold. With a sufficiently high amount of demand, the government might prefer to have an intervention.

The proposition has another implication which argues that the region elite can determine the likelihood of the intervention. The third-party decides to intervene according to the level of violence within the conflict and this proposition implies that the region elite can manipulate the government in order to increase the level of violence. The information asymmetry over the intervention threshold prevents the region elite from ensuring the intervention. However its action may generate a higher level of violence, so higher probability of intervention into the conflict.

Next, we analyze the relationship between the actions of the parties and their respective cost parameters. Higher cost parameter for a party means higher disutility for each level of violence. Therefore, both region elite and the government avoid higher levels of violence within the conflict. The government can choose lower levels directly and region elite can decrease the demand level and manipulates the government to decrease the level of violence. Assumed values are $x_u = 1.5$, $p = 0.5$, $g = 0.3$ for Figure 4.3 and $x_u = 1.5$, $p = 0.5$, $r = 0.4$.for Figure 4.4.

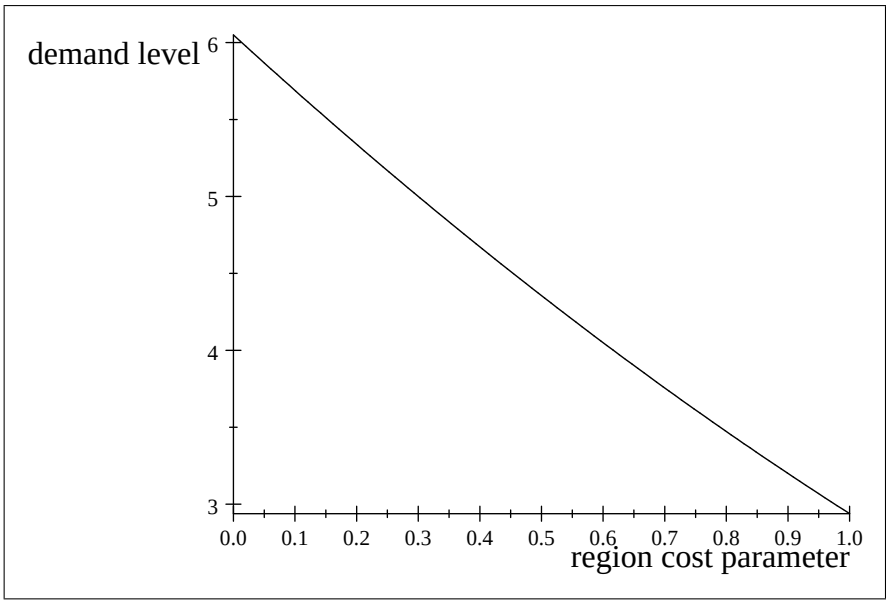


Figure 4.3: An increase in the region cost parameter increases the demand level

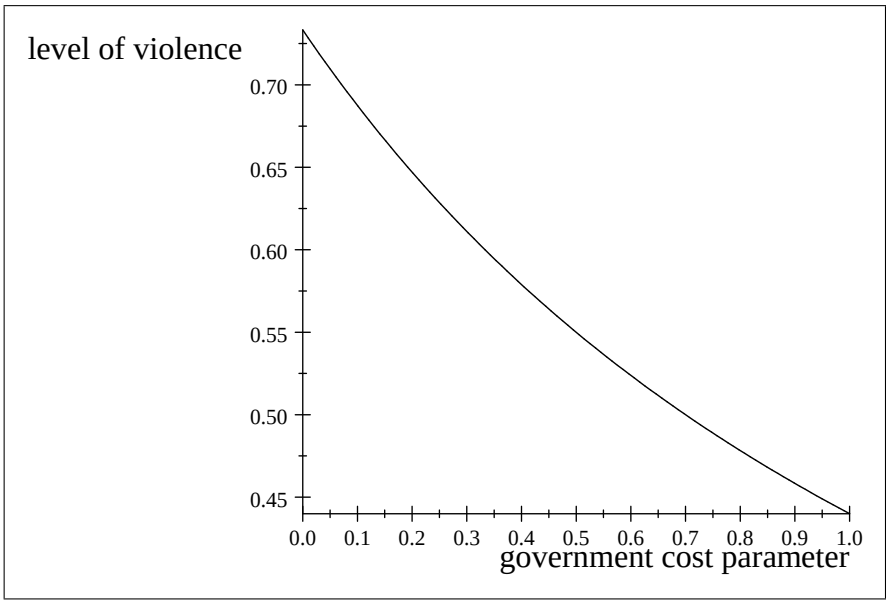


Figure 4.4: An increase in government cost parameter decreases the level of violence

Proposition 3 and 4 generalizes the example.

Proposition 3 *The demand level of the region elite decreases when the cost parameter of the region elite increases.*

As mentioned previously, the relation between the demand and the war cost is built upon the level of violence. When the cost parameter increases, the region elite decreases the demand level so that the government does not resort to high levels of violence. The proposition can be justified by the derivative of demand level in equilibrium with respect to cost parameter.

$$\frac{d}{dr}(x^*) = -\frac{1}{p\,(g + x_u)}\,(g - r + 2x_u) < 0$$

Proposition 4 *The level of violence decreases when the war cost parameter of the government increases.*

The government war cost, on the other hand, influences the level of violence directly. In order to avoid from higher cost, the government must decrease the level of violence. The relationship can be seen from the derivative of the level of violence in the equilibrium with respect to the government cost parameter.

$$\frac{d}{dg}(a_g^*) = \frac{1}{(g + x_u)^2}(r - x_u) < 0$$

Now we will look at how the change in the cost parameter of one party affects the decision of the other. Figure 4.5 represents the relationship between the cost parameter of the government and the demand level from the region elite. For this analysis we assume $x_u = 1.5$, $p = 0.5$, $r = 0.4$. It is clear that, the region elite responds to higher cost parameters for the government with higher demand.

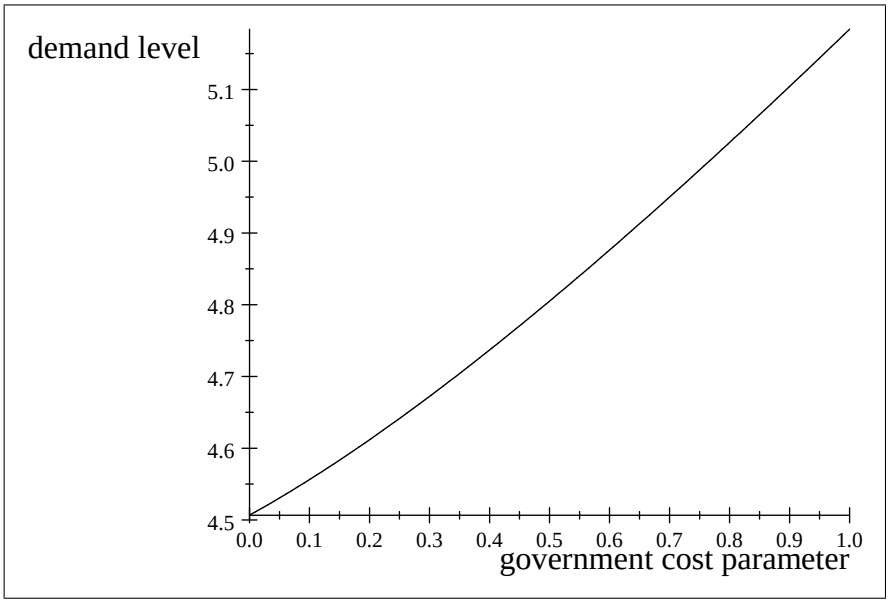


Figure 4.5: An increase in government cost parameter increases the demand

Proposition 5 *The demand level is positively affected by the cost parameter of the government.*

The idea of this proposition is following: As the cost parameter of the government increases, the government needs to bear higher cost for every level of violence. This encourages the region elite to make higher demands relying on the fact that the government is not in a position to increase the level of violence easily since she has to suffer from higher cost for each level of increase in the violence. The positive relationship can be seen through the derivative of the demand level in equilibrium

with respect to cost parameter of the government.

$$\frac{d}{dg}(x^*) = \frac{1}{2p\,(g+x_u)^2}\,(g+r)\,(g-r+2x_u) > 0$$

Similar analysis can be done with the cost parameter analysis of the region elite and the level of violence chosen by the government. We assume same values for x_u and p and $r = 0.4$. Figure 4.6, represents a negative relationship between two, implying that the level of violence within the conflict decreases if the cost parameter of the region elite increases.

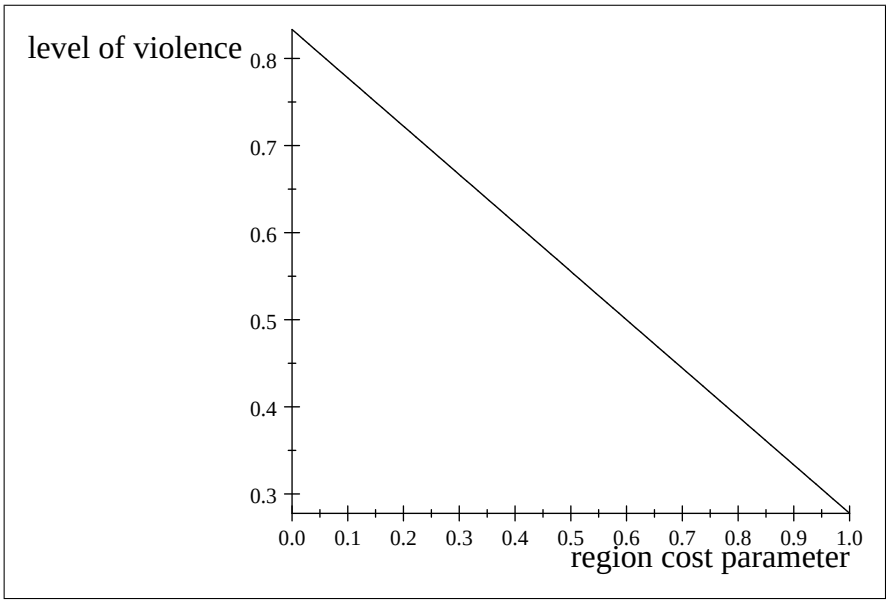


Figure 4.6: An increase in region cost parameter decreases the level of violence

Proposition 6 *The level of violence is negatively affected by the cost parameter of the region elite.*

When the cost parameter of the region elite is higher, it makes a lower demand according to Proposition 3. In that case, the government chooses a lower level of violence as shown in Proposition 2. By this decision, the expected utility of the government in case of no intervention increases while the probability of intervention decreases. In this way, the government gets higher utility with higher probability. The relationship can be seen from the derivative of the expected utility of the government in case of no intervention and the level of violence in the equilibrium with respect to cost parameter of the region elite.

$$\begin{aligned}
\frac{d}{dr}(u_g(x^*, a_g(x), \alpha)) &= \frac{1}{2\,(g+x_u)\left((g-r+2x_u)^2\right)^{\frac{3}{2}}}\,(3g+x_u)\,(g-r+2x_u)^3 > 0 \\
\frac{d}{dr}(a_g^*) &= -\frac{1}{g+x_u} < 0
\end{aligned}$$

Last proposition will examine the effect of the third-party division on the dynamics of the conflict. In the model, if the third-party decides to intervene, she rearranges the status-quo outcome and gives some of the resources the government had to the region elite. Third-party uses this division, x_u, as a punishment to the government in case of brutal violence or as a threat in order to prevent the government from acting brutally. In that regard, higher x_u means higher punishment for the government in case of intervention and is hoped to decrease the level of violence within the conflict. Figures 4.7 and 4.8 imply the opposite.

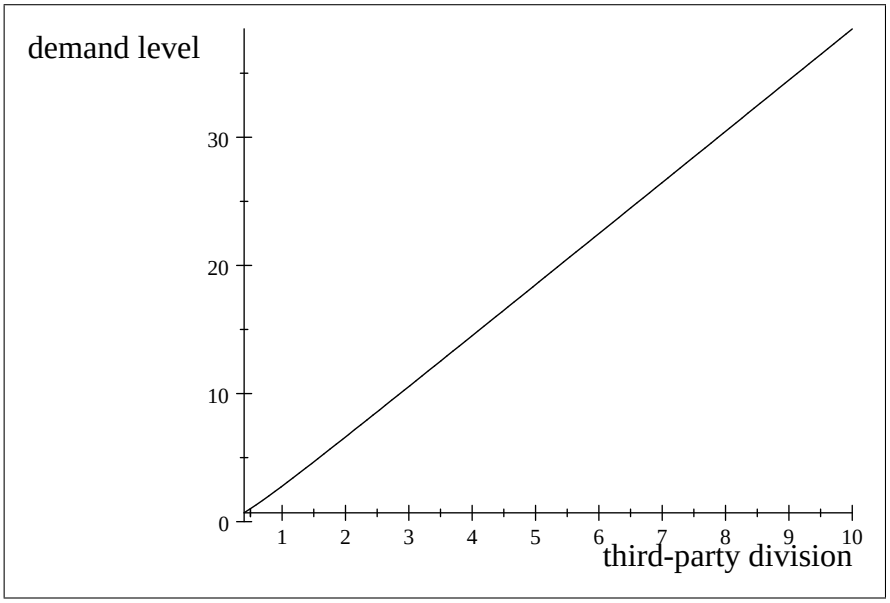


Figure 4.7: An increase in third-party division increases the demand

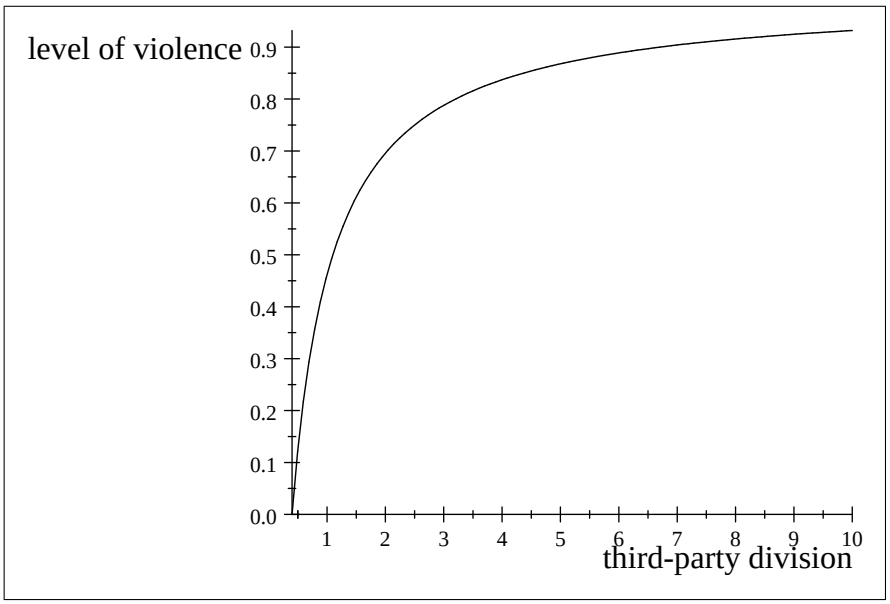


Figure 4.8: An increase in third-party division increases the level of violence

Proposition 7 *Both the demand level of the region and the level of violence chosen by the government increases as the third-party division favors the region elite more; creating a moral hazard situation for the third-party.*

As the third-party increases the share of the region elite after the intervention, x_u, the elite finds itself in a situation in which its expected payoff from the intervention increases. As a result the intervention becomes more beneficial in the sense that the extra share from the intervention exceeds the potential cost by the increase of violence from the government. Therefore, they increase the demand in order to increase their payoff in case of no intervention. At this point the region elite is not uncomfortable with the government to increase the level of violence since more brutal violence can lead them to the intervention. Another case might arise if the payoff the region elite gets from the intervention is higher than the payoff from bilateral conflict. In such a situation the region elite might prefer the intervention and manipulate the government to increase the level of violence so that the third-party intervenes to the conflict.

The government increases the level of violence when the region elite demands more as a consequence of the change in the third-party division by taking the risk of intervention. If the intervention threshold is too high, the government can still avoid it by increasing the level of violence in a moderate way. However, in this way she certainly balances her expected gain from the bilateral conflict by increasing the probability of winning in response to higher lose if the region elite wins the conflict. At that point the government takes the risk of intervention and responds to increase in demand with more brutal violence.

As a result, more promises to the party that suffers from the violence and more serious sanctions to the executor generates higher levels of violence within the conflict in contrast to what was aimed. In this kind of an environment, the action of the third-party to make a thread of intervention in order to prevent brutal violence generates more violence. More importantly, this situation is a result of the response of the region elite who accepts brutal violence from the government although the third-party acts in order to protect the minority in the first place. The model clearly foresees a moral hazard situation when the intervention threshold is unknown to both the region elite and the government. In that regard, the model is convenient with the thoughts of those who point out such a danger in case of humanitarian intervention.

CHAPTER 5

KOSOVO WAR: A CASE STUDY

The Kosovo war was the last one of the deadly wars which broke out with the dissolution of Yugoslavia. Following the death of Tito, Kosovo was among the ones who got autonomous governance as part of the reformation process of the republic in 1980s. For a decade, Kosovo Albanians enjoyed this autonomy as the Serb superiority within state offices ceased and the proportion of Albanians in the population increased steadily. However, Albanian authority over the territory of Kosovo began to depreciate as Milosevic gained more and more power first in the Communist Party and then as a Serbian Nationalist leader. In 1989, Milosevic established reforms that necessitates using Serbo-Croatian language in public offices and causes the removal of Albanians from offices. Some were immediately fired and some others were forced to resign since they did not give an oath for loyalty to Serbia. (Kuperman, 2008b)

The Albanian response to these changes was peaceful for a decade. Ibrahim Rugova and his party Democratic League of Kosovo (LDK) embraced a low-tension behavior and passive resistance against the Serbian aggressiveness. Meanwhile Milosevic was not considering Kosovo as a primary issue during the wars with Croatians and Bosnians. Besides, Albanians were successfully unarmed during the disunification of the Yugoslav army and did not have enough power to resist Serbian authority (Grigorian, 2005). In such an environment, launching an armed rebellion seemed meaningless to Rugova who explained the situation in 1992:

> We ... know that [the Serbian military presence] is overwhelming and that we have nothing to set against the tanks and other modern weaponry in Serbian hands. We would have no chance of successfully resisting the

> army. In fact the Serbs only wait for a pretext to attack the Albanian population and wipe it out. We believe it is better to do nothing and stay alive than to be massacred. (Vickers, 1998; as cited in Judah, 2000, p.61)

Judah explains that this policy of the Kosovo Albanians had three important considerations back then: staying alive by not giving any reason to Serbs for ethnic cleansing, keeping the issue on international agenda and building a legitimacy for the Republic of Kosovo (p.74). This policy continued until the Dayton Peace Agreement between Serbia and new Bosnian Republic in 1995 as a result of NATO's enforcement of Serbian leaders. For many Kosovo Albanians, the agreement proved that the peaceful policy followed by Rugova was not appreciated by Western powers while Bosnians got an independent state as a result of genocidal retaliation by Serbs and Western intervention at last Following the Dayton Agreement, the full-scale UN embargo on Yugoslavia lifted and EU recognized Federal Republic of Yugoslavia including Kosovo territories.(p.125). Western powers seemed to ignore the Kosovo issue and this ignorance made many Albanians to consider other strategies. Veton Surroi, a Kosovo Albanian political leader, explains the feelings of Kosovo Albanians: "There is a message that is being sent to the Kosovars - if you want to draw international attention you have to fight for it. That is exactly it. You need to use violence to achieve your goals." (Little, 2000)

The financial scandal of 1997 in Albania which created a chaotic environment for gun transfers to Kosovo Albanians helped a less-supported organization to gain power while people questioned the peaceful policy of Rugova and the LDK. The armed campaign of the Kosovo Liberation Army (KLA) grew into a full-scale insurgency by 1997. The assassination of Serbian policemen by KLA militias on 25 February 1998 was responded with massive use of violence by Serbia. The negotiations between Albanians and Serbians under the patronage of Contact Group were ceased by Rugova since the Serbian forces did not cease violence during the negotiations. In 1999 NATO forces threatened Milosevic with a sustained bombing if he did not surrender Kosovo their sovereignty for an interim period which will end with a referendum for the future of the region. Milosevic rejected the ultimatum and continued the violence against the Albanians. On 24th of March NATO launched an air strike against Serbia lasting 11 weeks which forced Milosevic to cease the violence at the end (Grigorian 2005, p.201). After a year of reconstructing the country and the state bureaucracy, Kosovo declared independence from Serbia in 2008 and Western the powers were among the first ones who recognize the independence of the Kosovo.

The issue of moral hazard in the case of Kosovo is related with the actions of KLA and its competition with the peaceful LDK under Ibrahim Rugova. When

KLA began its attacks on Serbia, the situation Rugova described in 1992 had not changed at all. Serbian forces were still much stronger than KLA militia forces and the Bosnian war had showed that they would not hesitate to resort genocidal violence in case of an upraise. While Rugova tried to maintain a relevant peace, why did KLA started an armed conflict which would end up with extreme violence and probable defeat? Miscalculation of the response from Serbia is not a good answer after what happened in Bosnia and KLA Leader Hashim Thaci also admits that they were aware of the result of armed violence would be retaliation by Serbia against civilians (Little, 2000). In his interview with Kuperman, Emrush Xhemajli, cofounder of KLA, states that "We thought it was essential to get international support to win the war. You could not stand against the world. We thought that with the international community on our side, we could win the war. But otherwise we would plan for a 10- to 15-year war, with a strategy to get the international community on our side." (Kuperman, 2008b, p.69).

The chronological events in the Kosovo war; the rise of KLA at the expense of peaceful LDK after the Dayton Peace Agreement indicates a moral hazard problem in Kosovo. The interviews implies that KLA leaders risked the lives of many civilians with armed rebellion even though they could estimate the response of the Serbian army by looking at its actions in Bosnia war. They also accepted that they relied upon the third-party intervention since the capability of the KLA was not enough to defeat Serbian forces. At the end, the brutal violence implemented by Serbians caused a NATO intervention and Kosovo is declared to be an independent state in the following years.

CHAPTER 6

CONCLUSION

The three-player model we propose discusses the dynamics of a conflict between a government and a minority group when there is a possibility of third-party intervention. The region elite representing the minority makes a demand and the government chooses a level of violence to respond to this demand in order to stay in status-quo. Existence of a third-party implies a threat to the government so that she does not resort to full brutal violence in order to suppress the region elite. The third-party division can be considered as a punishment to the government in case of brutal violence and is intended to discourage the government from such a behavior. In that regard, the third-party can change the division in favor of the region elite in order to decrease the expected payoff of the government in case of intervention so that the government never resorts to level of violence that is higher than the intervention threshold and the region elite does not suffer from brutal violence.

However, the equilibrium implies a moral hazard problem, since as the third-party division favors region elite more, the elite better manipulates the government to have a higher level of violence within the conflict so that the intervention guarantees a certain change from the status-quo in favor of the region elite. In that case, justification of the humanitarian intervention in order to prevent populations from brutal violence results in a situation in which the region elite accepts suffering from such a violence in order to get higher benefits at the end with the help of third-party intervention.

The threat of third-party intervention and the moral hazard issue related with this threat are examined earlier within the extended-deterrence theory and by other authors. However, in those studies, the interest of the third-party is derived from

its direct benefit from the stakes of war. In most studies, the payoff of the third-party is highly correlated with the share the region elite gets from the resources. In our study, on the other hand, the expected utility of the third-party is affected by the cost it must bear in case of intervention and the level of violence within the conflict. In that regard, the intervention decision depends on solely humanitarian reasons, since the third-party intervenes only if the level of violence within the conflict reaches a certain point that cannot be tolerated anymore. All humanitarian interventions are criticized by some degree with the idea that the intervener might have some secret agenda or expected political gains in her mind. However, the model implies that even if the intervener does not have any interest in the conflict other than the intention of decreasing the level of violence; the intervention can generate undesirable results. The results of the model, therefore, are important to consider; since they indicate that the international community should look for other measures in order to prevent populations from brutal violence.

Ruling out humanitarian intervention in order to avoid a moral hazard problem might leave populations without any insurance to state violence and result in even greater levels of violence around the globe. Moreover, protecting civilians in a conflict is considered as a duty for the international community as a part of the responsibility to support and protect human rights whenever necessary. As Kofi Annan, back then the Secretary-General, states in 54th session of UN General Assembly:

> ... if humanitarian intervention is, indeed, an unacceptable assault on sovereignty, how should we respond to a Rwanda, to a Srebrenica - to gross and systematic violations of human rights that offend every precept of our common humanity? (ICISS, p.2)

Therefore, instead of discussing the necessity of the humanitarian intervention, one should look for ways to increase its effectiveness and to make it robust to manipulations from the conflict. A point in which the risk of moral hazard is minimized without increasing the risk of populations to be faced with brutal violence should be found in order to satisfy the main intention behind the intervention.

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