
Peacekeeping Effectiveness: A Measure of All the Measurements

Adam Kunkel
Purdue University
Department of Political Science

Are third-party peacekeepers effective at reducing violence and establishing peace-producing regimes? This puzzle emerged with the end of the Cold War, as peacekeeping operations have increased exponentially in turn with the fall of the Soviet Union. Broadly speaking, those who have studied the effectiveness of peacekeeping at reducing violence in both the short and long term have come to conflicting conclusions. My article examines the roots of these conflicting results through a methodological literature review of the available quantitative articles on United Nations peacekeeping operations. This paper shows that the literature as a whole is marred by endogeneity and theoretical issues. This paper concludes that the research shows peacekeeper effectiveness in certain subsections but is underdeveloped in others. It is oftentimes impaired by methodological and terminological inconsistencies and needs to get past many of these issues before it can make more definitive causal claims about peacekeeping effectiveness.

Introduction

In the modern era, states have set up two separate international governmental organizations (IGOs): the League of Nations and the United Nations (UN). These two institutions were established to ensure peace throughout the world, albeit with different methods. While the League of Nations used the concept of mutual security, the UN often tries to keep this promise with peacekeepers (PKs) who work with warring parties and attempt to establish ceasefires. Once the number of peacekeeping operations (PKOs) expanded, so too did academia's interest in it. In these studies, scholars examined the different ways that peacekeepers can be effective and what effectiveness is. For example, do they reduce the amount of active conflict (short-term violence and war resolution) and

do they reduce the chances of conflict recidivism (long-term violence)? Those broad questions are answered using different independent variables, with some authors using the presence of a peacekeeping operation in general and some going so far as to examining the gender and racial makeup of peacekeeping troops. Understanding whether peacekeeping reduces violence is important. If it does reduce violence, then policy makers can work to fund and deploy them to situations prone to devolve into more violence. If it does not, then those same policy makers can defund UN PKOs and instead look at alternatives to reduce violence, such as regional or interstate coalitional peacekeepers. Either way, understanding how peacekeepers affect the peace is important. This paper concludes that the research shows peacekeeper effectiveness in certain subsections but is underdeveloped in others. It is oftentimes marred by methodological and terminological inconsistencies and needs to get past many of these issues before it can make more definitive causal claims.

First, this article will discuss the history of UN peacekeeping and the theoretical logics behind peacekeeper reductions of violence. Next, it will review the quantitative literature on peacekeeping effectiveness through the lenses of the methods used. Finally, the discussion will examine future points of interest in the peacekeeping literature and the implications for my research.

Historical Background of UN Peacekeeping

World Wars One and Two were the most destructive wars in human history with a combined 122 million people dying. This staggering amount of death, only twenty years apart, resulted in many changes in the international system, with arguably the biggest coming in the form of the United Nations. Stronger in policy possibilities and prescriptions

than its predecessor the League of Nations, the UN sought to become a worldwide forum of universal state membership with a goal of making the world a better and more peaceful place. The United Nations Security Council (UNSC) quickly emerged as a leading contender to ensure peace worldwide. At its inception, the UN determined five member states would stand as permanent members of the security council, with all other states rotating in on a regular basis. This member status was a codification of the distribution of power in 1945, as the five permanent members were those who triumphed at the conclusion of World War II.¹ The five permanent members also have veto status that can overrule any action the UNSC proposes, meaning any action the council takes requires a unanimous agreement.

The UNSC has a few different tools it uses to ensure peace. One common method is authorizing states or groups of states to enforce its directives. For example, after Saddam Hussein's invasion of Kuwait in 1990, the United Nations passed resolutions that directed Iraq to withdraw its forces from Kuwait.² When Saddam failed to comply, the Security Council authorized a coalition of nations, led by the United States, to remove Iraqi military forces from Kuwait.³ When offensive interventions are not appropriate and the UN is more interested in keeping peace more than removing offending actors, they use peacekeepers. This process is another common way the UN enforces peace and is the subject of this paper.

Peacekeeping troops are drawn from many of the UN's member states and represent a multinational coalition of troops⁴ under the directive and command of UN leaders in the

¹ The five nations were the prominent members of the Allied Forces: The United States, the Soviet Union, France, Great Britain, and China.

² Source: [https://undocs.org/S/RES/660\(1990\)](https://undocs.org/S/RES/660(1990))

³ Source: <http://unscr.com/en/resolutions/doc/678>

⁴ Source: <https://peacekeeping.un.org/en/troop-and-police-contributors>

security council. These third-party peacekeepers are different in scope and size from multi-state coalitions like the one authorized by UNSC 678, as they are typically deployed to do one of two things and sometimes both: keep the peace and build the peace. In that sense, they are often deployed to countries amid either an inter- or intra- state war to do either of those objectives. PKOs often intercede in state sovereignty and are deployed to places that do not want them while preventing either side from definitively coming out on top. Since the UN's inception, there have been over seventy unique PKOs.

Statement of the Question, Argument, and Causal Mechanisms

Do peacekeepers have an effect on preventing conflict in the present and on reducing its chances of happening again in the future? If peacekeepers do in fact reduce violence, why do states consent to PKOs that limit their actions against rebels that threaten their rule? To understand this, I examine the literature on the quantitative work on UN PKOs.

I argue that peacekeepers have a nuanced and complex effect on states. The data I have gathered, a collection and review of the large N studies of peacekeeping effectiveness, show how United Nations peacekeepers have disparate effects on short-term and long-term violence. The articles presented show how difficult it is to determine if peacekeepers are effective at reducing violence in countries they are deployed to. However, theoretically, they do so through two primary causal mechanisms as they are tasked with peacekeeping, peacemaking, and peacebuilding.

First, PKs often change the costs and incentives to combat to reduce short-term violence (STV). A government force killing rebels may not have too much controversy

when contained internally. However, the mere presence of peacekeepers on the battlefield presents both the government and rebels with a new variable to factor in. Attacking an internationally sanctioned peacekeeping mission and killing nationally and ethnically diverse peacekeepers not only looks bad but bears the risk of inviting more peacekeepers or even retaliation from independent countries angry at the loss of their troops. For example, in the 11 years of the Iraq War, U.S. forces suffered 4,507 deaths.⁵ However, in the 71 UN PKOs spread across 73 years, there have been a total of 4,049 deaths.⁶ indicating an unwillingness on the part of belligerents to directly engage with UN peacekeepers. Peacekeepers are deployed to active warzones, and protect civilians with force when given the mandate, and enforce that with weapons and military vehicles. Thus, government and rebel groups must now contend with a third actor all while avoiding direct combat with them. While changing the costs of combat is useful for reducing violence in the short-term, this causal mechanism often has unintended consequences for the peacemaking activities of PKOs, which is discussed later in the review of conflict resolution (RES) articles.

Second, many UN PKOs have an active part of the peacebuilding process as they work to prevent war recurrence (REC) in the long term. When given these mandates, they conduct operations such as “demobilizing the armies of the factions, arresting war criminals, and policing and administering a collapsed state.”⁷ This mechanism for reducing long-term violence comes in the form of building institutions that maintain peace and establish lasting, legitimate governments. The key to peacebuilding success is legitimacy. After all, many civil wars are started because a rebel group does not see the government in

⁵ Source: <https://dcas.dmdc.osd.mil/dcas/pages/casualties.xhtml>

⁶ Source: <https://peacekeeping.un.org/en/fatalities>

⁷ Doyle & Sambanis 2000: 781-782

power as legitimate. Peacekeepers, as an extension of the United Nations, represent the delegated authority and legitimacy of the international system. The legitimacy it enjoys is a result of many complicated factors, but overall, it comes from the normative “right to rule based on their conformity to certain philosophical values and principles.”⁸ With this legitimacy, UN troops, police, and observers construct democratic institutions while simultaneously balancing the entrenchment of legitimacy in said institutions as seen by both warring factions. Peacebuilding is an incredibly complex task. While PKOs operate under the complicated rules of engagement and ambiguous mandates from the UNSC, they often successfully manage this task in the face of opposition.

The Peacekeeping Literature

There are many scholarly works concerning the effectiveness of UN peacekeepers, and some containing non-UN peacekeepers, but this article will be examining the large *N* studies for several reasons. First, quantitative analyses are useful in dealing with endogeneity issues in the selection of peacekeeping. Whether it is with matching cases, instrumental variables, or regional analysis, judging the effectiveness of peacekeeping must deal with endogeneity if it is to make any true causal claims. This is a recurring issue in the literature. While many discuss the need to deal with issues of endogeneity and case selection bias, only three of the eighteen articles deal with it in a statistically meaningful way,⁹ while most attempt to deal with it in terms of their own case selection.

⁸ Dellmuth et al. 2015

⁹ Hultman, Kathman, & Shannon (2013) use a negative binomial regression with matching, Gilligan and Sergenti (2008) use a Cox proportional hazard model with matching, and Carnegie and Mikulaschek (2016) use a regression analysis with an instrumental variable.

Articles like Diehl's "Peacekeeping Operations and the Quest for Peace"¹⁰ do have their merits, but there will always be questions about case-selection and thus endogeneity. After all, PKOs are not deployed randomly. They are sent to areas of the world that are already experiencing an uptick in violence. How can we be certain that the unobserved variables of a peacekeeping mission do not play a confounding role in those analyses? These variables can be anything such as the international system's commitment to peace, the state in question and its commitment to peace, or the amount of violence already present in the region.

Quantitative studies use different tools to mitigate these issues. While it is not a value judgement, in terms of testing empirically the effectiveness of institutions, large *N* studies provide us with the data to make causal claims, provided the methods and data collection are sound. Finally, this review focuses on the UN peacekeeping studies for the same reasons that many scholars study them; that is, an availability of data. The UN releases monthly reports of their peacekeeper metrics to the public, which gives researchers an unbiased and complete version of the data, something hard to come by in security studies with all the complexities and lack of transparency already present in wars. Thus, much of the peacekeeping literature has focused on UN PKOs. What effectiveness means varies across different studies, but as noted by Sandler (2017), "Most of the effectiveness literature relies on a single criterion, dependent on some measure of peace duration or low probability of conflict recurrence." Throughout the literature, the effectiveness of peacekeepers is defined using one of three criteria. The first, and most populous, subsection of the peacekeeping literature is that which examines short-term violence. These articles

¹⁰ 1988. Diehl's article is a comparative piece, examining the differences between PKO effectiveness in inter- and intra- state conflicts.

look for the connections between PKOs and the number of battlefield deaths, violence against civilians, and the location polygons of violence. Next is the articles examining the chances of war resolution, which analyze the connection between UN peacekeepers and their effect on the duration of wars or the number of cooperative events between state and rebel groups. Finally, the last subsection looks at long-term violence. These articles revolve around the relationship of PKs and the chances of a recurrence of war after it ends.

Short-term Violence as the DV (STV)

For the studies on short-term violence, five use the more robust negative binomial matching mentioned previously and three use spatial analysis. The articles using a direct regression analysis use separate measures of dependent variables (DVs) to gauge effectiveness. Four use violence against civilians and one uses battlefield deaths. Those that measure violence against civilians, Hultman (2010), Hultman et al. (2013), Carnegie and Mikulaschek (2016), and Bara & Hultman (2020), come to a few contrasting results. Hultman (2010) determines that PKOs have no independent or significant result on curbing state violence against civilians. However, in Hultman et al. (2013), their conclusion changes. This appears to be the case for a few separate reasons. First, in the more recent publication they use propensity score matched sample. Propensity score matching entails examining several cases and matching those that are similar in observed covariates. This can be problematic, as researchers can only match based on observables, which ignores the possibility of unobservable sorting. Nonetheless, it is principally useful method that Hultman et al. used to show how UN PKs and police reduce the amount of violence against civilians. Interestingly, their results show an uptick in violence against civilians where UN

observers are deployed. This is thought to be a result of international commitment issues. If a state sees that the international community has no interest in sending PKs, it signals to the state that international will is low and that enforcement is unlikely. This issue comes up repeatedly in the literature, especially when using different estimators.

Finally, these differences also arise because of different independent variables. The 2010 article uses the presence of peacekeepers and different factors of the PKO mandate, such as whether it is robust or is targeted around protecting civilians. The 2013 paper, however, disaggregates the peacekeeper force by the type of personnel deployed, with separate categories of peacekeeping troops, police, and observers. PKOs vary by mission, and the makeup of personnel deployed can explain many different aspects of the intention and mandates. Overall, Hultman et al. (2013) is the more accurate article in terms of judging peacekeeper effectiveness. Bara & Hultman (2020) is similar in that it disaggregates the type of personnel and uses that as an independent variable to judge peacekeeping effectiveness. While Bara & Hultman (2020) is ultimately comparing UN and non-UN PKOs, it reveals similar results about the effectiveness of UN peacekeeping. Hultman et al. (2013) and Bara & Hultman (2020) are more accurate articles because the useful disaggregation of peacekeeping troops provides a more exact independent variable and thus a clearer explanation and use of the causal mechanism. While observing the presence of peacekeepers as a simple binary IV is useful, PKOs are not uniform. They vary in terms of the type of personnel and the nationality of personnel, among other things. In a secondary but still important sense, the data used by Hultman et al. (2013) is also a matched sample.

The final piece of the literature looking at violence against civilians is unique in that it is the only published article using this technique. In Carnegie and Mikulaschek (2016), they submit the use of instrumental variables to solve endogeneity issues present within the literature. Finding the causal effects of peacekeepers on reduction of violence against civilians, treated as: $x \rightarrow y$, otherwise stated as x causes y , we look for an instrument that can plausibly cause variation in x without directly affecting y . Thus, it would look like: $t \rightarrow x \rightarrow y$, where t is the instrument causing variation in x . Carnegie and Mikulaschek propose t as the rotation of seats in the security council. Countries sitting temporarily on the security council are on an as-if random assignment, where they have no control when they sit on the council and when they are removed. UN PKOs have no effect towards reducing government violence towards civilians but do reduce rebel violence towards civilians when controlling for their instrument. They conclude that this is likely because PKOs are there with the consent of the host country, meaning they are more likely to be forced to comply with what the state wants rather than what the mission mandates. This paper is a prime example of countries only using the security council and peacekeepers as a tool to get what they want. Their instrument shows how when states are in power in the UNSC, they are more likely to deploy PKs to regions near them, something clearly in their interest.

Hultman et al. (2014) use a negative binomial matching model on battlefield and civilian collateral deaths with a comparative dataset of African civil wars. Like Hultman et al. (2013) and Bara & Hultman (2020), Hultman et al. (2014) uses an IV of disaggregated UN PKO personnel. They find that PKs are effective in reducing battlefield and civilian collateral deaths, but that UN police and observers are not. They argue these results through

two causal mechanisms. First, UN PKs “resolve the security dilemma that exists between the belligerents.”¹¹ Second, they assert using a cost-analysis model that PKOs increase the costs of fighting as a route to success.

The most recent and innovative research in peacekeeping effectiveness utilizes spatial analysis using disaggregated geographic data. The earliest article comes from Beardsley & Gleditsch (2015), who looked at whether PKOs can “shape the geographic dispersion of particular episodes of violence.”¹² They concluded that PKOs decrease movement of actors, government or rebel alike, which according to them causes peace by reducing the mobility of the rebels and preventing governments from seeking out insurgents. Their research also shows that UN police correlate with an increase in violence regionally. Overall, while they determine that PKOs can reduce violence dispersion in the short term, it is possible that this can “allow nonstate actors to gain strength and legitimacy,” something that can make long-term peacebuilding difficult. The other inconclusive result in this area of the literature is from Ruggeri et al. (2017). They use spatial analysis to study eight countries in Africa and explore the locations within a country that peacekeepers are sent. Ruggeri et al. find that while larger and more robust PKOs can reduce the duration of violence, they cannot conclude whether they can prevent conflict from happening in the first place. The final important spatial analysis literature available is that of Peitz & Reisch (2019). They examine spatial effects to see if peacekeeper presence in an area reduces violence or simply relocates it to somewhere nearby. Peitz & Reisch find that PKOs curtail the amount of violence locally, especially when their equipment is better. However, when PKOs are disaggregated, the effect is mostly on battlefield violence

¹¹ Hultman et al. 2014: 737

¹² Beardsley & Gleditsch 2015:67

while reduced violence against civilians is unclear in their model. The spatial analysis literature, as it stands, is inconclusive when it comes to peacekeeper effectiveness and the reduction of short-term violence.

Chances of Conflict Resolution as the DV (RES)

The studies in this area of the literature are interested in the prospects for peacekeepers to increase the chances of a conflict being resolved. Three pieces in this subsection of the literature examine the ability of peacekeepers to facilitate peace treaties. Greig & Diehl (2005) find that:

In enduring rivalries, the presence of peacekeeping forces reduced the occurrence of mediation and negotiation attempts as well as reduced the prospects for their success when they do take place, at least with respect to achieving a broad peace agreement. The effects with respect to civil wars were not as harmful, but neither did peacekeeping have the kind of positive impacts it was designed. (p. 681)

Not exactly a glowing review of peacekeeping efforts, this paper concludes that peacekeeping, while reducing the violence immediately, can give legitimacy to the rebels, potentially increasing the violence in the long run.

The second cooperation analysis present comes from Ruggeri et al. (2012), which focused on UN PKOs in Africa. Their paper examined whether the total size of a PKO influenced how cooperative competing factions were with each other. They find weak evidence that “large UN missions increase the number of cooperative events,”¹³ and that what really matters is the balance of capabilities between the government and rebel group.

¹³ Ruggeri et al. 2012: 398

Both Ruggeri et al.'s and Greg & Diehl's (2005) conclusion is an important distinction for what can be accomplished by PKOs.

Notwithstanding Ruggeri et al. (2012) and Greg & Diehl (2005), Hinkkainen Elliott et al. (2020) come to a different conclusion. Specifically, their model adds in a previously underexamined variable: terrorist acts from the rebel group. These acts make cooperative events more likely in the presence of a PKO for two reasons. First, and most importantly, they give rebels an increased ability to hurt the government, as the cost to retaliation against rebels is increased by peacekeeper presence and a desire by the government to appear amicable to the international community. Second, because the rebels are resorting to terrorism, they are likely relatively weak and thus have an increased willingness to cooperate and bring an end to the conflict. Hinkkainen Elliot et al. crucially add another variable to the mix, saying, "UN troops are not failing (or succeeding) across the board; they have a different effect depending on the specific tactics adopted by the warring parties."¹⁴ Their article raises the idea that there are more possible confounding variables, which will be discussed in more depth in the conclusion.

The other three articles in this subsection analyze the connection of PKOs and the total duration of given wars. Similar to Diehl et al. (1996), Beardsley (2012) uses a competing-risks, or hazard, model through the lens of an event history analysis. Beardsley concludes that while UN peacekeepers may reduce violence, they also lower the chances of compromise or victory by either side, leading to long-term violence. He finishes by suggesting that when both sides signal intentions of sincerity towards the peace process that PKOs can facilitate that. Again, that is provided that the signaling is made in good

¹⁴ p. 10

faith, something notoriously hard to prove in intrastate conflicts and hard to identify in data.

Gilligan and Sergenti (2008) also use a cox proportional hazard model to run their analysis, but they also use a matched data set of post-cold war intrastate conflicts in Africa. The units in Gilligan and Sergenti's study are conflicts with PKs and without PKs, matched on similar observable covariates. Their hazard model shows that while peacekeepers can reduce the chance of war recurrence, it does not have a significant effect on countries already at war when the PKs were deployed. Regan (2002) uses the same method without matching and comes to a similar conclusion that PKs often increase the duration of a conflict.

Much of the research does seem to point to peacekeepers' abilities to reduce short-term violence. However, this can exacerbate tensions in the long term while giving legitimacy to rebels and thus prolonging the conflict. This brings up the oft-avoided question: *what are the roles peacekeepers are supposed to serve?* If they are there simply to reduce immediate violence as the name implies, then they seem to be effective. Yet, as scholars we must examine their unintended consequences. If they reduce violence in the short term yet only serve to increase tensions and widen the divide between state and rebel, their uses must be understood as such.

Long-term Violence as the DV (REC)

The final subsection of the quantitative peacekeeping literature looks at whether peacekeepers effect peace in the long-term. In other words, they examine the risk of war recurrence. In the hazard model section of the literature, Fortna (2004) determines that

“Traditional UN PKOs and observer missions reduced the risk of war by 86 percent and 81 percent, respectively. Additionally, peacebuilding missions limited this risk by more than 50 percent, while peace enforcement limited this risk by just under 50 percent.”¹⁵ Fortna (2008) uses the risk of war recurrence as her dependent variable and comes to a similar conclusion. Fortna’s 2008 results show the chances of conflict recidivism is reduced as a result of UN PK operations.

One of the earliest quantitative articles in this field was Doyle & Sambanis (2000). While never specified, the operationalization of their DV is the risk of war recurrence at a period of two, five, and ten years after a war ends, making it likely that they are using a hazard model of some sort; as such, the lack of clarity makes it hard to determine the validity of their model and methods. However, Doyle and Sambanis determine that peacekeeping is effective in curbing war recurrence with more peacekeepers, if overall hostility levels are relatively low, but that peacebuilding is more successful with multi-dimensional, robust PKOs.

This contrasts with Hartzell et al. (2001), who built on Diehl et al. (1996) by using a more forgiving five-year outcome. Their results show that less violent, longer conflicts are easier to maintain post-war and that peacebuilding domestic institutions can have a long-term advantage to reducing the propensity for war.

The one article in this section that determines peacekeepers to have a negative effect on long-term peace is Diehl et al. Their analysis is similar to logit and probit in that the variance in the dependent variable is a probabilistic result measured using the “time interval between events.”¹⁶ They use a long-term deterministic outcome to calculate the

¹⁵ Fortna 2004:1891

¹⁶ Diehl et al. 1996:694

effectiveness of PKOs. Their results are excessively strict on the time variable, leading to a controversial conclusion that PKOs are not effective in reducing violence between states.¹⁷

Discussion

The research on peacekeeping effectiveness would benefit greatly from working with the civil conflict literature. Since most peacekeeping missions are deployed to intrastate conflicts, especially after the end of the Cold War, most academic papers in this area have examined peacekeeping effectiveness amid a civil war. Civil wars are intricate, multi-causal, and endogenous; while the civil conflict literature has not found a solution to understanding these problems, the peacekeeping literature should take note. For example, while the PK literature typically looks for violence caused by state and rebel group dyads towards each other and civilians, civil conflict is rarely that simple. Civil wars are also complex and endogenous systems since “ambiguity is endemic to civil wars.”¹⁸ When scholars only focus on the master cleavage of group vs. state, they can miss a number of other variables that can contribute to peacekeeping effectiveness at reducing violence. On top of that, civil wars are often “characterized by bargains, deals, and norms that structure patterns of violence.”¹⁹ Again, failing to take those aspects of civil conflict into effect can seriously damage causality claims, and the literature needs to address this problem.

Another constant disagreement in the peacekeeping literature is the terminology. Throughout the peacekeeping literature, the definition of effectiveness is vague and not

¹⁷ Sandler 2017

¹⁸ Kalyvas 2003:476

¹⁹ Staniland 2012:248

unified, as are the measures used. The future of this area of the literature would greatly benefit from having consistent definitions. There are no definitive measures of peacekeeping effectiveness, and oftentimes too much of each article is spent defining what effectiveness means in each author's study. Again, this is not inherently a bad thing, as it is important to measure different aspects of peacekeeper missions to see how they affect states at a domestic level. However, fleshing out the terms being used and defining what each term means would help immensely with the patchwork literature that does not often agree with one another. The classification I use above is a good start, and focusing research in the areas of short-term violence, war resolution, or violence recurrence is imperative.

As it stands, the literature on war resolution is decidedly underdeveloped. Nearly all of the articles discussed the unintended consequences of peacekeeper's displacing conflict as both an increase in the duration of war and a lack of cooperation between rebel-state dyads. Nonetheless, Hinkkainen Elliot et al. specify their model more clearly and raise the important point that peacekeeper success in this area is highly situationally dependent upon the belligerents and their actions. Future research must address this. For example, a possibly important confounding variable that has yet to be examined is the military strength of neighboring states and rivals. The security dilemma has been well studied in international relations, and no state is immune. States experiencing a rebellion that they cannot effectively stamp out, hence the arrival of PKs, very likely shows neighbors and rivals a weakness that can be exploited. Consequently, already embattled leaders face the proposition of appearing even weaker simply by agreeing to meet with rebels and legitimizing their existence.

Importing the independent variable of international commitment to peace in a more substantive manner from the peacebuilding literature would also benefit articles examining war resolution. Researching the amount of foreign aid given to governments could also untangle the connections between peacekeepers and intrastate actor cooperation. If powerful governments are giving resources to the state actor in question, that can legitimate their actions against rebels and negatively harm the prospects for peace. Analyzing foreign aid given to rebels would also provide valuable insights, as that could both give the rebels a stronger ability and motivation to fight instead of negotiating. However, researching that would be more on a case-study basis as government documents are declassified since that is rarely explicated in government spending bills.

In terms of measurements of PK effectiveness, the methods used are useful but at times inadequate. The variation of the methods described above are important. The use of different parametric and semi-parametric models lets scholars make useful assumptions of the data that help them determine causality. However, as described before, determining causality in an already complex situation where another party (peacekeepers) are added in is difficult. The use of an instrumental variable, such as in Carnegie and Mikulaschek (2016), is important. Yet, the literature is decidedly sparse on approaches that use instrumental variable. This is in large part due to the massively complex system of PKs and their methods of reducing violence, but scholars must make more of an attempt at other, more advanced causal inference claims to establish causality.

The war recurrence subgroup is one area where causality is difficult to measure. This group overwhelmingly showed that when a PKO happens, that state is much less likely to fall back into war in the future. However, only one of the five articles, Doyle and

Sambanis (2000), tries to quantify the international system's commitment to peace as an independent variable. Scholars would do good in this area to try to understand the other possibilities that could cause peace in the long-term, such as the commitment to peace Doyle and Sambanis identify. Another useful addition would be a political economy approach. For example, after peacekeepers leave a state may be perceived by the world as being overall more stable than before. This can lead investors to identify it as a safer place to invest than before, leading to a stronger economy with better employment prospects for citizens, giving much less incentive to violently rebel.

The spatial analysis literature added a new methodological tool with which to analyze peacekeeper effectiveness. Using these techniques to locate the geographic dispersion of violence can open many doors to understanding how the deployments of peacekeepers change the situation and relocate violence, but these methods used in the three papers published result in two being inconclusive as to whether peacekeepers reduce violence. This is not ideal, and scholars who use spatial analysis methods must understand where the difficulties are coming from to create more effective models. It is possible, and even likely, that there are missing variables from the analysis. For instance, using cultural or ethnic boundaries as the grid space instead of equal rectangular spaces might solve an endogeneity issue present, as certain cultures and ethnicities react differently to both the government and UN troops.

Conclusion

Throughout this article, I have introduced the theoretical mechanisms for violence reduction by peacekeepers, outlined the quantitative literature on UN peacekeeping operations, and examined what these articles have to say about peacekeeper effectiveness. In terms of the peacekeeping literature, the results are varied to say the least. The literature I have identified in this review has many disagreements on the effectiveness of peacekeeping. This puzzle likely has much more to do with the definitions of effectiveness available and the theoretical issues rather than the methods or even the time-period examined. The literature is spread out on its determinations of whether peacekeepers are effective. I also regressed²⁰ the outcome on the year each paper was published to account for a possible hidden bias in the technology or methods available to scholars at the time, but there was no significant effect. It is clear, then, that more work needs to be done in the peacekeeping literature around defining terms concisely and consistently. The literature is blemished by different definitions, methods, and measures. While there is much to study in measures of peacekeeping effectiveness, deriving unified definitions would be of much use.

Researchers must also focus more on the endogeneity issues present. After more than two decades of quantitative literature, there is only one paper that uses an instrumental variable approach. Of course, instrumental variables are very hard to come by in this type of work and there needs to be discretion in the choice of instrumental variables; no one wants to see a recurrence of the use of rain as an instrumental variable seen in economics

²⁰ Basic linear regression used

many times over.²¹ Additionally, certain papers have tried to establish causal inference via other means, matching similar cases of civil wars with and without PKOs. However, as mentioned before, this presents many opportunities for bias. On top of that those papers used propensity score matched samples, and their work could be improved greatly through the use of cardinality matching, which improves analyses of hidden bias sensitivity tests among other things.²²

The large N peacekeeping effectiveness studies have changed drastically over time. While starting with negative binomial regressions and now moving into spatial analysis and instrumental variable approaches, the methods used by scholars have improved. However, there remains several issues to be solved if this literature endeavors to have true claims of causality. Formalizing terminology and classification issues can clean up the literature and make it more consistent. Further examination of confounding variables in the war resolution sub-group would make causality claims clearer. Finally, using more advanced methods such as the instrumental variable approach, the literature can improve the quality of research. This literature has an interesting premise. After all, determining what effect peacekeepers have on the states they are deployed to is important in setting their mission parameters and goals. However, before it can make any causal claims, these issues must be resolved.

²¹ See: Miguel et al. 2004, Haber & Menaldo 2011, and Sarsons 2015

²² Visconti & Zubizarreta 2018

Works Cited

- Aldrich, John H., and Forrest D. Nelson. *Linear Probability, Logit, and Probit Models. Quantitative Applications in the Social Sciences ; No. 07-045.* Beverly Hills: Sage Publications, 1984.
- Bara, Corinne, and Lisa Hultman. "Just Different Hats? Comparing UN and Non-UN Peacekeeping." *International Peacekeeping* (2020): 1-28.
- Beardsley, Kyle. "UN intervention and the duration of international crises." *Journal of Peace Research* 49, no. 2 (2012): 335-349.
- Beardsley, Kyle, and Kristian Skrede Gleditsch. "Peacekeeping as Conflict Containment." *International Studies Review* 17, no. 1 (2015): 67-89.
- Carnegie, A., & Mikulaschek, C. (2020). *The Promise of Peacekeeping: Protecting Civilians in Civil Wars.* *International Organization*, 74(4), 810-832. doi:10.1017/S0020818320000442
- De Coning, C. (2018). Adaptive peacebuilding. *International Affairs*, 94(2), 301-317.
- Dellmuth, Lisa Maria, and Jonas Tallberg. 2015. "The Social Legitimacy of International Organisations: Interest Representation, Institutional Performance, and Confidence Extrapolation in the United Nations." *Review of International Studies* 41(3): 451–75. doi: 10.1017/S0260210514000230.
- Diehl, Paul F., Jennifer Reifschneider, and Paul R. Hensel. "United Nations intervention And recurring conflict." *International Organization* 50, no. 4 (1996): 683-700.
- Doyle, Michael W., and Nicholas Sambanis. "International peacebuilding: A theoretical and quantitative analysis." *American political science review* 94, no. 4 (2000):79-801.
- "Event History Analysis" *Encyclopedia of Sociology...*Encyclopedia.com. (April 28, 2020). <https://www.encyclopedia.com/social-sciences/encyclopedias-almanacs-transcripts-and-maps/event-history-analysis>
- Fortna, Virginia Page. "Does peacekeeping keep peace? International intervention and The duration of peace after civil war." *International studies quarterly* 48, no. 2 (2004): 269-292.
- Fortna, Virginia Page. *Does peacekeeping work?: shaping belligerents' choices after civil war.* Princeton University Press, 2008.
- Gilligan, Michael J., and Ernest J. Sergenti. "Do UN interventions cause peace? Using Matching to improve causal inference." *Quarterly Journal of Political Science* 3, no. 2 (2008): 89-122.
- Greig, J. Michael, and Paul F. Diehl. "The peacekeeping–peacemaking dilemma." *International Studies Quarterly* 49, no. 4 (2005): 621-645.
- Haber, S., & Menaldo, V. A. (2011). *Rainfall, human capital, and democracy.* Available at SSRN 1667332.
- Hartzell, Caroline, Matthew Hoddie, and Donald Rothchild. "Stabilizing the peace after

- civil war: An investigation of some key variables." *International organization* 55, no. 1 (2001): 183-208.
- Heckman, James, and Burton Singer. "The identifiability of the proportional hazard model." *The Review of Economic Studies* 51, no. 2 (1984): 231-241.
- Hinkkainen Elliott, K., Polo, S. M., & Reyes, L. E. (2020). Making Peace or Preventing It? UN Peacekeeping, Terrorism, and Civil War Negotiations. *International Studies Quarterly*.
- Hultman, Lisa. "Keeping peace or spurring violence? Unintended effects of peace operations on violence against civilians." *Civil Wars* 12, no. 1-2 (2010): 29-46.
- Hultman, Lisa, Jacob Kathman, and Megan Shannon. "Beyond keeping peace: United Nations effectiveness in the midst of fighting." *American Political Science Review* 108, no. 4 (2014): 737-753.
- Hultman, Lisa, Jacob Kathman, and Megan Shannon. "United Nations peacekeeping and civilian protection in civil war." *American Journal of Political Science* 57, no. 4 (2013): 875-891.
- Kathman, Jacob D., and Reed M. Wood. "Managing threat, cost, and incentive to kill: The short and long-term effects of intervention in mass killings." *Journal of Conflict Resolution* 55, no. 5 (2011): 735-760.
- Krasner, Stephen D., ed. *International regimes*. Cornell University Press, 1983.
- Melander, Erik. "Selected to go where murderers lurk? The preventive effect of peacekeeping on mass killings of civilians." *Conflict Management and Peace Science* 26, no. 4 (2009): 389-406.
- Miguel, E., Satyanath, S., & Sergenti, E. (2004). Economic shocks and civil conflict: An instrumental variables approach. *Journal of political Economy*, 112(4), 725-753.
- Osborne, Jason W., and Elaine Waters. "Four assumptions of multiple regression that researchers should always test." *Practical Assessment, Research, and Evaluation* 8, no. 1 (2002): 2.
- Peitz, Laura, and Gregor Reisch. "Violence reduction or relocation?." *Zeitschrift für Friedens und Konfliktforschung* 8, no. 2 (2019): 161-181.
- Regan, Patrick M. "Third-party interventions and the duration of intrastate conflicts." *Journal of Conflict Resolution* 46, no. 1 (2002): 55-73.
- Ruggeri, Andrea, Han Dorussen, and Theodora-Ismene Gizelis. "Winning the peace locally: UN peacekeeping and local conflict." *International organization* 71, no. 1 (2017): 163-185.
- Ruggeri, Andrea, Theodora-Ismene Gizelis, and Han Dorussen. "Managing mistrust: An analysis of cooperation with UN peacekeeping in Africa." *Journal of Conflict Resolution* 57, no. 3 (2013): 387-409.
- Sandler, Todd. "International peacekeeping operations: Burden sharing and effectiveness." *Journal of Conflict Resolution* 61, no. 9 (2017): 1875-1897.
- Sarsons, H. (2015). Rainfall and conflict: A cautionary tale. *Journal of development*

- Economics, 115, 62-72.
- Shumway, Tyler. "Forecasting Bankruptcy More Accurately: A Simple Hazard Model." *The Journal of Business* 74, no. 1 (2001): 101-24. Accessed May 1, 2020. doi:10.1086/209665.
- Talmon, S., and C.D.I.I.L.P.L.S. Talmon. 1998. *Recognition of Governments in International Law: With Particular Reference to Governments in Exile*. Clarendon Press. <https://books.google.com/books?id=scc8EboiJX8C>.
- Visconti, Giancarlo, and José R. Zubizarreta. "Handling limited overlap in observational studies with cardinality matching." *Observational Studies* 4 (2018): 217-249.