

AMERICAN UNIVERSITY'S UNDERGRADUATE RESEARCH JOURNAL

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MEGAN NISSEL

To Intervene or Not to Intervene: The Role of Humanitarianism, U.N. Approval, and Economic Incentives in Determining NATO Military Intervention in Conflict

OZZIE CHUNG

Prospect Theory in International Relations

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Policy and Place in International Economic Coercion

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Partisan Pork: How House Delegation Cohesion Affects Earmark Spending

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The Effects of Electoral Systems and Gender Quotas on Female Representation in National Legislatures

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Clocks and Clouds was founded three years ago. The publication of its fifth issue is a bittersweet moment for us, the first generation of *Clocks and Clouds*' staff, as we leave the journal behind, even while we rest assured its legacy rests in capable hands.

The journal's ongoing mission to provide an outlet for premiere undergraduate research in political science and international relations continues to connect students, faculty, and administrators across our university. Over this past year, we have sought to strengthen our review practices, enhance the professionalism of the journal, and bring our staff and network of supporters closer together. This issue is the culmination of those efforts.

Yet such an achievement would not have been possible without the tireless work of both the talented authors who are profiled herein and our dedicated editorial review staff. Once again, this journal is truly yours.

Through our experiences with *Clocks and Clouds*, we have come to see research as a transformative process. If the proper methodology is adopted and the right questions asked, the unknown becomes known and the world changes for the better. It is safe to say that the authors of this issue have, in some small part, transformed our understanding of the world.

Megan Nissell proposes an explanatory model for when NATO chooses to intervene in intrastate conflicts, noting the importance of trade ties. Ozzie Chung applies prospect theory of decision-making to an IR context, assessing its merits in predicting state behavior. Cullen Moran highlights two novel factors that determine the success of sanctions regimes, timely strengthening our understanding of a critical and current policy issue.

For the more politically inclined, Matthew Waskiewicz assesses the role of political party cohesion of state congressional delegations in determining earmark spending. He has a note for aspiring politicians: it pays to be partisan. Amy Manning explores alternative explanations for the variance of female representation in national legislatures worldwide, helping to ensure that those same aspiring politicians have an equal chance to legislate regardless of gender.

The most vibrant fields of research are founded in diverse perspectives. Yet all too often, the voice of undergraduates is lost in those discussions. *Clocks and Clouds* is based on the premise that undergraduate students have ideas that matter. Join us in reading and listening to these dynamic new voices political science research.

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TO INTERVENE OR NOT TO INTERVENE: THE ROLE OF HUMANITARIANISM, U.N. APPROVAL, AND ECONOMIC INCENTIVES IN DETERMINING NATO MILITARY INTERVENTION IN CONFLICT

Megan Nissel

Abstract

The North American Treaty Organization (NATO) was founded at the outset of the Cold War and served as a collective defense alliance of states in North America and Western Europe against the Soviet bloc. However, following the end of the Cold War and the collapse of the Soviet Union, the role of NATO evolved and the organization began to take part in military interventions. This paper examines the impact of three variables on determining NATO intervention: human rights violations in a conflict, U.N. calls for action, and economic incentives measured in terms of trade. Using a qualitative case study analysis in which four conflicts were examined – two in which NATO intervened and two in which it did not – this paper found that a positive correlation does exist between economic incentives and NATO intervention.

Introduction

The North Atlantic Treaty Organization (NATO) is a military alliance based on the North Atlantic Treaty of 1949. The organization constitutes a system of collective defense: member states agree to mutual defense in the event of attack by an external party (North Atlantic Treaty Organization 2012). NATO began primarily as a political association but grew more militaristic as a result of the Korean War, the Cold War, and the formation of the Warsaw Pact. NATO's first military intervention in a conflict took place in Bosnia from 1991 to 1995. Since then, NATO has been involved in several other conflicts,

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including Kosovo in 1999, Afghanistan in 2001, and Libya in 2011 (Ibid.). The number of NATO interventions remains small, though there have been many conflicts in the world since NATO's formation in which international assistance may have helped end violence. Why then, does NATO intervene in some conflicts but not others?

While the interventions in Bosnia and Kosovo could be explained by the conflicts' proximity to the North Atlantic region and therefore proximity to NATO member states, and the military action taken in Afghanistan can be explained by the events of 9/11, the intervention in Libya stands out as unique. Libya lies outside the geographic sphere of NATO members and yet NATO did intervene. However, the ongoing conflict in Syria, which began in 2011, has had no such intervention, despite the country's close proximity to NATO member state Turkey. It would seem that there is more to NATO's involvement in a conflict country than its location alone. This is not to say that the location is unimportant. Rather, it would seem that more factors are at play. What then, are the other factors that determine whether or not NATO will intervene in a conflict?

This study will seek to fill a gap that exists in the literature dealing with the motivations behind NATO interventions. The first section of this paper presents an overview of previous studies that pertain to aspects of this question. The study then posits that a combination of factors makes intervention more likely. Three particular factors are identified, which together may be essential for a NATO intervention to occur: humanitarian incentives, U.N. approval, and NATO member states' economic interests. Four case studies – two in which NATO did intervene and two in which the organization did not – will provide the sample data for correlative analysis between these three factors and the probability of intervention.

While causation cannot be determined, the analysis conducted in this study provides some insight into the motivations behind NATO interventions. This study concludes by presenting other potential factors that could be considered in future research. Determining the factors that are most important in influencing NATO to intervene in a conflict will provide a better understanding of the organization. In turn, this understanding will allow for more accurate prediction of NATO behavior in the future.

Literature Review

As an important topic with foreign policy ramifications, NATO interventions have been studied and written about in depth. The breadth



of research related to the question at hand can be distilled into four main categories: (1) literature on the legality of NATO intervention, tied closely to coordination with the U.N. and receiving U.N. permission; (2) research looking closely at specific NATO interventions individually; (3) factors that influence interventions in general; and (4) factors that influence NATO in particular. However, there is a lack of research into whether NATO interventions occur for a purely humanitarian reason, with the goal of achieving a collective good, or if other factors – such as national interests – play a significant role.

The first relevant category of study focuses on the legality of NATO interventions. In particular, this category covers the role the U.N. has played in coordinating with NATO and granting the alliance permission to conduct its missions. J. D. Godwin (1999) looked at the NATO-U.N. relationship and determined, through examining NATO's role in Bosnia and Kosovo in 1992 and 1999 respectively, that NATO enjoys certain advantages that the U.N. and other regional organizations do not share. The alliance is grounded in the moral strength of a common democratic ideology. However, NATO lacks the political will and freedom of action required to perform peace operations without U.N. oversight (Ibid.). Godwin contributes to the literature the idea that U.N. approval is necessary in order for NATO's actions to be viewed as legitimate. The likelihood of U.N. permission might be an important factor in determining whether or not NATO will intervene militarily in a conflict.

Other relevant literature falls into the category of case-specific studies. While there are few studies comparing NATO interventions and looking for commonalities, there are many more articles that examine individual conflicts and the role of NATO interventions in them. Two articles that looked at the case of Libya give competing explanations for the Libya intervention. One article argues that Western intervention is ideological in origin and derived from liberal interventionism, but there may have been an imperialistic drive behind the Libya mission motivated by securing access to oil (Pfaff 2011). The other article argues that there was a moral justification for the intervention in Libya. It addresses the contested viewpoint that there was a just cause for forcible regime changes. It also argues that, at least initially, the mission goal was to protect civilians and not to overthrow Qaddafi (Pattison 2011).

One final category of relevant research consists of studies on the significant factors in interventions in general. Patrick M. Regan (1998) examined the conditions under which third parties decide to intervene in intrastate conflicts in his article "Choosing to Intervene: Outside Interventions in Internal Conflicts." He determined that the decision results from a mixture of domestic political considerations and strategic interests. Additionally,

Realism alone cannot account for interventions, which can occur not simply when national interests are at stake. This argument would lend itself to the idea that humanitarian and ethical concerns are the major factor behind an intervention. However, the study looks at interventions in general and not NATO specifically.

Similarly, another article looks at U.N. involvement in international crises. The authors compare two models of explaining U.N. behavior and determine that the organization is more likely to get involved in conflicts based on their escalatory potential and severity, suggesting that the U.N. adheres to the humanitarian and security missions laid out in its Charter rather than following the interests of the five permanent Security Council members (Beardsley, Schmidt 2012). This indicates that humanitarianism might in fact be more important in determining likelihood of intervention than states' interests. However, an important thing to note is that the article again focuses on the U.N. and not NATO specifically.

There are also studies that focus on NATO in particular, as opposed to interventions in general. An article entitled "Explaining Wars of Choice: An Integrated Decision Model of NATO Policy in Kosovo," discussed factors that influence why member states had varying degrees of support for NATO's Kosovo intervention, including balance of threat, Neo-Realism, public opinion, and governmental institutional structures. The article also points out that member states' desire to present a unified front even when they may disagree internally with one another. This might be indicative of the idea that interventions are typically driven primarily by the desires of a small number of member states (Auerswald 2004). This same idea is echoed in B.K. Shrivastava and Manmohan Agarwal's (2003) article where they examined the role of NATO in the Bosnia-Herzegovina conflict, and determined that the US was the driving force behind this intervention. Both of these studies are limited in scope because they only address one intervention each, and do not compare across cases. Furthermore, Auerswald draws no conclusion as to the relative importance of the factors analyzed.

A final article of importance is "NATO's ethnic cleansing: The Kurdish question in Turkey" by S. Esim (1999). The article brings into question NATO's humanitarian intentions through pointing out that, while NATO intervened to stop human rights abuses in Kosovo, a NATO member state, Turkey, has perpetuated human rights abuses against Kurds within the country and NATO has done nothing. This article raises an important point with regards to intervention motivations. If NATO interventions were executed on purely humanitarian grounds, NATO would necessarily have intervened in many



more conflicts than it has. Therefore, there must be other factors that influence the decision to intervene.

In sum, the existing literature provides many clues as to what the most important factors in influencing interventions may be. Research into the legality of NATO interventions contributes to the literature the importance of U.N. coordination and approval of missions. Case studies focusing on specific interventions provide a more in-depth examination of NATO's role in certain conflicts, and provide potential explanations for intervention beyond the humanitarian. Research on the motivating factors behind interventions in general, and NATO specifically, brings to light the importance of national interests.

The biggest problem with the literature is that a gap exists when it comes to why NATO intervenes in some conflicts but not others. As stated previously, this study will attempt to provide an answer to this question through exploring the importance of three factors: U.N. permission, humanitarian concerns, and national interests in terms of economics.

Hypothesis and Theoretical Model

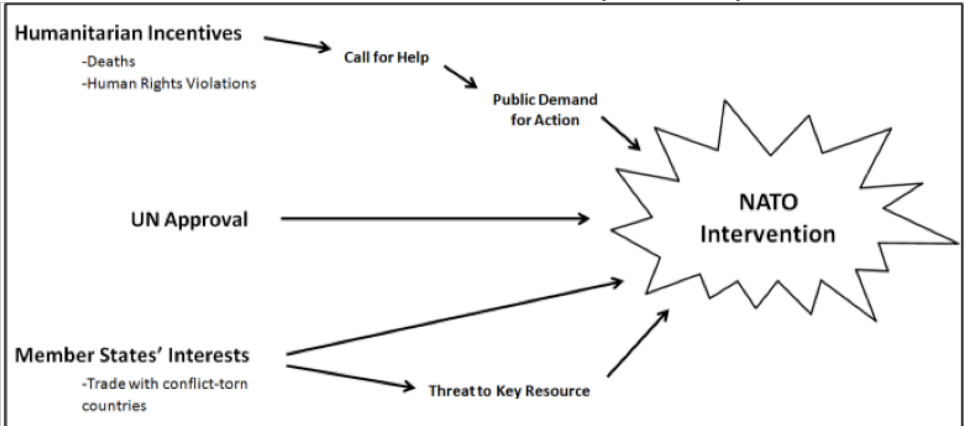
Under NATO's current treaty, if conflict occurs within the North Atlantic region, NATO will intervene for collective self-defense (North Atlantic Treaty Organization 2012). If a conflict occurs that results in high numbers of casualties, this could trigger a call for international assistance from within the conflict-torn country. This, in turn, could lead to a demand for action from the public of the international community, which might incentivize NATO to intervene. However, in all instances of conflict outside of the North Atlantic region, NATO members are bound only to consult with one another regarding intervention when member states' interests are threatened (Ibid.).

While NATO interventions have historically claimed to benefit the collective good by fulfilling humanitarian purposes, humanitarianism is not enough. Often, the interests of NATO member states must also be at stake. The theory that this study will seek to address is that interventions are more likely to occur when intervening in a conflict within another country would serve to protect the economic interests of NATO member states. Furthermore, NATO is more likely to intervene if a member state is partially reliant upon a natural resource within the conflict-torn country.

Additionally, due to the restrictions of international law, NATO will be much more likely to intervene in a conflict if the intervention has been

sanctioned by the U.N. This is essential because without U.N. approval any military action taken by NATO in another country can be deemed in violation of international law (Henkin 1999).

The model below demonstrates the theory to be analyzed:



The central hypothesis of this paper, then, is that NATO will be much more likely to intervene militarily in a conflict if three conditions are met: A) there are humanitarian incentives for intervention, B) the intervention has been sanctioned by the U.N. or U.N. support is likely, and C) the economic interests of NATO member states would be furthered through military intervention.

Methodology

Variables

The hypothesis has three conditions – or independent variables – that must be met in order for a NATO intervention to occur.

The first independent variable is whether or not there is a humanitarian incentive for intervention in a conflict. Humanitarian incentive will be operationalized as the presence of violence and human rights abuses in a conflict situation. Violence will be measured in terms of deaths. Any number of deaths over 1,000 will constitute an incentive to intervene. The greater the number of reported casualties, the higher the incentive for intervention. The presence of violence will be determined through news sources, the United Human Rights Council, and the Center for Justice and Accountability. Information on human rights abuses will be gathered from Human Rights Watch, Amnesty International, and news sources. If both violence and human rights abuses occurred in a conflict, then it can be said that a humanitarian incentive for intervention existed.



Along with humanitarian incentive come two intervening variables: (1) a call for international aid from within the conflict-torn country, and (2) demand for action by the public in the international community. If a conflict is causing deaths and human rights violations to occur, this will likely lead to a call for assistance from within the country, which will in turn lead to a demand for action among the public. Historical records and news sources can provide data on these intervening variables.

The second independent variable is the presence or absence of U.N. approval for a NATO intervention. This will be measured in terms of whether or not the U.N. called for a NATO intervention. Data for this variable can be found in U.N. and NATO records. This variable can have one of two values: “yes” or “no”.

The third independent variable is NATO member states’ interests, which will here be conceptualized in terms of economic power. That is to say, if the aggregate sum of NATO member states’ trade with a country in conflict were substantial – higher than \$15 billion USD annually – then it would be in NATO’s interest to intervene so as to protect their members’ economic interests. Trade is measured as the sum of all imports and exports between NATO nations and the country in conflict. Data is taken from the year prior to conflict manifestation, since this is theoretically before the conflict would affect trade. Economic data demonstrating trade interests can be found through the IMF and the CIA World Factbook.

Tied to this variable is yet another intervening variable: reliance on a particular resource. If any NATO states are partially reliant on the natural resources of the state in conflict, it would be in NATO’s interest to intervene.

The dependent variable in this hypothesis is the presence or absence of a NATO military intervention in a conflict. A NATO intervention will be defined by the presence of NATO troops within a country or the use of NATO military force, i.e. air strikes. Information on NATO interventions can be found in historical NATO records. This variable can have only two values: “yes”, an intervention occurred or “no”, an intervention did not occur.

Additionally, one control variable will be examined: the geographic location of the country experiencing conflict in relation to the location of NATO states. The probability of intervention is likely to be higher in a conflict located in close geographic proximity to NATO member states due to security concerns. Countries that share a border with a NATO member state will be considered very close. Those countries that are located in the region but do not share a border will be considered relatively close, and those that are outside the region will not be considered close.

Cases and Observations

There is a vast number of cases that could have been selected for analysis in this paper, as there have been hundreds of conflicts presenting a humanitarian incentive for NATO to intervene. For reasons detailed below, the cases chosen for this analysis were Bosnia and Herzegovina in 1992, Rwanda in 1994, Libya in 2011, and the ongoing Syrian civil war.

These four cases have been chosen because there are some interesting parallels. The Bosnia and Herzegovina war was the first conflict in which NATO ever intervened militarily. The war has been described as genocide. Rwanda, meanwhile, was also a case of genocide but it saw no NATO intervention. In fact, the international community largely ignored the Rwandan genocide until after most of the violence had already occurred. Additionally, both the Bosnia intervention and the Rwandan genocide occurred in close chronologic proximity and both countries were situated in conflict-torn regions.

The Libyan and Syrian conflicts also occurred within the same timeframe, as part of the Arab Spring, and both conflicts began as uprisings against the government and eventually turned into civil wars. However, despite the similarities between the two conflicts, only one – Libya – saw a NATO intervention. This is most interesting when one considers the fact that, of the two cases, Syria is located in closer geographic proximity to a NATO member state than is Libya, but it was Libya, not Syria, that experienced intervention.

While there are a whole host of other cases that could potentially be included in this study, this symmetry in cases will best highlight the differing reasons why NATO intervenes while displaying the least disparity in evidence. Providing another case in which intervention did or did not occur would only bias the study in one direction or another and the connection between these cases will serve to ensure there are as few intervening variables in the analysis as possible.

In all four cases chosen, there was a humanitarian incentive for NATO to intervene in order to achieve a common good. However, NATO only intervened in two cases. Therefore, it would seem that some factor beyond humanitarianism – or even geographic location – plays a role in whether or not an intervention will occur. Member states' interests are likely the cause.

Methodology

A qualitative method of analysis will be employed, using the four observations stated above – Bosnia in 1992, Rwanda in 1994, Libya in 2011, and Syria in 2011. Because of the small number of NATO interventions that



have occurred, and the difficulty that would therefore exist in finding cases that control for other variables, a comparative case study analysis would not be a viable method. As a result, case study analysis will be used.

Data Analysis

Bosnia and Herzegovina

The first case analyzed was that of Bosnia and Herzegovina where, in March of 1992, a territorial war broke out between the Bosniaks and the Serbs and Croats as a result of the breakup of Yugoslavia. The conflict ended in December of 1995 with the signing of the Dayton Agreement (Cutts 1999). Estimates put the number of deaths that occurred during the war between 97,000 and 110,000, 40% of whom were civilians (Center for Justice and Accountability 2012). Additionally, records show that human rights abuses did occur, in the form of indiscriminate killings and sexual violence (Amnesty International 2012). Because the conflict led to well over 1,000 deaths and human rights violations did occur, it can be said that there was a humanitarian incentive for NATO to intervene in the conflict. This satisfies the first of the three conditions that, according to the hypothesis, must be met for a NATO military intervention to occur.

The second condition of the hypothesis is U.N. approval of NATO action. This condition was also met in Bosnia when the U.N. Security Council passed a number of resolutions that sanctioned NATO military action. NATO involvement in Bosnia began as a result of UNSC Resolutions 713, 757, and 787 under which NATO forces enforced the U.N. arms embargo and sanctions, and monitored operations in the Adriatic (North Atlantic Treaty Organization 2012). UNSC Resolution 781 expanded NATO involvement to include monitoring and enforcing a no-fly zone; the Alliance's first military engagement occurred in 1994 when NATO shot down four planes for violating the no-fly zone (North Atlantic Treaty Organization 2012).

The third and final condition that must be met in order for NATO intervention to occur, according to the hypothesis, is that the economic interests of member states must be at risk. If the aggregate sum of trade between the country in conflict and NATO member states is greater than \$15 billion USD, then it can be said that an economic incentive for intervention to protect states' interests existed. In the case of Bosnia, trade data indicates that, in the year prior to the Bosnian civil war, the aggregate sum of NATO states' trade with Yugoslavia was \$18,805.891 billion USD (International Monetary Fund 2011). It is important to note that trade data for 1991 had to be determined based

on NATO states' trade with Yugoslavia rather than Bosnia and Herzegovina because, prior to the start of the Bosnian civil war, Bosnia and Herzegovina was a part of Yugoslavia. It is therefore possible that a key factor in NATO involvement was the protection of the economic interests of its member states.

The case of Bosnia and Herzegovina found support for the hypothesis; all three conditions – humanitarian incentives, U.N. approval, and economic interests – were met, and a NATO intervention did in fact occur. The theory behind the hypothesis, however, finds less support. This study theorized that humanitarian incentives in terms of deaths and human rights abuses leads to a call for help from within the conflict-torn country, which in turn leads to public demand for action among the international community, precipitating NATO intervention. Historical accounts indicate that there was a call for help from within Bosnia; however, there is less evidence indicating a demand for action among the international community (Cutts 1999). There is also no evidence indicating that this sequence of events in any way strongly influenced NATO to intervene.

Additionally, while the analysis shows that the economic interests of NATO member states were in fact at risk due to trade value, there is no evidence to indicate that any NATO member states were particularly reliant on any resources within the former Yugoslavia (Mongabay.com 1990). Therefore, in the case of Bosnia and Herzegovina, it does not appear that the intervening variables identified had much of an impact.

Bosnia and Herzegovina, while it does not share a border with any of the pre-1992 NATO states, is located in relatively close geographic proximity to Italy. Moreover, at the time, Eastern Europe was the focus of much attention due to the recent collapse of the Soviet Union and the breakup of Yugoslavia. Therefore, it made sense that NATO would be apt to intervene in a conflict located not too far from its member states' borders, and more importantly, located within the sphere of Western European and American interest.

Rwanda

The second case analyzed was that of Rwanda where, between April and July of 1994, genocide occurred when long-standing ethnic tensions culminated in the murder of thousands of Tutsi by the Hutu ethnic group (Eriksson 1996). Rwanda, unlike Bosnia and Herzegovina, is not located in close proximity to the North Atlantic region. That being said, over 800,000 deaths and countless human rights violations occurred during the approximately 100 days of genocide, which indicates a strong humanitarian incentive for intervention (Human Rights Watch 1996). However, while this first condition



necessary for a NATO intervention to occur is met, conditions two and three are not met. The U.N. never sanctioned an intervention in Rwanda, and trade data indicates that NATO member states did not have a significant economic interest to protect in Rwanda. The sum of aggregate trade with Rwanda in 1993 was only \$148.163 million USD (International Monetary Fund 2011). The case of Rwanda would therefore also support the hypothesis. Only one of the three necessary conditions was met and as expected, no intervention occurred.

The intervening variables also show less support for validating the causal story in Rwanda. While the death and human rights abuses that occurred did lead to a call for aid from within Rwanda, there was no subsequent demand for action from the international community until after the genocide had occurred, at which time many asked why nothing had been done sooner (Eriksson 1996). In the case of economic interests; however, the theory does hold. As NATO member states did not have significant economic ties to Rwanda, they also did not rely on any particular natural resource provided by the country. It therefore makes sense that they would not intervene, as they had no interests to protect.

In terms of geography, there is also a correlation here between location and intervention. Rwanda, located in central Africa, is far from the North Atlantic region. If the claim that interventions are more likely in conflicts that occur closer to the region immediately surrounding NATO member states is true, then the lack of intervention in Rwanda appears to support this.

Libya

The third case analyzed was that of Libya, where in February of 2011, a civil war began between forces loyal to Muammar Gaddafi and those seeking to overthrow his government in a revolution. The conflict ended in October 2011 after Gaddafi was killed and the National Transitional Council declared Libya to be liberated (BBC News 2012). Prior to NATO intervention in Libya, between 1,000 and 2,000 deaths had occurred; and, over the course of the conflict, human rights violations took place (Milne 2011). This constitutes a humanitarian incentive for intervention. However, it should be noted that NATO air strikes that took place during intervention raised the death toll even higher. By the end of the conflict, over 30,000 people had died (Laub 2011). Additionally, NATO forces have also been accused of war crimes and human rights violations within Libya, so while there may have been a humanitarian incentive for intervention, NATO's main goal was clearly not to protect Libyans (Grey 2012).

The second condition for intervention, U.N. approval, was met when the U.N. Security Council issued Resolution 1973. This resolution authorized NATO to protect civilians and civilian-populated areas under attack within Libya (North Atlantic Treaty Organization 2012). While this may have been the initial goal, the damage done as a result of NATO air strikes indicates that a larger goal may have been at play, namely ending the conflict and removing Gaddafi from power.

Trade data indicates that the third condition of the hypothesis, economic interests, was also met in Libya. Aggregate trade data between NATO member states and Libya totaled \$46,820.524 billion USD in 2010 (International Monetary Fund 2011). It can therefore be inferred that NATO had an economic incentive to intervene and end the conflict, in order to protect the economic interests of member states.

The hypothesis is supported in the case of Libya. All three of the conditions identified as necessary for an intervention to take place – humanitarian incentives, U.N. approval, and economic interests – were met. That being said, it is likely that some other factors not taken into account by the hypothesis may also have been at play – prominent among them being the objective of removing Gaddafi from power.

The case of Libya also supports the theory presented in this paper. As a result of the violence occurring within the country, there were calls from the rebels for assistance from the international community in removing Gaddafi from power (Posner 2011). In response to both the violence and the call for aid, there was at least some level of public demand for action within the international community (Pew Research Center 2011). However, it is less certain that public demand for action played an important role in influencing NATO to intervene. It is possible that the economic incentives and U.N. sanctions alone were enough to initiate intervention.

In terms of economics, Libya is an exporter of oil which a few NATO member states – notably France and Italy – are partially reliant upon (CIA 2012). This indicates that the economic intervening variable identified previously is significant in the case of Libya. This could also explain why France took a leading role in calling for the Libyan intervention.

Geographically, Libya does not share a land border with any NATO member states, though it is in closer proximity to the North Atlantic region than Rwanda. However, Libya does have a presence in the Mediterranean through trade routes, thus affecting NATO members in the area. For this reason, there is a possible correlation between location and probability of intervention in the case of Libya.



Syria

The fourth and final case analyzed was that of Syria, where in March of 2011, a civil war began between the forces of the Ba'ath Party government and those wishing to overthrow it and end nearly five decades of rule by the party. The conflict is still ongoing. President Bashar al-Assad has refused to relinquish power. While it is impossible to know for sure how many people have lost their lives to the war, U.N. Secretary General Ban Ki-moon estimated that the death toll had exceeded 100,000 as of July (BBC News 2012). Additionally, human rights violations have been committed by both pro- and anti-Assad forces (Nichols 2012). The large number of deaths indicates a strong humanitarian incentive for intervention, yet no such intervention has occurred.

The U.N. has not sanctioned an intervention in Syria to date. Nevertheless, there have been multiple attempts to call for sanctions against the Assad government. However, the resolutions have been vetoed within the Security Council by Russia and China. The lack of U.N. approval for an intervention means that one of the necessary conditions has not been met. Part of the reason that an intervention has not yet occurred is that the rebel forces are divided. As there is no cohesive opposition to the Assad regime, it would be hard for NATO or any other international entity to decide on whose behalf to intervene.

Likewise, trade data indicates that there is not a strong economic incentive for intervention. Aggregate trade between Syria and NATO member states in 2010 was only \$11,909.231 billion USD (International Monetary Fund 2011). This indicates that there are no significant economic interests to protect through a NATO intervention. Because only one of the three conditions identified by the hypothesis as necessary for a NATO intervention is present within Syria, and no intervention has occurred, the case of Syria shows support for the hypothesis.

The theory behind the hypothesis also holds true to an extent. This study theorized that violence would lead to a call for assistance from within the country, which would in turn lead to public demand for action within the international community. News sources indicate that there have been calls for international aid by the Syrian combatants (Foster 2012). Additionally, there has been some level of demand for action (Miks 2012). However, this has not led to an intervention – which makes sense considering the other two necessary factors for intervention have not been met. Furthermore, economically, it does not appear that any NATO member states are partially reliant upon a resource provided by Syria, meaning there is not another economic incentive to intervene.

Syria presents an interesting case with regards to the potential correlation between geographic location and intervention. Unlike any of the other three cases, Syria actually shares a land border with a NATO member state: Turkey. However, despite its close proximity, Syria has not experienced intervention. This would seem to indicate that in this particular case, other factors might have been more important than geographic proximity in determining NATO action.

Discussion

Overall, the four cases examined show support for the hypothesis posited in this study. In all four cases, there was a humanitarian incentive for intervention. However, in only two cases was there also U.N. approval for intervention and economic interests to protect. All three conditions of the hypothesis were met in Bosnia and Libya, and these were also the only two cases in which NATO intervened.

However, the causal story identified by the theory finds less support. In all four of the cases analyzed, there was a call for international assistance from within the conflict-torn country. Nevertheless, this only led to public demand for action in two cases (Libya and Syria), and in only one of the two (Libya) did an intervention occur. In addition, reliance on a particular resource within the country in conflict does not seem to be a necessary condition for intervention as evidenced by Bosnia. Rather than being a necessary condition for intervention, reliance on a resource appears to provide an extra impetus for action. In the case of Libya, for example, France took the lead on calling for and carrying out the NATO intervention (Erlanger 2011). It was France that was one of the NATO members most reliant upon Libyan oil. The intervention protected French economic interests.

The control variable analyzed, geographic location, also found mixed results in terms of its correlation with intervention. Syria, the only country out of the four analyzed that shares a land border with a NATO member has not experienced intervention, which would seem to disprove the notion that conflicts in countries located closer to NATO members would be more likely to experience intervention. While Bosnia and Herzegovina did not share a border with a NATO member state, its location in Europe likely impacted the mindset of NATO member states and influenced the decision to intervene. The Rwandan case also supports the idea that geographic proximity plays a role. It is located so far from NATO member that what happened within the country was of little importance to NATO, overshadowed by other international issues until after the genocide had ended.



Conclusion

The cases analyzed support a correlation between the combined factors of humanitarian incentive, U.N. approval, and economic interests and the occurrence of a NATO intervention. However, the small number of cases analyzed, a result of the small number of NATO military interventions that have occurred, makes it impossible to determine causation. Furthermore, also as a result of the small number of cases, this study's findings cannot be accurately generalized. Applying the hypothesis to future NATO interventions, and additional cases in which NATO does not intervene, could provide more evidence to support or discredit it.

There are also other factors that could be considered in future research, such as the potential geo-political threat (i.e. in the event of a nuclear Iran) posed by a conflict, and whether or not that influences NATO to intervene. Additionally, the regime type that exists within a conflict-torn country, or the type of conflict occurring, may have something to do with whether or not NATO becomes involved. Determining what other factors, in addition to the three analyzed in this study, are most important in determine NATO intervention in conflicts will allow for better prediction of NATO behavior in the future, and will provide a better understanding of the organization's past actions. Understanding these factors could be valuable for scholars and policymakers alike who wish to understand the decision-making process within NATO. ✕

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PROSPECT THEORY IN INTERNATIONAL RELATIONS

Ozzie Chung

Abstract

Prospect theory, a behavioral economic theory first proposed by David Kahneman and Amos Tversky in 1979, has evolved into a seminal theory on risk decision-making applicable in a wide range of fields. Yet in both political science and international relations, prospect theory remains controversial, in part due to its laboratory origins as an economic theory. This study seeks to examine prospect theory's explanatory power in 78 cases of interstate conflict. Through a bivariate logistic regression of risk determinants leading up to interstate conflict, the study determines that prospect theory does not have significant explanatory power as a predictor of war outcomes and has limited usage as a broad overarching theory in international relations.

Introduction

Since David Kahneman and Amos Tversky (1979) published their seminal paper, "Prospect Theory: An Analysis of Decision under Risk", on risk behavior and decision-making, a plethora of research has arisen across multiple disciplines. These disciplines include psychology and economics, fields which the authors worked in, but also mathematics, law, health, sociology, statistics, and engineering. As an alternative theory to the expected-utility hypothesis, which in international relations forms the backbone of Realist and Liberal scholarship, prospect theory argues that individuals make decisions based on their perception of losses and gains, not the final outcome. Yet of the robust

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literature deriving from Kahneman and Tversky's work, studies conducted in an international relations context represented only a small percentage of resulting literature (Mercer 2005, 2). An early scholar of prospect theory in international affairs later posited this was because "attempts to test these hypotheses in the complex arena of world politics faced serious conceptual and methodological problems" (Levy 1997, 88).

Consistent with this belief, many initial studies (Jervis 1992, Boettcher 1995, Shafir 1992, Levy 1992) rarely strayed outside the interdisciplinary application of prospect theory, instead choosing to focus on testing the new environment in which the theory would be transposed. These articles, which occurred in rapid succession during the early 1990's and 2000's, concluded that prospect theory had descriptive and explanatory power, yet contained significant areas for improvement and clarification.

Over the past decade, many studies have begun to test prospect theory's analytical capabilities in various case studies of high-risk situations in international politics (Schaub 2004, He and Feng 2009, Haas 2002, Hancock and Weiss 2011, He and Feng 2012). However, there exists a gap between the initial studies of prospect theory in international relations, and the subsequent applications of prospect theory to individual case studies. Conclusions of prospect theory's utility have been mixed, likely due to the lack of an underlying theoretical framework for testing in a social context.

As a result, building upon and expanding existing research on prospect theory represents a substantive goal that would advance the current state of prospect theory discourse in international relations. What is prospect theory's explanatory power in international relations? This question will form the basis for this study's contributions to scholarly literature. This paper aims to discern a better understanding of the theoretical and methodological difficulties facing prospect theory in IR, as well as its legitimacy as a decision-making model in the international sphere.

Theoretical Foundation

Prospect theory originated as an alternative model to the expected-utility principle, a theory that dates back to the Enlightenment era. Also known as the rational choice theory, the utility principle asserts that actors will behave rationally by estimating the expected value of his or her options. The expected value function, determined by the sum of a choice's costs and benefits in relation to its probability ($[(\text{costs} + \text{benefits}) \times \text{probability}]$)¹, orders each

possible option for the actor to then choose based on highest expected value (Schaub 2004). In other words, actors attempt to maximize the expected utility in their choices by selecting the choice with the highest return (Luce and Laiffa 1989, Ch. 2).

The expected-utility principle, though reflective of human appreciation for rationality, fails to account for changes in perception and the context of individual risk situations. Indeed, in terms of the rational choice theory such decisions would be called irrational. In his initial foray into behavioral psychology in international relations, Levy (1992) provides an example of how irrational behavior can appear rational:

In a typical experiment, 80% of respondents preferred a certain outcome of \$3,000 to an 80% chance of \$4,000 and 20% chance of nothing. If faced with the same two negative prospects, however, 92% of respondents preferred to gamble on an 80% chance of losing \$4,000 and 20% of losing nothing to a certain loss of \$3,000. In both cases respondents chose the option with the lower expected value and the combination of these two patterns is inconsistent with expected-utility theory. (174)

As exemplified, participants in the experiment chose the option contrary to the rational choice model. Cases such as these formed the foundation for alternative theories of decision-making under risk situations.

Over the past three decades prospect theory has risen to become the leading alternative to the expected-utility model (Levy 1996). Instead of the linear relation between probability and expected utility according to the rational choice model, prospect theory depicts an S-shape function oriented around a reference point (Levy 1992). The reference point changes as decisions are made and gains and losses are calculated. Because most individuals frame decisions around these gains and losses, the reference point is important because it divides a decision into two realms: a domain of gains for decisions which results in relative gain, and a domain of losses for decisions which results in relative loss. Determining the location of the reference point remains one of the most challenging aspects of applying prospect theory to the study of

¹ Costs and benefits are multiplied independently if the probability of costs and benefits are different.

international crises today.

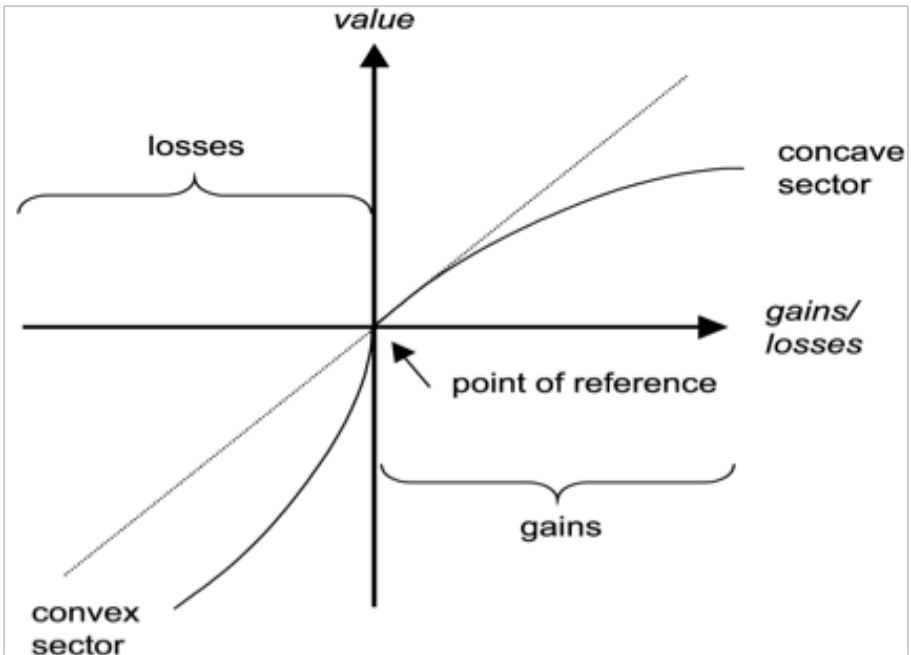


Figure 1. Value Function of a Prospect Theory Model. Source: Jacob and Ehret 2006

As depicted in Figure 1, Kahneman and Tversky (1979) determined through multiple laboratory experiments that decision-making occurs in the context of a framing effect that places particular weight on decisions occurring within the domain of losses. Several conclusions can be determined from Kahneman and Tversky's experiments:

1. People tend to think in terms of gains and losses.
2. People tend to be risk-averse (less risky in decision-making) with respect to gains, and risk-acceptant (more risky in decision-making) with respect to losses.
3. Increasing trends in gains and losses results in diminishing values on both sides of the point of reference. As one moves further from the reference point, the sensitivity to increments of change decreases equally for both the domain of gains and the domain of losses.



4. The endowment effect: Actors tend to overvalue their current possessions
5. Individuals overweigh outcomes which are certain compared to outcomes which are merely probable.
6. Individuals overweigh differences compared to similarities, and tend to ignore similarities. (Levy 1992)

Though these conclusions are broad in that they do not specifically refer to actors in an international context, defining prospect theory and its conclusions is important to understanding how scholars have transposed the framework of prospect theory from the laboratory to international relations. Further explanation of the logical progression from theory to conclusion will be discussed in the methodology section.

Literature Review

In international relations, research on prospect theory can be divided into two categories: scholars in Group A that studied prospect theory in an interdisciplinary context, and scholars in Group B that have applied the conclusions of the former to specific case studies in international relations.

Group A Scholars

At the forefront of research into prospect theory, scholars in Group A have studied the theoretical and mathematical explanations for prospect theory and extrapolated them to an international context. Among the first and most referenced articles published included those by Levy (1992), Boettcher(1995), and their follow-up works.

Levy (1992) identifies two phases of prospect theory as an alternative theory of risky choice. The editing phase includes a preliminary analysis of the options available to the actor, including possible outcomes and consequences and their associated values and probabilities (179). In the editing phase, the options are broken down to “simplify subsequent evaluation and choice” (Tversky and Kahneman 1981, 453). The evaluation phase examines the edited options and selects the preferred prospect (Levy 1992, 180). Though the editing phase contains a rigorous mathematical model used to evaluate an actor’s options, the evaluation phase lacks a solid theory of framing and editing. Levy notes that the ambiguity of determining a framework through the “norms, habits, and expectancies of the decision maker” is especially troublesome given the complex nature of the international environment (Ibid.).

Boettcher (1995, 577) builds upon these deductions by concluding that prospect theory is first and foremost a "descriptive theory" with no power to independently create a frame for risk situations. He identifies the "form of the probabilistic expression to a decision maker" as an important control variable in future studies, and advises researchers to "take care in applying formal, mathematically represented models of choice" (588). Like Levy, Boettcher also highlights the difficulties of applying prospect theory to the context of foreign policy decision making.

In a subsequent review of his 1992 paper, Levy (1997) identifies several additional problems with prospect theory. First, he notes that "none of the alternatives to expected utility theory...consistently organize the data" (197). Without a stringent methodological model for carrying out the evaluation phase of prospect theory, it becomes difficult to compare aggregated studies of similar situations. Additionally, problems lie within the external framework. In international relations, it is difficult to compare the "riskiness" of several options related to a decision. Defining risk in both the domain of gains and the domain of losses remains an issue which again makes comparisons difficult.

As a complementary article Jervis (1992) also brings up the issue that, as opposed to the singular actor in experiments, risk situations in international relations have two actors, and therefore the problems of identifying a reference point are compounded (197). He then argues that aggregation remains a problem. Specifically, whether or not the assumption that tests performed on a single actor can be extrapolated to a group, state, or organization remains an issue.

Though these early authors identify several major issues in prospect theory, they are keen to remind future scholars that their criticism serves to refine and improve a theory which has promise as an alternative theory to risk decision-making. Levy (1997) states that "regardless of outcome, prospect theory and its associated experimental findings have already made a significant set of contributions to the international relations literature..." (108). The potential of prospect theory and the importance of further research in producing more explanatory and less contradictory results goes hand in hand.

In the past decade, though there have been fewer articles examining the applicability of prospect theory in international relations, two recent articles of note fall under the category of Group A. In an assessment of prospect theory in political science, Mercer (2005) addresses the issue of determining a reference point by introducing five factors: status quo, aspiration, heuristics, analogies, and emotion. In similar fashion, Vis (2011) determines that the issue

of aggregation had only a marginal effect on international relations. Though these articles represent attempts to address outstanding issues in the ongoing dissection of prospect theory in international relations, such research has yet to be consolidated or widely disseminated.

Group B Scholars

Whereas the research of Group A Scholars has been centered around discussions within the same circles, namely in the journal *Political Psychology*, Group B scholars have published papers that are much more widely dispersed and cover a broader cross-section of international affairs. Most notably, these scholars have applied the theoretical analyses of Group A scholars to a spectrum of international skirmishes, conflicts, and wars. Hancock and Weiss (2011) applied prospect theory to investigate the politically risk-laden atmosphere surrounding the Oslo Accords, for example, while Haas (2002) sought to better explain the decision-making processes of top players in the Cuban Missile Crisis. Other authors utilized prospect theory in conjunction with other theories to examine alliances and other strategic functions. In two separate studies, Schaub (2004) and Lupovici (2010) employed prospect theory as a supplementary tool to examine deterrence theory, while Butler (2007) attempted to apply a prospect-theoretic explanatory model to coercive bargaining. He and Feng (2012, 2009) incorporated prospect theory in both a case study on tensions in cross-strait relations between China and Taiwan and a balance-of-threat analysis of alliance strategies in Asia.

Through this varied selection of prospect theory's application in international crises, it can be said that prospect theory is not lacking in either the number of scholars willing to integrate it in their research, or in the number of opportunities for its use. However, though there has been plenty of literature, many of the articles examined fail to account for all the variables brought up in Group A.

Some studies, like those of Hancock and Weiss (2011) and Haas (2002), choose reference points based on their own framework of qualitative methods. This is a subjective form of analysis that, when used in varying capacities over a broad scope of literature, creates as much difficulties in comparing methods as it does interpreting them. Other scholars seek to circumvent the issue entirely by predetermining a reference point (Schaub 2004). Such studies often incorporate prospect theory for its descriptive power – such as deterrence theory – but fall short elsewhere.

Among the scholars that have attempted to determine inputs for a model of determining frames of reference, Butler (2007) notably diverges

from the norm by introducing a mathematical model for determining a reference point, identifying power distribution, equity, variants of the status quo, and aspirations. This mathematical model is relatively new and has yet to be rigorously tested. Similarly, Mercer (2005) introduced his own set of determinants which have seen moderate use in literature (He and Feng 2009, Holmes 2012). By and large, however, the majority of research done in the field of international relations has not coalesced around a single theoretical framework for testing and setting a frame of reference.

Part of this stark contrast in empirical data is because Group A scholars (those testing the theory itself) had long concluded that prospect theory was greatly hindered by its laboratory origins in explaining individual decision-making (Levy 1997, Boettcher 1995, Levy 2003, Tversky and Kahneman 1981). Yet recent literature has illuminated the substantial body of experimental and empirical evidence – drawn from a variety of sub-disciplines unassociated with political science – which implies the opposite (Vis 2011, 338, Renshon 2013). Kühberger's (1998) meta-analysis of 248 published experiments involving risk decision-making, for example, supports the assumption that prospect theory can be applied equally well at the collective level.

Drawing upon Vis' and Kühberger's progressive work, this research proposal attempts to broaden the definition of prospect theory while addressing the framing and reference point issues which plague both qualitative and quantitative methodologies. At the same time, this paper will seek to expand existing literature on prospect theory through a macro, quantitative perspective. Keeping in mind that any development of a procedure to identify reference points "must be independent of the behavior to be explained in order to avoid the circularity of inferring an actor's reference point from her behavior and then explaining that same behavior in terms of framing effects based on that reference point" (Levy 2003, 234), this paper seeks to apply Kahneman's seminal theory on risk decision-making to the analysis of international crises.

Methodology

To carry out the research proposal, this study hypothesizes that states that increasingly perceive themselves to be in a domain of gains will exhibit risk-averse behavior and trend towards winning the wars they initiate, while states that increasingly see themselves in a domain of losses will display risk-seeking behavior and trend towards losing the wars they initiate. In other words, states that feel they are winning will be less likely to take risks and be more likely to consolidate their gains and win the wars they initiate. On the other hand,

states that feel they are losing will be more willing to take risks which would cause them to lose wars. This hypothesis assumes that the perception of loss and gain may not reflect the actual situation, and that making risky decisions in international crises generally backfires on the instigating actor.

States in a domain of gains or domain of losses will be the independent variable (IV) and outcome of war will be the dependent variable (DV). Because war tends to be the worst-case scenario for all actors, it likely is also the most risky of options. Prospect theory is therefore particularly useful in assessing the outcome of such risk. The proposal will be conducted through a bivariate analysis to test the explanatory power of prospect theory at a surface level. Because prospect theory has yet to be explored through quantitative means, the following research analysis will create a framework for future scholars to build their research.

Independent Variable

As the DV, domain – regardless of loss or gain – refers to whether an action takes place in the perceived realm of gains or losses; it can be relatively objective or subjective (McDermott 1998, 37). Extrapolated to the international stage, domain refers to a sense of whether a state perceives itself to be acting from a position of gains or losses.

To properly account for the subjective natures of individual actors or governments, McDermott argues that “an analyst needs to distinguish among the various criteria that different actors may use to determine perceived domains of action” (1998, 38). Due to limitations of time, defining domain on a case-by-case scenario is impossible in a quantitative study, though it remains a common method in most qualitative research. As a result, the next best alternative would be to borrow a set of quantitative guidelines from a similar study examining similar variables to determine the factors of domain.

A recent study by Jonathan Renshon (2013), “Status Deficits and War”, contains a data set which takes an unconventional approach to determining the causes of war by examining status as its independent variable. Renshon argues that the states with larger status deficits are more likely to take risks and enter wars. The central innovation in Renshon’s research is the use of Google’s PageRank algorithm, listed in Figure 2., to determine a state’s status deficit:

$$PRA = 1 - d + dPRT_1CT_1 + \dots + PRT_nC(T_n)$$

Figure 2. Google PageRank Algorithm. Source: Sobek 2003

Where PRA is the PageRank of page A , PRT_i is the PageRank of pages

T_i which link to page A , CT_i is the number of outbound links on page T_i and d is a damping factor which can be set between 0 and 1 (Renshon 2013). The damping factor, which accounts for the chance that a random user will stop clicking out of boredom, has little impact on the final result and can therefore be excluded (Renshon 2013).

The PageRank algorithm is particularly important here, as it helps account not only for the sending of diplomats but also for the reception of other states' diplomats based on the importance of each country's diplomatic ties (Renshon 2013, 18). The contradiction here – that a state's status rank is based on the status ranks of its relations – is addressed by setting the status ranks of all countries in a given year to "1".

The PageRank algorithm can be used to determine a state's Status Rank, which is then subtracted from the state's Power Rank in a given year to determine the final Status Deficit of a state. Calculations of the Power Rank will be gathered based on each country's CINC (composite index of material capabilities) score obtained at the Correlates of War site. Data from the Status Rank, on the other hand, will be drawn from the Correlate of War's "Diplomatic Exchange" dataset.

The values for Status Deficit is then divided and categorized by standard deviation below the mean (SDBM). SDBM therefore becomes the operationalized value for the independent variable. As a strong indicator of a state's perspective prior to conflict, SDBM will be used to determine the reference point of a state prior to war. The use of SDBM as a reference point is unique to this research and provides yet another possible solution to understanding a state's perspective prior to its decision-making.

Because the independent variable in Renshon's article and the hypothesis are closely related and can be interchanged, Status Deficits represents the most ideal variable to determining a reference point and to establishing a domain of gains and losses. Additionally, whereas indigenous definitions of domain would undoubtedly lack in methodological rigor, relying on existing research conducted at a higher level of quantitative analysis would greatly benefit the findings of this study. Based on a comparison of sequential years, a state's status deficit will determine its mindset going into a war, which will then be combined with the independent variable discussed below, to determine whether states in a domain of gains and losses act as prospect theory dictates. To remove any possibilities of feedback from the dependent variable back to the independent variable, the years in which each variable is compared will be staggered, $t - 1$ for the independent variable, status deficits, and t for the dependent variable, outcome of war.

Dependent Variable

To operationalize risk behavior, the independent variable needs to be both quantifiable and demonstrative of a high-risk situation. As a result, the outcome of wars is a logical choice. History shows that even well prepared and confident initiating states can end up losing a war. (Merom 2003) The usage of outcome of wars as the development variable helps to assess why some states win and others lose.

Due to the constraints of the dependent variable, operating on a nominal (0=lose war, 1=win war) scale for wars is the most realistic option. Using a directed-dyadic dataset drawn from the Correlates of War (COW) Inter-State War Data (v4.0) (2007), only the outcomes of “0” and “1” will be gathered. This is due to a lack of time to critically examine interstate wars which either become intrastate wars or fall below the threshold levels of war.

Should the hypothesis lean toward causality, states exhibiting a greater standard deviation below the mean (an indicator of status deficit and distance from the reference point) will be less likely to win wars they initiate, and states exhibiting a greater standard deviation above the mean will be more likely the win the wars they initiate.

Control Variable

Because a country’s demographics, economic power, and military strength may all contribute to a state’s perception of its status, I used the Composite Index of National Capability (CINC score) found on the Correlates of War site and calculated the ratio of the CINC score of the defender over the CINC score of the initiator. This continuous variable was then inputted in the bivariate logistic regression to determine its influence and effect on both the DV and IV.

Data Analysis

Outcome	Coeff.	Std. Err.	z	P>z
SDBM	-6.528278	8.712593	-0.75	0.454
_cons	.1570533	.4684336	0.34	0.737

Figure 3. Bivariate Logistic Regression Test (without CINC score)

Clearly, in Figure 3 the relationship between the independent variable, status deficits (calculated by standard deviation below the mean (SDBM)), has

no statistical relation to the dependent variable, the outcome of war. At 0.454, the p level indicator for causality does not fall under the 0.05 significance level for statistical correlation. This suggests that, assuming no relation between the state perceptions of status and the outcome of wars, there is a 45.4% probability that the data was obtained out of chance. Through the -6.53 seen in the coefficient, however, there is possible indication of a negative relationship between a state’s distance from the mean and its likelihood of winning a war.

Outcome	Dy/dx	Coeff.	Std. Err.	z	P>z
SDBM	-1.846338	-7.414716	8.894489	-0.83	0.404
CINC Ratio	-.0050917	-.0204477	.0391593	-0.52	0.602
_cons		.2459278	.4979753	0.49	0.621

Figure 4. Bivariate Logistic Regression Test (without CINC score)

The same logistic regression with CINC score calculated does not significantly change the results. The control variable has little impact on a state’s likelihood of winning a war. Though there is a lower p-value, and thus reduced likelihood that the IV and DV occur by chance, it does not change the outcome of the results in a substantial way. The predicted probability (dy/dx) column indicates that per every 1.0 increase in value of the standard deviation below the mean (SDBM), it is 1.8% less likely that a state wins a war, which further corroborates but does not alter the initial test calculated in Figure 3. This can also be seen in the regression chart in Figure 5:

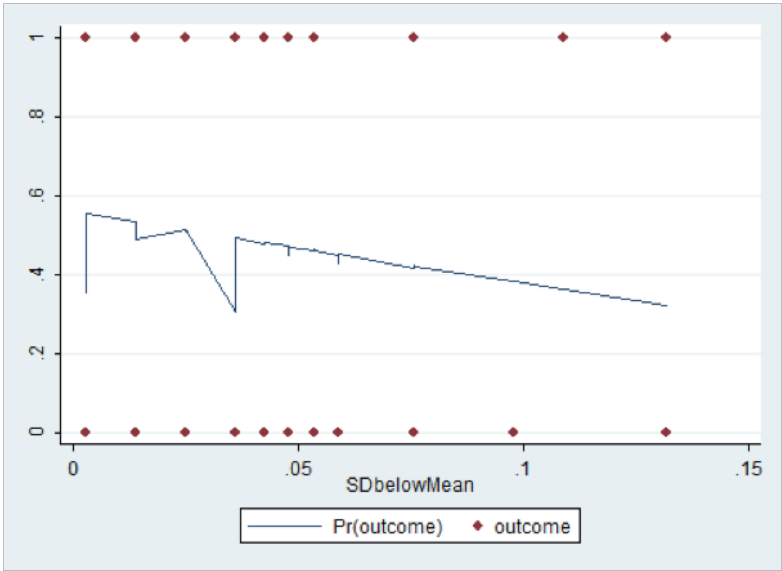


Figure 5. Bivariate Logistic Regression Test (without CINC score)

Whereas a test depicting strong correlation would have cases aggregated in the upper right and bottom left corner of the screen, variations in standard deviation do not appear to have any significant impact on the distribution of cases. Additionally, the graphed prediction line depicts a weak negative correlation between status deficits (calculated in standard deviations below the mean) and the outcome of war. From Figures 3, 4, and 5, the dependent variable is shown to have no correlation to the independent variable. Because status deficits demonstrate a state’s domain of gains or losses, this study concludes that a state’s distance from the reference point – defined as status deficits and calculated by standard deviations – does not affect the outcome of wars it initiates.

Conclusion

The research conducted in this paper reflects the difficulty in applying prospect theory to the social sciences. Using a new approach in status deficits to define the reference point, this study sought to provide insight on not only the applicability of alternative measures of reference-determining variables but also to examine prospect theory using quantitative means. Given the limited time and resources available, the author was unable to come to a

more definitive conclusion about prospect theory's explanatory power in international relations. Though the results suggest that there is no correlation between status deficits and the outcome of wars, when studied at the theoretical level the outcome only limits the applicability of prospect theory to the specific methodology listed in this paper. Specifically, the research conducted here has two implications: a) that a state's perception of status does not affect the outcome of wars it initiates, and b) that status deficits as the determinant to defining a reference point has little individual explanatory power.

The first implication suggests that status deficits are not significant in determining the outcome of war. This echoes the trend Lindley and Schildkraut (2005) argue for – that states' perceptions of themselves and of their opponents fall victim to miscalculation and misperception. Based on their conclusions, determinants of war are becoming "increasingly elusive... [and] more study of miscalculation and misperception" is called for (43). Though the CINC score included in the data analysis accounted for traditional determinants in demography, military power, and economic power, a whole host of other factors could impact a state's perception of its status going into a war: relative power of neighbors, the pain-tolerance of defenders, variations in transparency as indicators of informational accuracy, the frequency for change in a state, etcetera. Future research, however, can take into consideration the negative relation between status deficits and war outcomes when researching factors leading up to and determining wars.

The second implication suggests that while status deficits do not support the irrationality of actors in international relations, older, more strongly proven variables for determining a reference point may have greater significance when employed in a similar quantitative study. The main issue here is the difficulty of converting qualitative analysis to macro-level quantitative data. The five complementary techniques - reference point, aspiration as reference point, heuristics, analogies, and emotion – identified in Mercer's (2005) oft-cited qualitative review of prospect theory presents an intriguing avenue for future research. If a quantitative aggregate of such values can be achieved, then the research conducted in this study can be examined alongside future studies of quantitative applications of prospect theory to better define and test its applicability to international relations.

Lastly, much can be said about the internal difficulties observed through the process of gathering and analyzing data for this research paper. Attempting to recreate Renshon's database of wars initiated by states with status deficits ended up being too time-consuming. Instead, this study utilized only a partial sample of his research obtained from the article, "Status Deficits



and War” (Renshon 2013). This meant that the study was only able to work with states with positive values of status deficits, which represented only states that fell under the “domain of losses”. Additionally, the study was unable to expand the size of the database of wars, which consisted of only 49 cases of wars resulting in either a victory or a loss. Future research can focus on the recreation and expansion of the Google PageRank algorithm to include not only the entire 139 dataset of wars from Renshon’s (2013) database, but also cases of non-war interstate disputes. Additionally, the inclusion of more control variables may help clarify the results. Though the statistical results were inconclusive, the possibilities for further research identified here provide a solid foundation for future research on prospect theory in international relations. ✕

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POLICY AND PLACE IN INTERNATIONAL ECONOMIC COERCION

Cullen Moran

Abstract

This paper investigates factors that contribute to the effectiveness of international economic sanctions. A review of existing literature on sanctions reveals that scholars of economic statecraft have largely neglected to consider two variables – the policy goals of the sender and the place where sanctions are implemented – in their analyses of sanctions success. This study uses multiple analyses of variance to establish that policy and place do account for a degree of variation in the success rate of sanctions. Causal mechanisms that reflect the role of the power-maximizing policymaker are then taken into account to explain the relationship between sanctions success and sender policy. Finally, this study proposes a regional approach to the study of economic statecraft that is based on threshold models for collective action.

Introduction

Economic statecraft has been a subject of scholarly debate for millennia, from Athens' trade embargo on Megara some 2,400 years ago to the United States' ongoing sanctions against Cuba. Despite this history of discussion, there is little consensus about how and when sanctions should be used, and whether or not they are effective. Indeed, the very task of defining the term "sanctions" is no small challenge. Many scholars and policymakers understand modern sanctions as a means of coercion entirely of its own

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(Kaempfer and Lowenberg 1992; Drezner 1999), while others see sanctions as an evolved form of big-stick diplomacy (Doxey 2000; Elliot 1995). Still others find sanctions as an effective alternative to war (Eland 1995; Kanovalov et. al. 1995). For the sake of brevity and simplicity, this study will define sanctions as a government or coalition of governments' intentional disruption of normal economic relations with a target state.

Understanding the circumstances under which sanctions are successful is essential for the development of future policies. Additionally, the scholarly implications of answering such a question would shed light on the role of policymakers within international political and economic structures. This study attempts to identify how sanction outcomes vary according to the policy goal of the sender nation and the region in which the sanctions are implemented.

Historical Background

The prevalence of sanctions has drastically increased in the past century (See Appendix 1)¹. The formation of the League of Nations represented a shift in international relations towards viewing economic statecraft as a more peaceful venue for coercion and diplomacy. Most post-World-War economic sanctions regimes have been characterized by the U.S. leadership of an alliance of developed nations to pursue objectives that advance the foreign policy goals of the U.S. (Hufbauer et al. 2007). The rise of U.S. influence has coincided with a sharp rise in the use of economic sanctions. In the first forty-five years of the U.N. Security Council's existence, economic sanctions were only imposed twice – first against South Africa in 1977 and against Rhodesia in 1996. During the 1990s, however, the Security Council enacted sanctions a total of sixteen times (Cortwright and Lopez 1995).

Since their first use, sanctions episodes have fallen into one of six categories: promoting democracy and human rights, forcing compliance with sender government's nuclear policy, influencing the outcomes of internal disputes of the target country, demanding the transfer of persons across international borders, influencing the control over territory, and diminishing the target government's level of power in the international arena (Hufbauer et al. 2007). In the late 1970s, the United States began a pattern of implementing

¹ The appendix data referenced in this study is archived online at www.american.edu/clocksandclouds.



sanctions against countries that it claimed were violating human rights. These cases initially involved much of Latin America, including the 1977 sanctions against Paraguay, Guatemala, Argentina, Nicaragua, El Salvador, and Brazil. As the 20th century came to a close the use of sanctions then spread to the rest of the world (Hufbauer et al. 1990).

Sanctions for nuclear policy compliance have served predominantly for the enforcement of the 1970 Treaty on the Non-Proliferation of Nuclear Weapons (NPT). These sanctions episodes have seen some degrees of success in nonproliferation in South Korea (1975) and Taiwan (1976), but were largely unsuccessful in India (1974, 1978, 1998), Pakistan (1974, 1978, 1998), Argentina (1978), and Brazil (1978) (Ibid.). With regards to influencing internal disputes of target countries, sanctions played at least some role in overthrowing Rafael Trujillo in the Dominican Republic (1961), João Goulart in Brazil (1964), and Salvador Allende in Chile (1971). Sanctions also played a large role in ending Apartheid in South Africa (Kaempfer and Lowenberg 1992; Hufbauer et al. 2007). Sanctions have also been implemented on occasion for the extradition of criminals, release of prisoners, or repatriation of persons of interest to the sender country. This category of sanction is exemplified in 1992-2003 U.N. sanctions against Libya for the extradition of the Pan-Am attack suspects and U.S. sanctions against Iran in 1979 for the release of American hostages. Sanctions implemented to influence control over territory include measures against expropriation of land, for withdrawal of target country from disputed territory, for assimilation of target countries bordering the sender country, and for the promotion of independence of certain territories from target nations (Hufbauer et al. 1990).

The last category, diminishing the target government's level of power in the international arena, often serves the sole purpose of weakening the target state, without any particular policy change in mind. This category is characterized by ongoing U.S. sanctions against North Korea to impair their military power and by the 1918 U.K. embargo on Russia to destabilize the Bolsheviks (Ibid.). These "impairment" sanctions are more comparable to direct military intervention because they lack specific policy objectives and are a part of a zero-sum struggle for power in the international arena. they are therefore consistent with the sanctions-as-war-alternative hypothesis.

These six categories are not exhaustive. There are a number of cases that are too specific to be placed in any single category. An example of this very specific sender policy goal is U.S. measures against Japan in the early 1990s for Japan's trade in endangered sea turtles. This particular sanctions episode

has little in common with other sanctions episodes, and had no precedent. We can treat such cases as outliers – interesting, but not useful in identifying trends.

Literature Review

This study is an analysis of two variables that help predict compliance or noncompliance in sanctioned states. These two variables – policy goal of sender country (policy) and region in which sanctions are implemented (place) – are widely neglected in existing sanctions research.

The rise in the use of sanctions in the past decades has fostered a growth in both volume and diversity of scholarly work. One of the most pressing questions that these scholars address is "Do sanctions work?" International relations and economics scholars tend to argue that economic sanctions are ineffective methods for changing target country behavior. The most definitive analysis of the effectiveness of sanctions, conducted by Gary Hufbauer et al., concluded that sanctions lead to compliance only 34% of the time (2007). Edward Pound and Jihan El-Tahri agreed that "this most favored tool of diplomats is such a deeply flawed instrument" (1994). Margaret Doxey, one of the founders of the study of economic statecraft, acknowledges the poor success rate of sanctions and argues that threatening or using military action is quicker and more effective than sanctions (2000).

Most scholars concur that sanctions generally have little positive effect. However, they often identify circumstances under which sanctions can be effective, and they tend to take two different approaches to identifying such circumstances.

The first approach identifies domestic groups as the primary force behind sanctions enactment. Kaempfer and Lowenberg argue that "a theory explaining sanctions... should be based on individual political agents, including politicians, voters, bureaucrats, and interests groups" (1992). These two scholars advocate for the public choice approach to economic statecraft analysis, an approach that contends that interest groups within states seek redistributive benefits for themselves and their members. They claim that sanctioning governments seek to display their resolve to change the target government's behavior and also to minimize the domestic economic consequences of implementing those sanctions. Sanctions are enacted on behalf of domestic interest groups against interest groups in the target country as symbolic measures.

Similarly, Hufbauer et al. (2007) identify “demonstration of resolve” as a common reason for implementing economic sanctions. Heads of state, and the U.S. president in particular, often feel the need to send a message both to domestic and international audiences about their disapproval of certain target country behaviors. When the U.S. government implements sanctions for this reason, they often do so because the cost of not taking any action is greater than the cost of implementing sanctions (Hufbauer et al. 2007) That is, policymakers in these cases believe that not enacting sanctions to block a target country behavior that domestic and international audience condemn could hurt elected officials’ re-election hopes at home and would harm U.S. reputation internationally. Thus establishing a precedent for what kinds of objectionable behavior a misbehaving government can get away with. The Comprehensive Anti-Apartheid Act (1986), for example, was drafted in an atmosphere of large anti-apartheid sentiments within the American public and eventually passed over the veto of President Reagan, who was in his second term and therefore unconcerned with re-election.

The second approach to sanctions analysis treats economic statecraft as a form of direct government-to-government coercion, often as an alternative or precursor to military engagement. Daniel Drezner (1999) maintains that the primary factor determining the outcome of sanctions is anticipation of future conflict: “the strategies of the two countries depend on the opportunity costs of a stalemate outcome and the expectations of future conflict. As the target country’s opportunity costs of deadlock rise, sanctions are less likely and less useful.” Hufbauer et al. (2007) echo this approach in one of their central arguments, arguing that sanctions are successful when the economic and political costs to the target of noncompliance is greater than the political and security costs of compliance.

Within these two approaches there are three factors that scholars must grapple with in order to draw meaningful conclusions about economic statecraft. They are: (1) the speed and duration of the sanctions; (2) the differing effects on the target leader, target elite groups, and target citizens; (3) the level of multilateral compliance.

Scholars make one of two assertions about the speed with which sanctions should be implemented. One argument holds that sanction implementation should be rapid and comprehensive; the other holds that implementation should be protracted and gradual. Kimberly Elliot (1995) maintains that the impact of sanctions is maximized when they are implemented “quickly and decisively.” This decisiveness she says, “allows the target no

time to adjust and enhances the political credibility of the sender, signaling its commitment to the sanctioning." This side of the argument is joined by Cortwright and Lopez (1995), who argue, "comprehensive, rigorously enforced sanctions are more likely to be successful than limited, unenforced measures."

On the other hand, Cortwright and Lopez (1995) also point out that the U.N. is more likely to maintain its credibility as a force for peace "by providing a graduated and escalatory response to conflict... in a softer, nonmilitary mode." In addition, some scholars contend that there is a psychological effect to slower, more protracted sanctions. Ivan Eland (1995) posits, "the fear of the unknown contained within the threat of future measures may have greater psychological effects on the target than the actual sanctions that turn out to have less drastic economic effects than anticipated." Eland also argues that quickly implemented sanctions do not allow for threats of future economic coercion, nor do they allow political leaders in the sender state to ease sanctions without losing face internationally and domestically.

A second area of contention is what sector of the target state sanctions should affect. Margaret Doxey (2000) highlights the humanitarian issues that accompany sanctions, arguing that most sanctions episodes harm the population of the target country, often placing stress on a part of society that often has little control over policymakers' compliance or noncompliance. Therefore, Doxey and other scholars of this school of thought advocate for more targeted measures, such as freezes on the funds of government leaders, expulsion from international sporting events, and travel restrictions. According to Kaempfer and Lowenberg (1992), however, "investment and financial sanctions are also likely to have relatively weak effects on the target country, because of the size and efficiency of world capital markets." For this reason, Kaempfer and Lowenberg advocate for measures that go after the target nation's ruling elite in order to avoid a "rally-around-the-flag" effect, which occurs when political leaders in a target country are able to re-direct the population's frustration into a call to action against the sender country.

The degree to which multilateral compliance is necessary constitutes a third subject for debate. Some scholars, such as Ivan Eland (1995), contend that multilateralism is crucial for sanction success: "failure to get adequate multilateral cooperation can send a message of weakness to the target, rather than the signal of resolve intended by the sanctioning nations." In some cases however, multilateral sanctions can be counterproductive because of the temptation to take advantage of low competition for target countries' export markets.

These factors, while useful in understanding the outcomes of individual sanctions cases, neglect two of the most important elements of any sanctions episode – policy and place. Most game-theoretic sanctions models begin with a binary decision of the sender party: to sanction or not to sanction. To phrase that decision as a question from the sender’s perspective – would sanctioning or not sanctioning best advance my foreign policy? As outlined above, analysis of this initial decision tends to focus on the role of interest groups, the level of future conflict that the sender foresees with the target, the magnitude of sanctions, the parties within the target that will be sanctioned, the level of international support, etc. These analyses are incomplete because they take for granted two seemingly simple decisions that precede all other variables – what is the “foreign policy” that the sender government wants to promote, and where do they want to promote it? That is to say, the decision of whether or not a sender should use sanctions to promote their foreign policy can be made only after the sender decides what that policy is and where it should be promoted. This study will show that these factors do play important roles in the outcomes of sanctions episodes.

Some scholars have taken sender demands into consideration in their models, but only in terms of the magnitude of political capital demanded. In his game-theoretic analysis of sanctions success, Drezner (1999) identifies three questions that must be answered to determine the outcome of the sanctions “game.” They are: (1) when will the sender prefer “deadlock” to “status quo”?; (2) under what demands will the target prefer “acquiescence” over “deadlock”?; and (3) how will the sender respond to the target’s decision? Drezner’s answer to the second question (under what demands will the target prefer “acquiescence” over “deadlock”?) could provide a framework to better explain the policy aspect of sanctions episodes.

Drezner bases his answer on an “optimum possible concession,” and concludes, “the target’s concessions will increase when the difference between Target’s and Sender’s opportunity costs of deadlock increases.” This conclusion, although at first glance rather banal, is useful in understanding the role that political capital plays in economic coercion. Where Drezner and other scholars come short, however, is their failure to identify which types of concessions carry the highest political cost. Understanding which of a sender’s demands is more politically costly to a target government is critical to understanding what determines sanction success. This study will seek to determine which of these sender policies is more likely to be met.

Also critical to comprehending sanctions success is an understanding of the regional factors at play. Scholarly investigation of sanctions regimes

has restricted itself to isolated sender-target interactions, and for that reason, has overlooked the regional implications of sanctions. This means that scholars have discovered very little about the effect that sanctions regimes have on countries that neighbor the target country or that have strong economic relationships with it. The "demonstration of resolve" that serves as the reasoning behind many senders' implementation of sanctions implies that third, fourth, and nth parties have important impacts on sender-target relations, but the effect within those third, fourth, and nth parties remains neglected. Indeed, some scholars have all but given up on determining these effects. As Kimberly Elliot (1995) puts it, "it is difficult, if not impossible, to know whether a sanction successfully deterred a third party from taking objectionable actions in most cases." Similarly, Hufbauer et al. (2007) begin their analysis with this disclaimer: "our analysis concentrates on the response of the immediate targets. We do not underestimate the exemplary power of forceful action, but it is inherently difficult to know when a good thrashing of one wrongdoer deters bystanders from committing similar misdeeds." Ioana Petrescu (2010) has shown that sanctions can have a deterrent effect on a target government's future actions, but the farther-reaching regional impacts are left unaddressed. This study takes a first step at addressing this seemingly "impossible" question of regional impacts.

Data Analysis

The statistical analyses conducted for this study have shown that the degree to which sanctions episodes are successful varies for different sender policy objectives and for different regions of the world. In other words, *policy* and *place* are significant variables in sanctions success. To evaluate sanctions success, this study utilized the 16-point scale developed by Hufbauer et al. This score consists of a "policy result" score of range 1-4 multiplied by a "sanctions contribution score" of 1-4. Hufbauer et al. characterize any sanctions episode with a score of 9 or higher as a successful sanctions episode. This scale is outlined in *Economic Sanctions Reconsidered* (2007):

Policy Result

1. *Failed outcome*: illustrated by the Soviet attempt to destabilize Yugoslavia's Marshal Tito in the period 1948-55 (Case 48-4) and by the Indian nuclear tests in the face of threatened U.S. sanctions (Case 98-1).

2. *Unclear but possibly positive outcome*: illustrated by the U.S. and Saudi efforts to get Jordan to reduce its support for Iraq during the run-up to the first Gulf War.

3. *Positive outcome, meaning the sender's goals were partly reached*: illustrated by U.S. efforts to promote a return to democracy in several Latin American countries in the 1970s and by U.N. efforts to halt ethnic cleansing and civil conflict in the Balkans (Case 91-1).

4. *Successful outcome, in the sense that the sender's goals were largely or entirely realized*: illustrated by the joint efforts of the United Kingdom and the United States to overthrow Idi Amin in Uganda in the late 1970s (Case 72-1), by the end of the apartheid era in South Africa (Case 85-1), and by the removal of General Raul Cédras from power in Haiti (Case 91-5).

Sanctions Contribution

1. *Negative contribution*: illustrated by the U.S./U.N. campaign against the Cédras regime in Haiti (Case 91-5), which triggered an outflow of desperate migrants trying to escape the impacts of sanctions and find work in the United States.

2. *Little or no contribution*: illustrated by the Soviet withdrawal of assistance from China in the 1960s (Case 60-2) and by U.S. suspension of economic and military aid to Thailand in the wake of the 1991 coup (Case 91-3).

3. *Substantial contribution*: illustrated by the withdrawal of Dutch economic aid to Suriname between 1982 and 1988 (Case 82-2) and by U.S.-U.N. sanctions against South Africa over apartheid (Case 85-1).

4. *Decisive contribution*: illustrated by the U.S. success in deterring a coup in Guatemala in 1993 (Case 93-2).

This study adopted Hufbauer et al.'s data (n=224), which includes nearly a century of sanctions episodes and detailed information relating to each case. This data is the most comprehensive dataset available, and Hufbauer

et al.'s 16-point scale is very useful when conducting statistical tests. Other datasets and scoring systems do exist, but none are as exhaustive as this.

To begin the analysis of sender policy effect on sanctions success, six different sender policy objectives were identified and coded. The categories are as follows: (1) promoting democracy and human rights (n = 54), (2) forcing compliance with sender government's nuclear policy (n = 22), (3) influencing the outcomes of internal disputes of the target country (n = 26), (4) demanding the transfer of persons across international borders (n = 8), (5) influencing the control over territory (n = 26), and (6) diminishing the target government's level of power in the international arena (n = 39). In an ideal world, these samples would be larger in order to increase the likelihood of finding a significant difference. However, even with the relatively small sizes of these samples, we will see that there still exists a distinguishable trend in levels of sanction success according to sender policy.

As a side note, I argue that the category of "diminishing the target government's level of power in the international arena," is a fundamentally different form of statecraft (more similar to "economic warfare" than to "economic coercion") because, in these episodes, no policy demands are made of the target state. I included this category of sanctions in the dataset because not doing so would unjustly decrease the degrees of freedom upon which the subsequent analyses of variance are based, thus producing inaccurate results. Aside from its treatment in the statistical analysis, however, this category of sanctions will not be deeply discussed. An in-depth discussion of "economic warfare" as its own form of statecraft is a topic for future research.

Of the 224 cases made available by Hufbauer et al., 175 pertained to one of the six categories outlined in the previous paragraph. The remaining 49 cases did not belong in any single category, and so they were not included in any statistical tests for difference in success score between policy categories. In some cases, the sender party made multiple demands of the target government, so for this reason sanctions episodes were assigned to a category based on the primary sender objective. For example, although the U.N. cited human rights concerns as one of the justifications for their 1993 sanctions against Angola, their primary policy goal was to bring an end to Angola's civil war (Hufbauer et al. 2007). So, this sanctions episode was coded as (3) influencing the outcomes of internal disputes of the target country, rather than (1) promoting democracy and human rights.

In order to begin identifying regional variations in sanctions success, I coded for seven different world regions: (1) the Middle East and North Africa (n = 38), (2) Western Europe (n = 23), (3) Africa South of the Sahara (n =

32), (4) Latin America (n = 44), (5) Pacific Asia (n = 38), (6) South Asia (n = 14), and (7) Eastern Europe, the Balkans, and Ex-Soviet states (n = 32) (see Appendix). It is important to note that a “North American” region consisting of the U.S. and Canada is not included because such a region would have too small a sample size to draw any meaningful statistical conclusions.

The division of the globe into seven regions is, of course, debatable. It is not, however, arbitrary. These regional categories are based on the shared history and close diplomatic and economic ties of each region’s members. Not only do countries within these regions share these characteristics, but also there is a noticeable “clustering” of sanctions episodes to each region, which is visible in the map provided (see Appendix 2.2) that shows sanctions episodes by region and by level of success.

I ran a series of analyses of variance to compare mean success scores among different policy categories and different regional categories. The dependent variable in these tests is *successscore*, derived from the 16-point scale developed by Hufbauer et al. The independent variables are *policy_code*, coded from 1-6 as described above, and *target_code*, coded from 1-7 as described above. A preliminary visual comparison of mean *successscore* and 95% confidence intervals pertaining to those means reveals that there appears to be notable differences in mean *successscore* for different values of the two variables:

Figure 1. Mean success score by policy objective

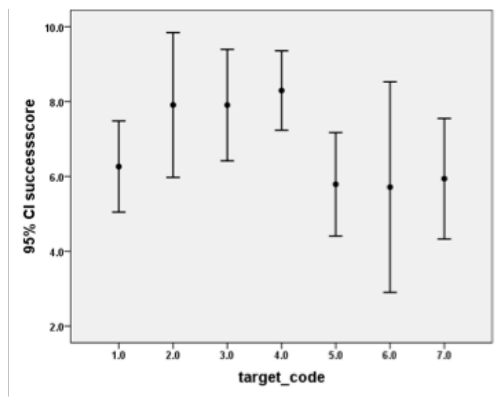
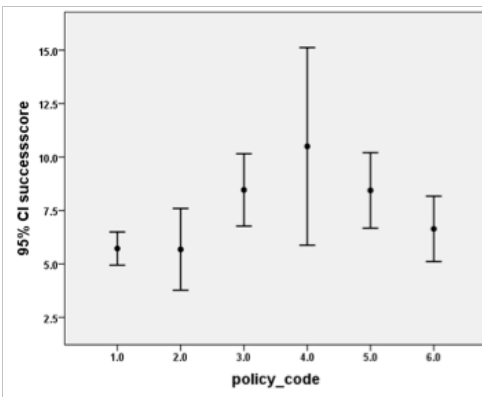


Figure 2. Mean success score by region of target

In the above confidence interval comparisons, sanctions for human rights and democracy (*policy_code* [1]) and for nuclear policy (*policy_code*

[2]) appear to be less successful than sanctions for civil disputes (*policy_code* [3]) transferring persons (*policy_code* [4]) or control over territory (*policy_code* [5]). Likewise, it appears that sanctions in the Middle East and North Africa (*target_code* [1]), in Western Europe (*target_code* [2]), in Africa south of the Sahara (*target_code* [3]), or in Latin America (*target_code* [4]) are more successful than sanctions in Pacific Asia (*target_code* [5]), in South Asia (*target_code* [6]), or in Eastern Europe, the Balkans, and Ex-Soviet states (*target_code* [7]).

A one-way analysis of variance for each variable confirms that there is at least one statistically significant difference in *successscore* between the six sender policy objectives ($F=4.271$, $df=5,169$) and between the seven regional categories ($F=2.160$, $df=7,216$). This one-way ANOVA, however, does not take into account the effect that *policy_code* might have on *target_code*, or vice-versa. That is, one-way analysis of variance does not consider the fact that one region may be less successful than other regions simply because sanctions with less successful sender objectives are implemented in that region more frequently in other regions. Similarly, one-way analysis of variance does not take into account the fact that one sender policy objective may be less successful than other sender policy objectives simply because that particular sender demand was made in a region that is more resistant to economic coercion than other regions:

Tests of Between-Subjects Effects

Dependent Variable: *successscore*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1152.530 ^a	35	32.929	2.346	.000
Intercept	4545.117	1	4545.117	323.831	.000
<i>target_code</i>	255.457	6	42.576	3.033	.008
<i>policy_code</i>	340.822	5	68.164	4.857	.000
<i>target_code</i> * <i>policy_code</i>	521.524	24	21.730	1.548	.062
Error	1936.895	138	14.035		
Total	11476.000	174			
Corrected Total	3089.425	173			

a. R Squared = .373 (Adjusted R Squared = .214)

Figure 1: Two-Way ANOVA Output

A univariate, two-way analysis of variance, which takes into account the effect that *policy_code* may have on *target_code* and vice-versa, confirms

that *policy_code* still contains at least one significant difference ($F= 4.857$, $df=5,169$) when controlling for the effects of *target_code*, and *target_code* still contains at least one significant difference ($F=3.033$, $df=7,216$) when controlling for the effects of *policy_code* (see Appendix 3 for ANOVA output).

Post-hoc analyses reveal which specific policies and regions differ from one another. Tukey’s Honest Significant Difference Test² provides pairwise comparisons between all policy objectives and between all regional categories.

	(I) <i>policy_code</i>	Mean Difference (I-J)	Std. Error	p-value	95% CI	
					Lower Bound	Upper Bound
Democracy/ Human Rights (1)	Internal Disputes (3)	-2.739*	.8943	.031	-5.324	-.155
	Transfer Persons (4)	-4.778*	1.4193	.012	-8.880	-.676
	Control of Territory (5)	-2.718*	.9063	.037	-5.337	-.098
Nuclear Policy (2)	Transfer Persons (4)	-4.818*	1.5467	.027	-9.289	-.348

The following table presents the significant pairwise comparisons for the post-hoc testing on *policy_code*:

Figure 2. Significant Difference in *sanctionssuccess* among Sender Policy Goals
 *Significant at the 95% confidence level

According to these results, sanctions for the promotion of democracy and human rights are significantly less effective than sanctions that seek to influence domestic disputes of the target country, to force the transfer of persons, or to influence the control of territory. Likewise, sanctions that promote the nuclear policy of the sender government are significantly less successful than sanctions for the transfer of persons. It is worth noting that *successscore* for nuclear policy is also approaching significant difference relative to *successscore* for both internal disputes ($p\text{-value}=.114$) and control

² This particular post-hoc test is more useful than the other options because it adjusts the α -level in accordance with the number of comparisons being made. When making multiple comparisons, the probability of committing a Type-I error increases as the number of comparisons increases. Tukey’s HSD lowers the α -level in order to take this effect into account. Tukey’s HSD is thus more conservative than Fisher’s Least Squared Difference, but it is not quite as conservative a test as the Bonferonni Correction.

of territory (p -value=.126). The entire post-hoc output for *policy_code* is available in the Appendix (Appendix 4).

A Tukey's HSD post-hoc analysis of *target_code* yields one significant difference – between Latin America and South Asia (p -value=.051). The entire post-hoc output for *target_code* is available in the Appendix (Appendix 5). Approaching significance are the differences between Western Europe and South Asia (p -value=.123), between Africa south of the Sahara and South Asia (p -value=.129), and between Latin America and Pacific Asia (p -value=.101).

These statistical analyses suggest that sanctions success varies based on the sender's desired policy outcome and on the region in which sanctions are implemented. Basing the conclusions of this analysis solely on the statistical results would not allow for such results to be extrapolated to the entire population of sanctions episodes. So, given the imperfect nature of the dataset and the myriad methods by which such data could be interpreted, it is important to take into account both statistical significance and observable patterns. That is to say, although statistical significance is not present in every single post-hoc pairwise comparison for *policy_code* and *target_code*, there is an observable pattern revealing that sanctions for human rights/democracy, and nuclear policy are generally less effective than other categories of sanctions, and that sanctions implemented in Pacific Asia, South Asia, and Eastern Europe/Balkans/Ex-Soviet states are generally less effective than sanctions implemented in the Middle East/North Africa, Western Europe, Africa south of the Sahara, and Latin America.

Discussion

Policy and power Maximizing

Why are sanctions for human rights/democracy or nuclear policy less successful than other types of sanctions? The answer appears to lie in the way governing bodies balance the anarchic structure of the international system with competing domestic interests. Different concessions from one governing body to another incur domestic and international political costs. Members of these governing bodies seek to minimize these costs and maximize their gains from any transaction involving political capital. Having established a statistically significant difference between sanctions success for human rights/democracy or nuclear policy and sanctions success for target domestic conflict, transfer of persons, and control over territory. It logically follows that governments targeted by sanctions prefer bringing an end to domestic conflict and forfeiting control over single individuals or small territories over



ending human rights abuses, initiating a democratization process, or giving up nuclear power. A model of international relations that takes into account this balance between international and domestic pressures is necessary for a proper interpretation of these results.

There has been much debate in international relations theory surrounding the role of domestic pressures in the formation of foreign policy. Many scholars who take the Realist approach to international relations all but discount the influence of domestic pressures in world politics, treating states as unitary actors that seek to maximize their power in a zero-sum international structure (Waltz 1959; Jervis 1978; Walt 1985; Mearsheimer 2001). This Realist approach is, ironically, not very realistic when considering the fact that states are led by coalitions of individuals, each of which seeks to make themselves better off in the short-run in all circumstances. States themselves are not individuals. States do not act or think. Most importantly, they have no memory and cannot make predictions about the future. These tasks are left entirely up to individuals. When deciding how to respond to any form of coercion on behalf of a foreign power, each individual member of the target state's governing body who is involved in the formulation of foreign policy will seek to improve, in absolute terms, their individual circumstance. The aggregate result of these individual decisions is what ultimately forms foreign policy.

Many scholars of international relations have recognized the central role of domestic politics in foreign policy outcomes. Stephen Krasner (1977) points out that the U.S. government, in its post-WWII efforts to promote free trade and liberal international economics, "confronted [both] external and internal constraints – resistance from other international actors and from particular domestic interest groups. This dual challenge of external and internal resistance must be faced by any state leader." Robert Putnam (1988) goes into more detail about the nature of the interplay between international (Level I) and domestic (Level II) demands in the formation of foreign policy:

"Central executives have a special role in mediating domestic and international pressures precisely because they are exposed to both spheres.... The politics of many international negotiations can usefully be conceived as a two-level game. At the national level, domestic groups pursue their interests by pressuring the government to adopt favorable policies, and politicians seek power by constructing coalitions among those groups. At the international level, national

governments seek to maximize their own ability to satisfy domestic pressures, while minimizing the adverse consequences of foreign developments. Neither of the two games can be ignored by central decision-makers, so long as their countries remain interdependent, yet sovereign."

Putnam also recognizes the weight that individual decisions have in the process of diplomacy and the development of foreign policy:

"An experienced negotiator familiar with the respective domestic tables should be able to maximize the cost-effectiveness (to him and his constituents) of the concessions that he must make to ensure ratification abroad, as well as the cost-effectiveness of his own demands and threats, by targeting his initiatives with an eye to their Level II incidence, both at home and abroad."

When a head of state is confronted with sanctions, they have a binary decision to make: concede to the sender's demands (end human rights abuses, sign a nuclear treaty, change domestic political structures, release prisoners, withdraw control over a territory) or suffer the economic and political ramifications of sanctions, be they in the form of a trade embargo, freeze of assets, etc. The statistical analysis conducted in this study has shown that heads of states' responses to sanctions vary according to the sender's demands. When heads of state in target countries do not comply with sender demands, it is because each individual within the governing coalitions of the targeted state are better off with the status quo (noncompliance) than with the alternative (compliance).

Heads of state seek to guarantee their own survival and maximize their own level of power, as defined by Morgenthau (1948) in both domestic and international spheres. States that are run by coalitions of such individuals is among the most fundamental properties of international relations. When heads of state comply with sender demands, it is because the projected result of compliance will leave them better off than the projected results of noncompliance. This variation is a direct result of attempts of the governing individuals in the target state to make themselves better off.

The results of this study's statistical analysis suggests that heads of state believe that they are better off by not conceding to human rights/

democracy sanctions or nuclear policy sanctions. The results similarly suggest that heads of state believe that conceding to sanctions for domestic disputes, transfer of persons, and control over territory makes themselves better off than not conceding to such sanctions. When confronted with such sanctions, many heads of state, in an effort to convince the sender government that human rights abuses will soon cease, often release a number of political prisoners as their immediate response. Other abuses, however, continue as before. Heads of state take such action because releasing prisoners poses no immediate threat to their survival or individual level of power domestically and internationally.

The following table outlines the strategic process of heads of state when faced with these decisions. This table does not aim to establish universally applicable rules for sanctions outcomes, rather it hopes to lay out a set of generalized, observable patterns that shed light on the role that individual power maximizing plays in the formation of foreign policy.

Sender Policy Demand	Response of Heads of State	Justification for Response
Democratize	Comply	Compared to not complying with the sender's demand, is less likely to make heads of state better off. This implies that maintaining a grip on the domestic sphere is more important for heads of state than preserving good standing in the international community.
Comply with sender nuclear policy objectives	Do not comply	Complying with the nuclear policy objectives of the sender state entails a loss of power at the international level, because such a concession nearly always means the curtailment of nuclear weapons development. Heads of state consider the consequences of giving up nuclear power to be greater than the consequences of not complying with the sender's demands.
End internal dispute, change domestic political structures	Comply	Heads of state believe that they are better off complying with sender demands than maintaining the current status of their domestic political structures. Heads of state often incur large losses in this type of political transaction because this category of sanctions is frequently implemented in response to the same coup or civil war that propelled them to their position of power. Although heads of state sustain a large net loss of power when complying with sender demands, not complying would bring even greater losses because noncompliance is likely to result in removal from power entirely.

Sender Policy Demand	Response of Heads of State	Justification for Response
Allow for the transfer or release of prisoners, agents, or other persons of interest territory	Comply	Heads of state believe that they are better off complying with sender demands than keeping prisoners, agents, or other persons of interest imprisoned because the release of those prisoners poses no immediate threat to the level of power of individuals within the governing coalition.

Figure 3. Responses of target heads of state to sender demands

Implications

So far, this paper has identified individual power maximizing as a core determinant of international relations. Using this model, it becomes clear why there is significant regional variation in sanctions success. Each region of the world contains a network of governing bodies that engage in regional interstate relations. Each of these governing bodies is comprised of power-maximizing individuals. Thus, each region is home to a community of governing individuals, each of which seeks to maximize their own power. Treated as such, regions become suitable units for analysis using threshold models of collective behavior.

Sociologists have long used threshold models to explain collective action. Some scholars have applied such models to systems of international coercion. Kaempfer and Lowenberg (1992) have used threshold models in their work on economic sanctions, proposing, "Sanctions can serve an important function in stimulating the process of attaining a critical mass of support within a collectivity." Based on the results of this study's statistical analyses of regional variation in sanctions success, it is reasonable to conclude that power-maximizing heads of state within a community of regional governing individuals tend to make decisions about foreign policy based on the decisions of their peers. In other words, when heads of state are deciding how to respond to sanctions, they are likely to make that decision according to how heads of state in neighboring countries have previously responded (or are responding) to sanctions.

Threshold models for collective action, when applied to this situation, reveal that heads of state, when they perceive that a critical threshold value of other heads of state have responded to sanctions in a particular way, will take the same course of action as those other heads of state. That critical threshold value varies from individual to individual, but it may also be the case that



each region has a distinct average critical threshold value. Granovetter (1978) explains how context helps determine threshold values:

“Thresholds are situation-specific. An individual’s riot threshold is not a number that he carries with him from one riot to another but rather results from the configuration of costs and benefits, to him, of different behaviors in one particular riot situation. Inevitably, some situations will engage an actor more ideologically than others; one will seem more dangerous, one more exciting.”

The existence of context-based variation in critical threshold values could imply that each region of the world has its own range of threshold values for the type of collective action activated in response to economic sanctions. This context-based variation would produce the regional variation in sanction success seen in this study’s statistical analyses. Further research is needed to establish what, exactly, determines a region’s average critical threshold value. Different standard deviations for threshold critical values within regional samples could also produce this variation in sanction success, and it is even possible that different standard deviations account for more regional variability in sanction success than a difference in means does.

Conclusions

This study has sought to identify and analyze two neglected variables in the study of economic coercion: policy, defined as the desired policy outcome of the sender government, and place, defined as the region within which sanctions are implemented. This study has shown, using multivariate analysis of variance, that there is a statistically significant difference in sanctions success for different values of policy and place. With regards to sender policy objectives, the results of these tests show that heads of state prefer to change political structures, give up control over persons of interest, or withdraw control over disputed territory rather than democratize, end human rights abuses, or change nuclear policy. With regards to regional variation, these tests show that sanctions in the Middle East and North Africa, in Western Europe, in Africa south of the Sahara, and in Latin America are generally more successful than sanctions in Pacific Asia, in South Asia, and in Eastern Europe, the Balkans, and Ex-Soviet states. This study then moves to interpret these results using the power-maximizing individual as the primary unit of analysis, concluding

that individual power-maximizing behaviors account for the variability in sanctions success for both policy and place.

Using the power-maximizing individual as the primary unit of analysis, this study suggests that individuals within a governing coalition believe that not conceding to sanctions for human rights/democracy or nuclear policy makes them better off than conceding to such sanctions because concession relinquishes control over the domestic sphere in the case of human rights/democracy sanctions. In the case of sanctions for nuclear policy, concession relinquishes a share of control of the international sphere. Heads of state seem to believe that concession in either of these situations diminishes the level of power that those individuals possess. Likewise, governing individuals believe that conceding to sanctions for domestic disputes within the target country, for the transfer of persons of interest or for the control over territory makes them better off than not conceding to such sanctions, because not conceding would invite too much international pressure. In this case, heads of state seem to believe that not conceding diminishes the level of power that they possess.

This study also addresses regional variation in sanctions success using the power-maximizing-individuals model. Threshold models of collective behavior, when applied to instances of international coercion, reveal that heads of state, when they perceive that a critical threshold value of other heads of state have responded to sanctions in a particular way, will take the same course of action as other heads of state in the same region. Numerous factors could explain how regions came to possess different threshold levels for collective action, and this is a topic for future research. ✕



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PARTISAN PORK: HOW DELEGATION COHESION IN THE U.S. HOUSE OF REPRESENTATIVES AFFECTS EARMARK SPENDING

Matthew Waskiewicz

Abstract

The federal earmark is a topic often lamented by the general public as corrupt and wasteful. Until recently, this “pork” was a mainstay of politics in Washington. Because distributive spending is often used to advance partisan goals such as reelection, previous scholarship suggested that legislators of the same party would work together to secure this money, resulting in higher federal earmark spending per person. Using a dummy variable for party majority within a House delegation, state-level data was analyzed through a regression analysis of House delegation cohesion and federal earmark spending per capita. Statistically significant results were found with an increase of earmark spending of \$1.24 per person in a given state for every percentage point shift in a state delegation’s relative party composition. In addition, no significant relationship between party majority within a delegation and earmark spending was found, indicating Democrats and Republicans achieve similar results when they work together to secure federal funds. These findings suggest that the degree to which legislators work together has a larger effect on the benefits constituents receive than party affiliation.

Literature Review

The congressional earmark – federal funding provided by Members of Congress to companies, organizations, or projects – was an integral part of the modern political process. Following outcries of corruption and waste from the

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general public, in 2010 and 2011, Democrats and Republicans moved to include in their party rules a ban on earmarks. While what is commonly referred to as "pork barrel spending" is, for now, a thing of the past, the ramifications of such distributive spending will be felt for decades to come. Much scholarly work has been done on the relationship between political parties and pork, but a gap remains as far as a relationship between the concentration of those political parties within a state and the dollar value of earmarks garnered.

This research contributes to the existing dialogue on congressional earmarks by exploring the relationship between the concentration of a political party in a state's House delegation and the federal earmarks delivered to that state. Much of the existing literature focuses on congressional districts as their unit of analysis (Rocca and Gordon 2013, Lazarus and Reilly 2010), whereas this paper will use states as its unit of analysis. With the exception of Engstrom and Vanberg's (2010) work, few scholars look at a state's congressional delegation holistically. Giving a holistic view of earmarks at the state level is critical because representatives respond to voters at this level of analysis. To look at earmarks without taking into account the actions of others leaves out an important confounding variable in the form of other legislators. This paper aims to account for that confounding variable by integrating state-level data with a party-centric look at a state's House delegation to discern the connection between legislative cohesion and constituent benefit.

Background

Scholars have long sought to establish a link between the congressional pork barrel and party politics. Many studies positively correlate positive election outcomes for incumbents with distributive benefits (Levitt and Snyder 1997, Lazarus 2009, Engstrom and Vanberg 2010, Lazarus and Reilly 2010, Rocca and Gordon 2013). Others look at which party holds the majority and uses political ideology as a determinant of earmark spending (Alvarez and Saving 1997, Bickers and Stein 2000). A few studies explore the relationship between collaboration amongst elected officials and earmarks (Levitt and Snyder 1997, Engstrom and Vanberg 2010). It is important to note party majority, electoral outcomes, and party cohesion are intrinsically linked as being simultaneous goals of a national political party.

Electoral Outcomes

A number of recent studies have positively correlated election outcomes with earmarks (Levitt and Snyder 1997, Lazarus 2009, Engstrom and Vanberg 2010, Lazarus and Reilly 2010, Rocca and Gordon 2013). Though



the overwhelming consensus in the literature is that earmarks contribute to positive incumbent election outcomes, studies point to different driving factors behind this correlation. Rocca and Gordon (2013) find a strong positive correlation between campaign contributions from defense-related PACs and earmarks relating to the defense industry. Lazarus (2009) contends the driving factor behind greater allocations of earmarks in a district is the electoral vulnerability of the incumbent, but only for the majority party. Another study, by Lazarus and Reilly (2010), points to a significant positive correlation between electoral outcomes and the type of distributive spending, namely, that Democrats benefit from traditional spending projects, such as highways and bridges. But it was only among conservative Republicans that electoral benefits from contingent liabilities, direct and guaranteed loans from the government to businesses and organizations, were felt. This study suggested a difference between political ideology and the effect of earmarks on a constituency.

Party Ideology

Attempts to link party ideology with differences in distributive spending have been less conclusive. Alvarez and Saving (1997) examined the effect of distributive benefits in the Democratically-controlled House of Representatives in the 1980s and found a “sharp partisan difference” in the effect of these outlays in that additional federal money positively affected Democratic reelection margins but had little effect on Republican reelection margins. Alvarez and Saving purported this difference was likely because of party ideology, with Republicans largely disavowing distributive spending as unnecessary waste. However, when Bickers and Stein (2000) looked at the effect of Republican control of Congress in the 1990s, they found that overall outlays on projects increased, even among entitlements, a typically Democratic focus. Most significant during the Republican era were the increases (27%) in contingent liabilities, outlays typically supportive of Republican pro-business doctrine. These studies assert that party majority is a contributory factor in the overall partisan fight to bring federal money to states.

Legislator Collaboration

Assess the House district as the unit of analysis has been the most common methodology in past research because of the relative ease with which empirical data can be gleaned from House election results and the easily identifiable monetary amounts of earmarks distributed to a district. Unfortunately, this partial approach does not take into account the work of

other actors in the political arena. The focus on U.S. House districts results in a gap of the majority of existing literature on this topic, rarely focusing on the effect of other politicians on federal money garnered for constituents. Levitt and Snyder (1997) are an exception to this focus on a district's Member of Congress and they contend the driver behind distributive benefits in a district has to do with more than just the Representative. They believe earmark spending within a district is also partly due to other actors, such as governors, mayors, and local bureaucrats, lobbying for federal contracts and grants. To test this hypothesis, Levitt and Snyder look at the correlation between electoral benefits to a House member and the earmarks brought to adjacent districts within the member's state, but outside their district. This focus is closer to the idea of collaboration as a driving factor behind earmarks to a state but still fails to look at the state in a holistic fashion.

Engstrom and Vanberg (2010) continue with this notion of collaboration. However, they use individual members as their unit of analysis in the success of lawmakers securing earmarks. They include senators in this analysis under the premise that the two senators from a state's congressional delegation will work together to secure earmarks. Engstrom and Vanberg found that even among senators of the minority party, senators benefit from being partnered with another senator who is successful in the earmarks process, particularly if the partnered senator is up for reelection. Engstrom and Vanberg's findings contribute to the idea of collaboration between lawmakers to secure earmarks for a state.

House Delegation Cohesion

Existing literature on earmarks in Congress make one fact clear: distributive spending within a district is an overwhelmingly partisan affair. Earmarks are used predominantly for partisan purposes, whether that it is to ensure a positive electoral outcome for an individual lawmaker (Levitt and Snyder 1997, Lazarus 2009, Engstrom and Vanberg 2010, Lazarus and Reilly 2010, Rocca and Gordon 2013), or for the entire party (Alvarez and Saving 1997, Bickers and Stein 2000). Thus, it seems sensible that lawmakers will collaborate to bring as many earmarks and as much money to their state as possible. Levitt and Snyder (1997) believe this to be the case, however they do not use the state as their unit of analysis. Engstrom and Vanberg (2010) similarly ignore the state, choosing individual members as their unit of analysis. In assuming earmarks are a partisan affair, this work will explore how party cohesion among legislatures in a state's House delegation affect earmarks delivered to that state. In doing so, this paper will explain how party



politics is a driving factor behind the benefits constituents receive.

The hypothesis of this study comes from a body of research that suggests distributive spending, like much of politics, is a tremendously partisan affair. A number of studies have described a link between positive election outcomes for incumbents and distributive benefits (Levitt and Snyder 1997, Lazarus 2009, Engstrom and Vanberg 2010, Lazarus and Reilly 2010, Rocca and Gordon 2013). This link underscores the partisan agenda of garnering earmarks for House districts. Quite simply, those who garner earmarks for constituents are more likely to be reelected. Furthermore, studies examining a possible relationship between party ideology and differences in distributive spending have been inconclusive when taken in aggregate (Alvarez and Saving 1997, Bickers and Stein 2000), suggesting that party ideology cannot be established as a causal determinant of earmark spending. Inferred from this body of research is the notion that earmarks are used to advance partisan interests, regardless of political party affiliation.

Methodology

Theory and Expectations

This study hypothesizes that, in comparing American states, those states that have higher party cohesion within their delegations to the U.S. House of Representatives will have higher per capita federal earmark spending than will states that have lower party cohesion within their House delegations. The null hypothesis of this study is that, in comparing American states, those states that have higher party cohesion within their delegations to the U.S. House of Representatives will have the same per capita federal earmark spending than will states that have lower party cohesion within their House delegations.

A few recent studies have asserted that other politicians, not just the Member of Congress for a district, have an effect on the monetary amount of earmarks garnered for that member's district (Levitt and Snyder 1997, Engstrom and Vanberg 2010). The crux of these assertions is that politicians will work together to secure as much federal money as possible for their districts. This is an assumption adopted in this study, which argues distributive spending is an overwhelmingly partisan affair: members of the same party within a state's U.S. House delegation will try to win a majority for their party in the House by working together to bring earmarks to their districts.

In addition, both parties want to win a majority, thereby advancing their party's interests. Republican House members will work with other Republican House members within a state to secure earmarks, just as much as Democratic

House members will work with other Democratic House members within a state. Since positive electoral outcomes and party interests are intrinsically linked, members of the House of Representatives will collaborate with other members of a state's House delegation that are of the same party. Thus, a strong positive correlation between party cohesion and per capita earmark spending is expected in the findings.

Operationalization and Conceptualization

The independent variable (IV) in this study is the number of Democratic members of the U.S. House of Representatives as a percentage of the state's House delegation. The independent variable will be operationalized as a measure of party cohesion by taking the percentage of Democrats in each state's House delegation, subtracting 50% from that value, and then taking the absolute value of that difference. For example, a state with 25% Democratic and 75% Republican House members would have a value of 25, whereas a state with 90% Democratic and 10% Republican House members would have a value of 40. Please note that this formula does not differ for smaller states. Those states with fewer representatives in Congress are considered to be the same as those with larger members for the purposes of this study. Although efforts have been made to control for any skewing effects due to fewer representatives from population, with such a confounding error is not possible to control for completely within the limitations of this study. Thus, minimal skewing will occur.

Contextually, the measure for the independent variable is the measure for party cohesion, as both higher values are expected to positively correlate with the dependent variable. The operationalization of this variable as a percentage is intent on controlling for the population of each state, as the number of U.S. Representatives in a state is dependent on population.

The dependent variable (DV) in this study is earmark spending in dollars per capita. Again, the use of "per capita" in the operationalization of this variable is a way to account for a state's population. Both the independent variable and the dependent variable for this hypothesis are interval level data, with the independent variable being measured as a percentage and the dependent variable being measured in terms of U.S. dollars. Using the state as a unit of analysis is an attempt to minimize duplication of previous work done on the topic of earmarks, with most scholarship to date focusing only on the House district as a unit of analysis (Rocca and Gordon 2013, Lazarus and Reilly 2010).



Research Design

The dataset for this study is adapted from Philip H. Pollock III's *An SPSS Companion to Political Analysis* (CQ Press 2012): States. The independent variable data comes from the American Conservative Union's calculation for number of House members of each party in 2009, at the beginning of the 111th Congress. Philip Pollock, the author of the dataset, converted the raw numbers into percentages. The dependent variable data comes from data collection done by Lauren Cohen, Joshua D. Coval, and Christopher Malloy for the National Bureau of Economic Research in March 2010, also during the 111th Congress. For each variable, the number of cases is 50, one for each state. As previously stated, the data already controls for population in its current form. In addition, having both variables during the same Congress controls as much as possible for variations in party makeup of individual House delegations. To test the theory that linking party majority to earmark spending is inconclusive, a dummy variable for party majority will be used. Because both variables are coded in States as interval level data, the method for this study will be to calculate a correlation between the independent variable and the dependent variable and then to conduct a regression analysis on the data. This analysis aims to disprove the null hypothesis.

Data Analysis

All of the tests run use party cohesion as the independent variable (IV) and federal earmark spending per capita as the dependent variable (DV). Because the IV is measured in terms of the percentage of a state's House delegation being Democrats, the operationalization of party cohesion in this study is measured as the absolute value of the difference between 50 percent and a state's percentage of its House delegation being Democrats. It is important to note the independent variable is simply a way to easily reflect the partisan mix of each state's House delegation and its quantitative value as percentage Democrats has no bearing or influence on the results of the analysis. The first tests conducted were to determine a level of correlation between the variables and one to test for statistical significance. Figure 1 shows results of the correlation and statistical significance tests run between the independent and dependent variables.

Figure 1: Correlation and Statistical Significance			
		House Delegation Cohesion (%)	Earmarks per capita (in USD)
House Delegation Cohesion (percent)	Pearson Correlation (2-tailed) N	1 50	0.335* 0.018 50
Earmarks per capita (in USD)	Pearson Correlation (2-tailed) N	0.335 0.018 50	1 50
* Correlation is significant at the 0.05 level (2-tailed).			

Figure 1.

Figure 2: Regression Analysis ^{a,b}					
Model	Unstandardized Coefficients	Standardized Coefficients	T-value	Sig. (P-Value)	
	B	Std. Error	Beta		
(Constant)	20.748	19.821	N/A	1.047	0.301
House Delegation Cohesion	1.236	0.499	0.338	2.476	0.017
Party Majority D/R	-16.183	18.729	-0.118	-0.864	0.392
a. Dependent Variable: Federal earmarks per capita (in USD)					
b. Adjusted R2 = 0.089					

Figure 2.

As Figure 1 demonstrates, there is a clear link between the percentage of members of a state’s House delegation being of one party and the federal earmarks garnered per person in that state. The Pearson correlation, known as r , is 0.335. To test for causation and magnitude, a linear regression was used. However, to test the theory that earmark spending is not significantly different depending on the party holding the majority of House districts in a delegation, a dummy variable for party was used.

Figure 2 shows the results of the bivariate regression analysis. The model yields the following function for federal earmark spending per capita: Federal earmark spending per capita = 20.748 + 1.236*(House delegation cohesion) + -16.183*(Party Majority D). The y-intercept of 20.748 shows us that when a state’s House delegation is 50% Democratic and 50% Republican, the average federal earmark per person is \$20.75. The regression coefficient of



1.236 tells us that, for each percentage increase in House delegation cohesion; there is an increase of \$1.24 in earmarks per person. With the average congressional district containing more than 700,000 people, each percentage point increase in House delegation cohesion correlates to an increase of more than \$850,000 for each congressional district per year. Extend that benefit over multiple districts and multiple years and it becomes easy to see how members of a House delegation working together might bring tangible benefits to their constituents.

Interestingly, when a dummy variable for party majority was used, with a Democratic majority coded as a “1” and Republican majority coded as a “0”, the results are not significant

($p > 0.39$). This suggests that it makes no difference whether a House delegation is majority Republican or majority Democratic. Per capita earmark spending will increase as the delegation becomes more cohesive, regardless of which party holds a majority.

The value of the adjusted R-square is 0.089. This means that about 8.9% of the variation in the federal earmark spending per capita is explained by party cohesion within a state’s House delegation. The other 91.1% of variation in federal earmark spending per capita in each state is explained by other factors, of which there are several. The data therefore describe a weak relationship between party cohesion and per capita federal earmark spending.

For a significance level of $p < 0.05$, the P-value of the relationship is 0.017. Under the assumption that the null hypothesis is correct, we obtain a regression coefficient of 1.236, by chance, about 1.7 percent of the time. Because the probability of obtaining the test statistic by chance is less than 5 percent, we can safely reject the null hypothesis. In comparing American states, those which have higher party cohesion within their delegations to the U.S. House of Representatives will have higher per capita federal earmark spending than will states that have lower party cohesion.

Conclusion

As hypothesized, states that have higher party cohesion within their House delegations will have higher per capita federal earmark spending than will states that have lower party cohesion. This provides a frame for the assumed link between party politics and constituent benefits, a link described as having positive electoral outcomes for members (Levitt and Snyder 1997, Lazarus 2009, Engstrom and Vanberg 2010, Lazarus and Reilly 2010, Rocca and Gordon 2013). Research attempting to link party majority with earmark spending has been inconclusive (Alvarez and Saving 1997, Bickers and Stein

2000) and indeed, when using a dummy variable for party majority within a House delegation, there is no significant difference between Republicans and Democrats. In addition, since many politicians will work together to secure as much federal money as possible for their districts (Levitt and Snyder 1997, Engstrom and Vanberg 2010), it is logical that a House delegation that is heavily of one party would secure more earmarks for constituents than a House delegation split between Democrats and Republicans. This occurs as House members of the same party and state delegation, either because of self-interested reasons of wanting to win reelection or because of directives from the national party, will be eager to work together to sponsor bills, draft amendments, or pressure committees that bring federal dollars back to their state.

In addition, it is intrinsically easier to work together if interests are shared, which often occurs between delegation members of the same party. As greater amounts of federal dollars come to the state, constituents look at these benefits, whether they are infrastructure projects or tax breaks for a large employer, as a reason to reelect the politicians who secured the funding (Lazarus and Reilly 2010, Rocca and Gordon 2013). Consequently, higher amounts of earmark spending become associated with positive reelection outcomes to those who secured more earmarks, increasing the incentive for members of the same party to work together to secure these contracts and bids. This reinforces the overtly partisan function of distributive spending in the U.S. Congress.

This study established a clear link between House delegation cohesion and per capita federal earmark spending. In fact, almost 10% of the variation in earmark spending can be attributed to this variable alone. Nonetheless, as with all social science research, it is difficult to not only operationalize concepts and phenomena into statistical tests, but also to control for other variables that may be affecting the relationship being studied. One of the main reasons these two particular variables were chosen is because they both control for population and both occurred over a similar time period, during the 111th Congress. But as is evident in the analysis, other variables are at play in this relationship, which provide ample opportunity for further research.

One aspect of distributive spending that can be researched further is the effect of committees on earmark distribution, using states as the unit of analysis. However, to take into account a smaller sample size that would result from this research, any further studies would have to examine a longer time period. Engstrom and Vanberg (2010) examine the effect of committee members, particularly those on the Appropriations Committee, on earmarks garnered, but they do so without the lens of cohesion and without the state



as a unit of analysis. One further avenue for research is to examine this relationship, as existing literature suggests committee membership may also affect earmarks.

Another possibility for further research on this topic would be to expand the scope of the current study to include additional sessions of Congress. This study focused on only the 111th Congress due to the availability of data on that particular session and the complexity of expanding the timeframe. Including this time series data could help determine whether or not the relationship between House delegation cohesion and federal earmark spending has increased or decreased over time and to further examine whether delegation majority continues to be a non-significant variable. Creating a panel study could eliminate additional confounding variables, such as the possible negative skewing effect of having smaller districts with only one representative.

Democrats and Republicans included in their party rules a ban on earmarks for the 112th Congress because of the often corrupt and wasteful appearance of earmark spending. While this might predicate an end to distributive benefits to constituents, it is very likely that what is commonly referred to as “pork barrel spending” has and will continue under other guises. One only has to look at recent news to know this is true. As part of the October 2013 deal to end the government shutdown and raise the debt ceiling, the amount of money authorized for the Olmsted Lock and Dam project, a series of locks being built by the Army Corp of Engineers in Kentucky, increased from \$775 million to \$2.9 billion (Robillard 2013). Even though Senate Minority Leader Mitch McConnell of Kentucky claimed to have had no part in the inclusion of this provision in a bill that reopened the government, the inclusion of such an authorization suggests that distributive spending is alive and well in the United States Congress.

Thus, since the earmark ban and methods of earmarking money have become less explicit, it has become more imperative – not less – to study distributive spending and its effect on our political system. This study’s findings provide valuable evidence that legislators will work together to secure federal spending, which also benefits their particular constituents. The finding that the majority party in a delegation does not matter for earmark spending is of particular importance, as it suggests that the degree to which members work together matters much more than their party identification. But what will happen now that legislators cannot secure spending in the same fashion? Will constituents still benefit from government spending? Will party cohesion disintegrate? As time goes on, the answers to these questions will grow to define our changing political landscape and with it, our nation’s political future. ✕

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THE EFFECTS OF ELECTORAL SYSTEMS AND GENDER QUOTAS ON FEMALE REPRESENTATION IN NATIONAL LEGISLATURES

Amy Manning

Abstract

Women make up anywhere from 0% to 56% of the national legislatures around the world. Research has attributed this wide spectrum to political, socioeconomic, and cultural or ideological factors. After testing these existing theories on a sample of 188 countries, this study offers a more comprehensive explanation for this wide variation in female representation. A quantitative analysis of the cases yields four statistically significant factors: type of electoral system, presence or absence of quotas, socioeconomic status, and predominant religion. These factors all affect the proportion of women in a country's legislature. The hypotheses—which posit that type of electoral system and presence or absence of quotas will influence female representation—are supported by the findings. However, this study finds that additional factors also play a significant role in determining female representation and thus suggests avenues for future research.

Introduction

The proportion of national legislature seats currently held by women varies from as low as 0% in some countries to as high as 56% in others. At first glance, the numbers seem surprising, with developing nations like Rwanda taking the lead in female representation while world powers like the United States fall in the middle of the pack. This begs the question: what causes the variation in female representation among the national legislatures of different nations?

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While many scholars have sought an answer to this question, few have undertaken a comprehensive study seeking a model that could explain the current variation on a truly global scale. This study will attempt to present such a model by applying existing theories to a larger and more representative sample of countries from 2010 to 2013. In doing so, this study aims to provide policymakers and the general public with options for increasing female representation and making national policy a better reflection of its population.

This study argues that political factors—specifically the type of electoral system and the presence or absence of quotas—play the most significant role in influencing a country's level of female representation in the national legislature relative to socioeconomic or cultural and ideological type factors. This study hypothesizes that countries with proportional representation electoral systems and countries with implemented quotas will have a higher proportion of women in their national legislatures than those with majority plurality systems or those without quotas. To test these hypotheses, a regression analysis was conducted with 188 countries in the year 2013.

This study will first discuss the existing literature on the research topic and the diverse theories that have been used to explain the variation in female representation. The second section will present the theory and argument by providing an in-depth theoretical discussion and simplified theoretical models ending with the hypotheses. The third section of this paper will be an overview of the research design, beginning with an introduction of each variable and concluding with a discussion of the cases, observations, and methods. The fourth section, seeks to analyze the results from the multivariate linear regressions. Finally, the last section of this paper will conclude with a discussion of the findings, their limitations, and their implications.

Literature Review

Large quantities of literature have been written on the subject of female representation in politics. However, most of the studies have used female representation as the independent variable and examined the effects of increased female representation on policymaking, political participation, and gender equality. Overall, there seems to have been less focus on what causes variation in female representation among states' national legislatures.

Historically, many of the studies that did address the topic were based on cases of industrialized Western states. Recently, attention has shifted toward non-Western states but there is still little research that attempts to compare variations between Western and non-Western states. In the literature, there



are few comprehensive studies focusing on the variation in the percentage of female representatives of different countries. Therefore, this study aims to address that gap in the literature. Although the existing literature does not offer a complete answer to the proposed research question, it does provide some ideas that are useful in developing this study's explanation for the discrepancy across a large number of countries in recent years.

Based on the literature, there are three main schools of thought to explain differences in female representation in national legislatures: the socioeconomic school, the cultural and ideological school, and the political school. The first two schools fall short in providing an adequate explanation for the variation in the percentage of women in legislatures. Socioeconomic arguments typically advance the claim that developed nations will have higher proportions of women in their legislative bodies. However, data shows that this is not always the case. While culture and ideology undoubtedly have an impact on women's representation in certain countries, it is unlikely that it can provide a universal explanation for the differences among countries. Some countries with cultures and ideologies that would seem to support greater gender inclusive in politics still lag behind in terms of female representation. Although there is no certain consensus, the political school of thought seems to have gained the most support. Because political factors seem the most likely cause of the issue in this study, the political school of thought to will be used to develop this study's approach.

Socioeconomic School

The socioeconomic school contends that states' social and economic conditions, including the level of education, female participation in the work force, and gross domestic product, affect the number of women participating in their national legislatures.

This model has produced mixed results. While some studies suggest a positive correlation between socioeconomics and women's legislative representation, others have found that there is no relationship. A study of women's legislative representation data from 140 countries has suggested that a higher percentage of women enrolled in secondary education and a higher level of economic development are two causes of increased female representation in national legislatures (Adams 2011). Although the study is one of the most comprehensive to date, it could have been improved by including data on the approximately 50 additional countries that were missing. Another study of cross-national female legislative representation found that from 1950

to 2007, the percentage of women in managerial positions which include directors, chief executives, production and operating managers, specialist managers and managers of small enterprises influenced the percentage of women in legislature. As women's professional statuses rose, so did their chances of being elected (Stockemer 2007). However, a flaw of this particular study is that it examined only the 27 EU countries. Thus, the validity of these results would be called into question if applied to another, more diverse group of nations.

Conversely, a separate study showed that none of the social and economic variables examined—education, labor force participation, and economic condition—had a statistically significant impact on women's representation. The socioeconomic argument does not seem to hold up when one considers that a number of developing nations have high female representation rates. In fact, "many developing countries...have much higher rates of representation of women in parliament than do some of the most developed countries" (Yoon 2004, 456).

Cultural and Ideological School

This school suggests that a country's culture and ideology, particularly factors such as religion, egalitarianism, national public opinion, perception of gender roles, cultural heritage, and generational differences influence the proportion of women the country will have in its national legislature. Studies that have analyzed socioeconomic causes also propose that countries in which Protestantism is the dominant religion have higher percentages of women in legislature, whereas predominantly Islamic countries have lower percentages. Other studies have found that Catholicism, Buddhism, Judaism, Confucianism, and Hinduism also tend to result in lower numbers of female representatives (Adams 2011).

Research in this school seems to focus on national attitudes towards gender equality as the reason behind the level of female participation in national legislatures. Studies have found a positive relationship between these two variables, where "egalitarian attitudes toward women leaders influence the proportion of women actually elected to office." The literature has also showed that with each generation, attitudes are shifting toward more egalitarian views, which suggests that we will continue to see an increase in women in legislature (Inglehart and Norris 2001). Similarly, another study done in 2003 used data on gender attitudes in 46 states to establish a link between attitudes and legislative representation. What they found is that negative ideology reduces the proportion of women in legislature by influencing both the supply and demand for female representatives (Paxton and Kunovich 2003).



Yet, with both of these studies, there are some significant outliers that do not fit the gender attitudes explanation. The United States, for example, has generally positive attitudes towards women and women's rights but continues to lag in terms of female representation in Congress. Examples such as this suggest that national attitudes are not the main cause behind differences in legislative representation. The studies also failed to establish causation, which raises the question of whether positive attitudes lead to higher representation or vice versa.

Other scholars have put forth a similar argument that liberal attitudes towards the role of women should increase the proportion of women in national legislatures. One particular study established unidirectional causation using nine selected cases—the U.S., U.K., France, Belgium, Denmark, Ireland, Italy, Luxembourg, and the Netherlands (Bergh 2009). For the U.S., the study found that public attitudes affect actual levels of female representation but found no reverse causal effect. For European countries, the results were mixed. In some cases the results were similar to the U.S., while for others it appears that the causal effect occurs in the opposite direction (Ibid.). Most critically, this study is flawed because it does not confirm its argument that high public opinion of women leads to more women in legislature, nor does it provide an alternative explanation. In addition, like many other studies on the topic, the cases selected are limited to Western countries and thus the results may not necessarily apply to non-Western nations.

Looking specifically at Sub-Saharan Africa, scholars have argued that cultural norms and stereotypes on gender roles influence women's running and being elected for office. More specifically, patriarchal culture is a barrier to female political representation. According to this research, patriarchal culture as measured by the prevalence of female genital mutilation impedes women's representation in national legislatures: "how favorably or unfavorably the society views women's involvement in politics depends on where its culture lies in the egalitarian-hierarchical cultural spectrum" (Yoon 2004, 459). In addition to the lack of socioeconomic data available, this study is again confined to one region of the world, which limits its generalizability.

Political School

The political school of thought, which includes theories relating to the presence of internal conflict, type of electoral system, political parties, elite turnover, and implementation of gender quotas, is the most common and seemingly most popular explanation for varying levels of female legislative representation between states.

One political argument is that internal armed conflict can increase female representation in legislature (Hughes 2009). Following conflict, women may outnumber men, unite in coalitions, be more present in the public sphere, seem more reliable, have more organizations supporting their participation, and find political openings where governments have been toppled or politicians pushed out of office. Results show that with each year of internal conflict, women's share of legislative seats rises, especially when that conflict was over government authority (Hughes 2009). However, in some cases, the proportion of women in legislature returns to pre-conflict levels after the conflict ends, so high levels of female representation may only be temporary.

One of the most common explanations for variation in women's representation is the type of electoral system in a country. Many scholars have found support for the claim that multimember proportional representation systems in which the number of seats that a party wins in an election is proportional to the amount of its support among voters are more favorable to women than single-member majority or plurality systems, in which the winner takes all. Analysis of 28 Sub-Saharan nations finds that women's representation is 4.31% higher in proportional representation systems than in majority-plurality systems (Yoon 2004). Additional analysis of 140 states confirms that finding (Adams 2011).

A related argument identifies elite or legislative turnover as a cause of variation. Frequent elite turnover offers better chances for women to gain representation by increasing the number of opportunities they have to enter politics (Hughes 2007). Rates of elite turnover are influenced by the type of electoral system, with proportional representation systems having higher rates than majority-plurality systems. A study using event-history analysis for 153 countries between 1950 and 2000 found that while elite turnover through elections and legislative interruptions can increase women's representation in legislatures, democratic routes are most effective for achieving high levels of female involvement in politics (Ibid.). One problem with this study; however, is that it only examined short-term effects of elite turnover, so the long-term impact on women's representation is not clear.

Another argument claims that scholars need to consider party systems—in other words, whether the system is party-centered or candidate-centered. According to this argument, party-centered systems should translate into higher levels of women's representation because "in systems where elections are based on the personal characteristics of candidates, women may be less attractive candidates" (Thames and Williams 2010, 1581). This hypothesis was tested using a cross-sectional data set of 57 countries between

1980 and 2005, and support was found with party-centered system increasing women's representation by 4.5% (Ibid.). This theory could be improved, however, by applying it to a larger sample of countries, specifically one that includes more cases from Africa, which is underrepresented in the study.

A final argument in the political school of thought is the use of gender quotas. Voluntary party quotas are commonly used with proportional representation systems while reserved or special seats are used in plurality/majority systems. Both types of quotas have become more common in recent years (Bauer 2012). The studies on gender quotas all suggest that a positive relationship exists between quota use and the presence of women in national legislatures. Several scholars have identified quotas as the most significant factor for women's representation. Analysis of seven African countries shows the success of quotas in increasing the proportion of women since their implementation in the 1990s but questions remaining regarding how successful quotas are in other parts of the world (Bauer 2012).

While previous research provides a variety of theories explaining the cause of variation in female representation, there remain gaps in the application of these arguments that render them inadequate for a model explaining the phenomenon. With additional factors considered, the political school of thought may most accurately model this causative mystery. Within the political school, the ability and willingness of a nation's political institutions to engage women provides the most logical explanations for differences in female legislative representation among countries. Since existing literature lacks large-scale and comprehensive application of theories, this study will provide a new platform for examining causes of variation in female representation.

Theory

Theoretical Discussion

A country can be considered capable of including women if it has an electoral system that facilitates women's entry into the legislature. The type of electoral system that is most conducive to women's participation is a proportional representation system. If a country has a proportional representation electoral system, legislators are elected in multimember districts. Political parties are therefore able to list multiple candidates on ballots. When this occurs, parties have an incentive to include female candidates in order to appeal to a larger pool of voters. More women on the ballot provide more opportunities for women to be elected. And when women have a higher chance of being elected,

there will be a higher proportion of women in the country's national legislature.

One way that a country may show its willingness to include women in its legislature is by implementing a quota system requiring that a certain proportion of the legislative body be comprised of women. When countries implement quotas, there are more opportunities for women in government, allowing women to hold positions of political power. When women are seen as leaders and play a positive role in government, there may be a shift in the public's opinions on women in politics. Viewed in this light, they will become more widely accepted in the political sphere, which will lead to an increase in votes for female political candidates in future elections. This will result in a higher proportion of women in national legislature.

Theoretical Models

Proportional representation electoral system >>

Political parties have incentive to include women on the ballot to appeal to more voters >>

More opportunities for women to be elected >>

Higher proportion of women in national legislature

Implementation of quotas >>

Requirement that women participate in government >>

Women seen in positions of political power >>

Shift in public opinions about women in politics >>

Acceptance of women leaders >>

Increase in votes for female legislators >>

Higher proportion of women in national legislature

Hypotheses

The proportion of women in a country's national legislature will be higher if that country has a political structure that incentives female participation and if that country actively works to increase female participation.

H1: Countries with a proportional representation electoral system will have higher female representation in their national legislature than countries with a majority-plurality electoral system.

H2: Countries that have implemented a quota system will have higher female representation in their national legislature than countries that have not implemented quotas.

Research Design

Variables and Data Sources

For the purposes of this study, the dependent variable (DV) is female representation in national legislatures. Representation will be measured by the percentage of women in the lower chamber of each country's national legislative body, which is a continuous measurement. Data will be collected from the World Bank (2012), which provides statistics on the proportion of seats held by women in national parliaments of 252 countries, territories, and regions, and the Inter-Parliamentary Union PARLINE Database (2013), which gives both the proportion and actual number of female legislators for each country.

The independent variables (IVs) assessed in this study are type of electoral system and the presence or absence of a quota system. The ability of a nation to actively involve women is shown through the type of electoral system a country has in place. Certain electoral systems have been shown to be more accommodating to women trying to enter into politics and to give women a better chance of acquiring seats in a legislature. This study will use a nominal measurement with two categories for this variable: proportional representation (PR) system or other. This study will collect data on this variable from the ACE Project: The Electoral Knowledge Network (2013), which offers continuously-updated information regarding the type of electoral system in 234 countries and territories, and Inter-Parliamentary Union PARLINE Database (2013), which provides a more detailed description of each country's electoral system. The data represents the breakdown of women in national legislatures as of November 2013.

The second independent variable used in the analysis, the presence quota system, is defined as whether efforts have been made by a country to increase women's participation. This will be measured by assessing whether the country has implemented a quota system at the national level that requires women to be included in the legislative process. For this nominal measurement, there are two categories: whether the country has implemented a quota at the national level or not. A country is considered to have implemented a quota system if it has a legislated quota, either reserved seats or legal candidate

quotas, or if its political parties have adopted voluntary quotas. Data for this variable will come from the Quota Project: Global Database of Quotas for Women (2013), which lists countries that have implemented quotas and details the type of quotas adopted by each. The data represents the year 2013.

This analysis will include three control variables. Control variables (CVs) will be countries' level of egalitarianism, level of development, and predominant religion. The first CV, egalitarianism within a country, can be defined as the level of support for equality of all groups in society. This study will look specifically at the level of support for gender equality. Anti-egalitarian attitudes toward gender can be expected to keep women from running or being placed on ballots and therefore from being elected, which reduces the proportion of women in a country's legislature. As a measure of egalitarianism, this study will use the acceptance (meaning the ratification, accession, or succession) of the UN Convention on the Elimination of all forms of Discrimination Against Women (CEDAW) as found on the UN Treaty Collection Database (2013). By signing the Convention, a country commits to take measures to put an end to discrimination against women and ensure equality. In theory, acceptance would indicate that a country is supportive of women. This is an ordinal measurement with two categories: support or no support. The data represents acceptance of the treaty as of 2013.

The second CV is the country's socioeconomic condition, meaning the level of development within a country. Development can be measured by a country's gross domestic product (GDP) per capita. Data on GDP per capita will come from UNdata (2011) because the United Nations offers the most complete set of 2011 GDP data. It is expected that countries with higher levels of development, or higher GDP per capita, will have a larger proportion of women in their legislatures. An alternate measure of development would be to examine female enrollment in secondary education or female participation in the workforce. More women would likely have a secondary education or be involved in the labor force in countries with a higher level of development. If females are present in these areas, it is more likely that they are accepted in that country's political system as well. However, because there is limited data available on these measurements, using them would significantly reduce the number of cases included in the statistical analysis. For this reason, the study will instead use GDP per capita as a measure of a country's level of development.

The third CV in this analysis will be religion. Although a country's religious composition can vary greatly, this study will be classifying each country by its dominant religion, or the religion that is practiced by the largest



percentage of the population. Past studies have indicated that Protestant countries have higher levels of female representation. However, because there is a lack of recent data on countries' religious composition at the denominational level, this study will analyze the effect of religion on a country's proportion of women in legislature using the seven major religion headings of Christian, Muslim, Hindu, Buddhist, Jewish, Unaffiliated, and Other. The data on this nominal measurement will come from the Pew Research Religion and Public Life Project (2012), which published a report on the global religious landscape that is accompanied by a table of religious composition by country for the year 2010. It is expected that countries that are primarily Christian to have higher levels of women serving in their national legislature compared to all other religions.

Cases, Observations, and Methods

To test this theory, a large-N quantitative analysis of 188 countries will be conducted using data from recent years (2010-2013). These 188 cases were selected because they have data available on all of the variables this study wished to examine. The cases chosen have shown significant variation in the IVs (the ability and willingness to engage women), the DV (female participation in the national legislature), and the CVs (egalitarianism, development, and religion). Additionally, they have shown significant geographical variation, which will make for a more statistically valid comparison.

This study will make observations of each of the cases in the year 2013. However, for variables for which 2013 data has not yet been collected, such as GDP per capita, the most recent data available will be used. This study will use statistical methods to analyze the data collected on these cases. This will require creating dummy variables for my four nominal variables. Using SPSS, the analysis will look at descriptive statistics to find measures of central tendency, and then run two multivariate linear (OLS) regression models—the first with the two IVs, and the second with the IVs and CVs.

Data Analysis

Descriptive Statistics

The data was analyzed by running descriptive statistics (see Figure 1) to determine the measures of central tendency for each variable. Since the majority of the variables—electoral system, quotas, egalitarianism, and religion—were nominal, mode was the best measure of central tendency. The mode for electoral system was 0, meaning that most countries in the sample

had an electoral system other than PR. For quotas, the mode was 1, meaning that the majority of the countries studied had implemented some form of quota at the national level. The mode for the measure of egalitarianism was 1, which meant that most of the countries in the sample had accepted CEDAW. The mode for the religion variable was 1, which tells us that the majority of the countries in this study were predominantly Christian.

Because the remaining variables—socioeconomic status and female representation—were continuous measures, skewness was used to determine which measure of central tendency was appropriate. Both variables had a positive skew, so the median was the best measure of central tendency. For the socioeconomic variable, the median GDP per capita was \$5,339.00. The interquartile range of \$13,891 best measures the dispersion for this variable. This measure tells us that 50% of the observed countries had a GDP per capita between \$1,511.25 and \$15,402.25. For the dependent variable, the median percentage of women in a legislature was 18.45%. The interquartile range of 15 for this variable shows that in 50% of the observations, the percentage of seats held by women was between 11.575% and 26.575%. Both continuous measures could be seen as having considerable dispersion.

		Statistics					
		PR Electoral System	Quotas at National Level	Ratification, Accession, or Succession of CEDAW	GDP per capita (US\$)	Christianity	Proportion of Women in Lower Chamber of National Legislature (%)
N	Valid	188	188	188	188	188	188
	Missing	1	1	1	1	1	1
Mean		.410	.543	.963	15173.590	.670	19.737
Median		.000	1.000	1.000	5339.000	1.000	18.450
Mode		.0	1.0	1.0	5318.0 ^a	1.0	.0 ^a
Std. Deviation		.4931	.4995	.1898	25461.3950	.4714	11.4594
Skewness		.371	-.172	-4.928	3.408	-.730	.544
Std. Error of Skewness		.177	.177	.177	.177	.177	.177
Range		1.0	1.0	1.0	170261.0	1.0	56.3
Percentiles	25	.000	.000	1.000	1511.250	.000	11.575
	50	.000	1.000	1.000	5339.000	1.000	18.450
	75	1.000	1.000	1.000	15402.250	1.000	26.575

a. Multiple modes exist. The smallest value is shown

Figure 1: Descriptive Statistics

Basic Regression

In addition to a descriptive analysis, a multivariate linear (OLS) regression was used to measure how changes in the two IVs influenced the DV of female representation. This model (see Figure 2) showed support for the hypotheses that countries with PR systems and countries with quotas would have higher proportions of women in national legislatures. The unstandardized

coefficient for electoral system indicates that countries with a PR system have 5.467% more women in their national legislatures. This regression has a p-value of .001, which indicates that the relationship is highly statistically significant and the data can be highly confident that it will hold in the population.

The unstandardized coefficient for the other independent variable suggests that countries with quotas at the national level have 7.103% more women in their legislature. With a p-value of .000, this relationship is found to be significant and the data is confident that it will also hold in the population. Based on the regression’s R-square value of .209, it is possible to conclude that the two independent variables account for 20.9% of the variation in female legislative representation among countries. This shows that there are additional variables correlated with the independent variables that must be considered.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.644	1.152		11.839	.000
	PR Electoral System	5.467	1.655	.235	3.303	.001
	Quotas at National Level	7.103	1.634	.310	4.348	.000

a. Dependent Variable: Proportion of Women in Lower Chamber of National Legislature (%)

Figure 2: Basic Regression Results

Complex Regression

In a second regression, both the independent and control variables were analyzed to determine their relationships with the dependent variable. Even after including the control variables, there was support for the two hypotheses. In this regression, the unstandardized coefficient for electoral system denotes that countries with a PR system have 4.030% more women in their legislature. As in the previous regression, this relationship is statistically significant (p-value of 0.018) and the data is confident about finding this relationship in the population. The unstandardized coefficient for quotas shows that countries with quotas have 7.387% more women in their national legislatures. With a standardized coefficient of .322, this variable is shown to have the largest association with the dependent variable. Because the quota variable has a p-value of .000, the data is highly confident that the relationship holds in the population.

Unlike the previous regression, this regression took into account the three control variables, which were egalitarianism, socioeconomic status, and religion. The unstandardized coefficient for egalitarianism (measured by the

acceptance of CEDAW) indicates that countries that have ratified, acceded, or succeeded to the convention have 4.024% more female legislators, but the p-value of .307 renders this relationship insignificant. Because the p-value is so high, the data is not confident that this relationship would hold in the population. Although the results for this variable defied the original expectation that countries that accept CEDAW will have more women in their legislature, the other control variables followed predictions.

The unstandardized coefficient for socioeconomic status (as measured by GDP per capita) suggests that with every additional \$1,000 in a country's GDP per capita, there will be .06044% more women in the country's legislature. With a p-value of .043, this relationship is significant and the data is confident that the relationship would hold. The unstandardized coefficient for the final variable, religion, indicates that countries where the majority of the population practices Christianity will have 3.185% more women in legislature. A p-value of .048 reveals the relationship is significant and would hold in the population.

It is possible to interpret this regression's R-square value of 0.252 as meaning that the five variables account for 25.2% of the variation in the dependent variable, which suggests that there are other factors—perhaps culture or history of conflict—that explain the majority of the variation in the presence of women in national legislatures.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	7.152	3.969		1.802	.073
	PR Electoral System	4.030	1.687	.173	2.389	.018
	Quotas at National Level	7.387	1.613	.322	4.580	.000
	Ratification, Accession, or Succession of CEDAW	4.024	3.925	.067	1.025	.307
	GDP per capita (US\$)	6.044E-005	.000	.134	2.041	.043
	Christianity	3.185	1.603	.131	1.987	.048

a. Dependent Variable: Proportion of Women in Lower Chamber of National Legislature (%)

Figure 3: Complex Regression Results

The regression provides insight into the relationship between the independent and control variables and the dependent variable. The hypotheses that PR electoral systems and quotas are both positively associated with female representation in national legislatures are supported by the data. The results suggest that these two variables do influence female representation. Additionally, some of the confounding variables, namely socioeconomic



status and religion, seem to contribute to the proportion of female legislators. While the final variable—egalitarianism—did appear to have a positive relationship with female representation, that relationship was not statistically significant, making it highly unlikely that it is a cause of any variation in female representation among countries. This could be attributed to the weakness of the variable used to measure of egalitarianism. Perhaps with a more accurate measure, like survey data on views towards women, would see a statistically significant relationship between egalitarianism and the DV. However, because this data is not available for a large sample of countries, it was not possible to use it as a measure of egalitarianism for the purposes of this study.

Because the R-square values were low, it is clear that other variables not measured in this study are associated with female representation. Furthermore, given the quantitative methodology and inability to establish a temporal sequence, this analysis was unable to establish causation between the variables examined. This analysis can only state with confidence that correlations exist.

Conclusion

The goal in conducting this research was to explain the variation in female representation between different countries' national legislatures. While research has previously been done on this subject, it has often been limited in its application because of the use of small-N qualitative analysis to examine several observations or large-N quantitative analyses that were unrepresentative of the world's countries. This research was meant to fill the gap in assessing the validity of existing theories by analyzing a more comprehensive sample of countries in recent years.

This study suggested that the type of electoral system and the presence or absence of quotas within countries would be the most significant causes of variation in the proportion of women in countries' national legislatures. More specifically, those countries with a proportional representation electoral system and countries with quotas in place would have higher levels of female representation. After running a large-N quantitative analysis of 188 countries that included several multivariate linear regressions, the data supported both two hypotheses. The presence of quotas resulted in the strongest relationship, increasing female representation by over 7%. Countries with PR systems saw an increase of 4 to 5% in female representation. Some of the confounding variables also seemed to play a role in the number of women in legislature but to a lesser degree than the independent variables. Based on the low

R-square values found in both regressions, it is clear that the variables tested are not adequate in explaining all of the variation in the dependent variable. Additional variation could be a result of other aspects of domestic politics, cultural differences among countries, or history of internal conflict within a country, as proposed by the existing literature. Future studies could shed light on other potential causes, as well as improve on elements of this study by examining causal mechanisms, finding data sources that serve as more accurate indicators of the variables, and collecting data on the few countries that were excluded from this analysis.

The findings from this study have several important implications for theory and policy. First, the data casts doubt on the existing view that attributes varying female representation to egalitarianism. The data does seem to lend support to the claims that socioeconomic status and religion play a role in the level of female representation in legislatures but it best supports past scholarship from the political school of thought.

The results of this study also help to identify some of the factors that allow women to succeed in political office in certain countries. It also identifies some of the roadblocks that may hinder women's success in other countries. This knowledge gives policymakers who are interested in increasing female representation several options for doing so. Yet even if policymakers are not themselves interested in increasing female representation, the general public frequently influences them. When the information from this study is put in the hands of the public, individuals seeking higher female representation may call for change, leading policymakers to implement quotas or alter electoral systems. With higher female representation, legislatures can implement policies that more accurately represent and serve the needs of the entire population, creating a more democratic system.

Female leaders are more understanding and responsive to the needs of women so they are better able to conceive and implement policies that positively impact the lives of women in their country (Bauer 2012). Thus, when this research is applied to national politics, we could see an increase in the number of opportunities for women in legislatures, as well as an increase in the number of opportunities for women in all facets of life as gender and other social issues find a place on the legislative agenda. ✕



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Clocks and Clouds is an American University undergraduate research journal that publishes articles on the cutting edge of political science, international studies, and public policy. The journal is meant to add a voice to the intellectual dialogue both within the American University community and in broader academia. Our name comes from the work of philosopher Karl Popper, where clouds are a metaphor for the disorderly and irregular in social science while clocks represent the predictable and rational. By providing a venue for top undergraduate research, *Clocks and Clouds* aims to find the clocks amidst the clouds.

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EVEN THE MOST CLOUDY
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-KARL POPPER

