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Kantian Peace Extended: Liberal Influences and Military Spending

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ABSTRACT OF DISSERTATION

Isaac Martin Castellano

The Graduate School

University of Kentucky

2013

KANTIAN PEACE EXTENDED: LIBERAL INFLUENCES ON MILITARY
EXPENDITURES

Dissertation

A dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy in the
College of Arts and Sciences at the University of Kentucky

By Isaac Martin Castellano

Lexington, Kentucky

Co-Director: Dr. Karen Mingst, Professor of Political Science
And Dr. Clayton Thyne, Assistant Professor of Political Science
Lexington, Kentucky
2013

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Abstract of Dissertation

KANTIAN PEACE EXTENDED: LIBERAL INFLUENCES ON MILITARY EXPENDITURES

The Kantian Triangle of democratic institutions, IGOs, and economic interdependence has received a great deal of attention by international relations scholars. This project expands on liberal theory by arguing the pacific effects of the Kantian Triangle extend beyond dyadic context, and shapes state decision making on defense spending decisions. This project asserts that as states (1) build democratic institutions, (2) increase the number of memberships in international intergovernmental organizations (IGOs), and (3) exposes domestic markets to the global economy and subsequent interdependence on foreign markets for both imports and exports, they are less likely to allocate resources toward the military. To test this argument I employ both quantitative and qualitative methods. I first utilize a pooled time series data set of all states from 1960-2000. I then examine the case of Brazil and its relationship with the Kantian Triangle and subsequent military planning decisions. I conclude that there is mixed evidence to support the notion that the Kantian Triangle reduces military spending. I establish that while democracies reduce military spending, consolidated democracies enjoy no additional benefit in military spending. However, the longer states are democracies the more likely they are to reduce spending, and if they have electoral systems based on consensus designs. I find that IGO memberships reduce military spending, however, the bulk of influence IGOs have on military spending decisions are retained by security focused organizations. Lastly, I find that international trade and overall economic globalization increases military spending, while regional trade decreases it. In all the Kantian Triangle has a substantial influence on military spending, yet it is clear from this project that this influence is not universal among all elements of the Kantian Triangle, and that the liberal influences are not completely pacific.

KEY WORDS: Liberal Theory, Defense Expenditures, Democracy, International Intergovernmental Organizations, Economic Interdependence

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December 6, 2012

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Chapter 1: How Far Do Liberal Influences go?

Section1: Research Problem/Puzzle

Published in 1798, Kant's *Perpetual Peace* unleashed two centuries of theoretical debate about the role of democracy, IGOs, and economic interdependence on interstate conflict. Kant's well known argument is that as states embed these three influences into their domestic institutions and foreign policy, they are less likely to engage in international conflict. Kant's argument has been a source of liberal theory in the field of international relations for generations. What has remained a puzzle is how deep these influences go in shaping state behavior, if they do at all. Realists and liberals disagree on the relationship between liberal influences and interstate conflict, and little work has been conducted on the relationship between military expenditures and liberal influences. This project works to fill this gap by examining the role liberal influences have on military spending, and argues that as the elements of the Kantian peace become more institutionalized, the more likely states are to decrease their military spending. As states develop democratic institutions, join IGOs, and have an increasingly larger share of their economies dependent on both global and regional trade, they reduce their military expenditures and prioritize other spending.

Scholars have long examined what causes states to militarize and what defense spending says about state behavior, their perception of the international environment, and their willingness to use force. Uncovering the causality of military spending, and more importantly, state's decisions to shift their strategic planning away from a heavy reliance on military force to cooperation and non-violent leverage options is of great theoretical and policy importance. If liberalization reduces military spending, then the long

promoted American policy of encouraging developing states to adopt liberal institutions takes on more meaning and importance in terms of the implications of those policies. Moreover, if liberal influences work to increase military spending, it raises questions regarding the efficacy of such efforts, in addition to building the field's understanding of the role liberal influences play in state decision making. Further, this project aims to advance the debate between realist and liberal schools of thought by uncovering the contributing factors of defense spending. If liberal factors do in fact influence military spending, more can be said about the power of this theoretical tradition to predict state behavior. Further, if analysis fails to show that liberal factors influence state behavior, the field can conclude that realist influences are dominate in shaping expenditure levels, and that realists do a better job of explaining state preparation for conflict than liberals. If this study concludes that the liberal influences of democracy, IGOs, and economic interdependence do little to dampen the state's demand for military expenditures, then by extension it could be argued that they do little to institutionalize non-violent means to solve international conflicts, as states leave on the table the option of using a robust military.

Lastly, this project works to fill a temporal gap on the subject of defense spending. Most of the major contributions on military spending were conducted in the Cold War era, with the exception of a handful of studies (Goldsmith 2003, 2007; Fordham and Walker 2005; Collier and Hoeffler 2007).¹ Obviously much has changed since the Cold War era, both in the advancement of international relations theory and the political developments that have shaped state defense policy. This project aims to

¹ These references do not include discussion of strategy, procurement, or grand strategy.

theorize about military spending in the absence of a bipolar context, and further examines spending patterns through both the Cold War and aftermath.

Section 2: Research Questions

The first set of research questions focus on democracy's relationship with military spending, which has long been considered a key element in the peaceful relations among states in terms of bilateral relations and the absence of conflict.² Given this importance, several scholars have previously examined democracy's relationship with military spending (Fordham and Walker 2005; Goldsmith 2007; Bueno de Mesquita, et al. 2003). These extensions of the democratic peace literature aid in clarifying the role of democratic institutions. However, these examinations have not probed the differences between democracies, they only have established that democracies are more likely to carry lower spending levels than non-democracies. It is unknown if states experience a continued decline as they strengthen their democratic institutions, or if the duration of institutions or variation in electoral or legislative systems plays a role in shaping military spending rates. Therefore, this study examines the long term influence of democratic structures on military spending. I ask the following questions: (1) Do democratic states spend less on the military the longer they are democracies?, (2) Do states spend less on the military as they strengthen their democratic institutions?, (3) Do parliamentary or presidential system structures reduce military spending more than the other?, and (4) Do consensus or majoritarian electoral systems reduce military spending more than the other?

My second set of research questions focus on the relationship between IGO memberships and military spending. Numerous scholars have found a strong relationship

² See Russett and Oneal (2001) *Triangulating Peace* for a more detailed discussion of this literature.

between overlapping IGOs and a reduction of conflict between member states. I want to know what the relationship is between IGO membership and military expenditures. My next research question is therefore: (5) Does membership in an increasing number of international organization, regardless of the IGO's focus, lead to a reduction of military expenditures? The argument that there *is* a connection can be rooted in the idea that as states become dependent and accustomed to IGOs in their decision making processes concerning foreign affairs, the need for the military options will decrease. Further questions examined here include: (6) Does membership in security focused IGOs do more to reduce military expenditures of states than non-security IGOs?, (7) Do more powerful IGOs have more influence on military expenditures than weaker ones?, and (8) Does the duration of IGO membership have an influence on military spending patterns of member states? A key argument of this project is that as liberal influences become more institutionalized, they will have a greater effect on military spending. Therefore, it is important to examine the role time has, given the temporal dependence of the institutionalization process. As mentioned above, the effects of IGO membership on military spending may be enhanced, or even be dependent on the democratic status of member states.

My third set of questions examines the role that economic interdependence plays on military expenditures. In the military expenditure literature, there is a clear identification of economic strength as an influence on defense spending levels, but what is left unexamined is the role international commerce has on the need to maintain a strong military. Certainly some would argue that the more economic interests a state has, the more military might they need to protect those interests. But, as Keohane (1984) argues,

there is no need to have a hegemonic power to enforce rules, because states can do enforcement without a strong power system via IGOs, something that has been present since the 1960s. Moreover, numerous scholars have argued that international commerce between states reduces the probability of conflict. This raises the following questions: (9) Does increasing dependence on the international economy result in a reduction of military spending? Trade within a region may have a more salient role on security issues than trade outside the region, as contiguity is a major cause of hostilities between states. This project examines whether high levels of trade between neighbors decreases the need to maintain a larger defense budget. Following from this, I ask (10) How do regional trading patterns influence conflict preparation? International trade, however, is not the only component of economic interdependence. Foreign Direct Investment (FDI), import restrictions, portfolio investments, as well as a range of other factors that are generally considered to be elements of economic globalization are also components of economic interdependence. I therefore ask (11) Does economic globalization reduce military spending? Globalization is not contained to purely economic exchanges; social exchanges, such as remittances, tourism, and popular cultural consumption may work to reduce ignorance and misconceptions among elites and citizens that drive down the need for high rates of military spending. I therefore ask (12) Does overall globalization shapes military spending? In all, by answering these questions this project advances the field's understanding of the contributing factors to defense spending, advances the theoretical debate on the role of liberal and realist influences on military spending, and provides an opportunity to test the validity of the liberal tradition and compare the results to the realist influences on military expenditures.

Section3: Structure of Project

This project proceeds as follows. Chapter 2 lays out my theoretical framework, which argues that states that institutionalize the elements of the Kantian Triangle are more likely to reduce their military expenditures. I begin the chapter by examining the process of defense budget creation, followed by a discussion of the alternative explanations of military spending. There is a clear alternative to the theory presented here rooted in the realist tradition, and thus a discussion of the realist tradition helps clarify the assumptions and arguments contained in the liberal perspective I put forward. I then move on to detail the relevant literature on military expenditures, which is broken down into two groups: external and internal influences. There is a great deal of debate within the field about which of these two forces has a greater influence on the military spending decisions of states. The literature is riddled with claims of dominance based on one factor or the other. I further discuss the role of liberalism in international relations theory and its place in the security literature. I then detail how democratic institutionalism, IGO membership, economic interdependence, and globalization work to reduce the need and drive of states to allocate resources toward their militaries. I complete each of these discussions separately and lay out my hypotheses derived from my research questions above.

In Chapter 3, I present the research design for the quantitative portion of the study which examines for all states between 1960 and 2000 the relationship between liberal

factors and military spending levels.³ In Chapter 4, I present the basic findings from the quantitative data, with findings that offer mixed support for the argument. Chapters 5, 6, and 7 each examine a separate point of the Kantian triangle, and further examine the relationship they have with military spending given alternative dependent variables, temporal and spatial influences, alternative control variables, and other modeling issues. Chapter 8 provides an in-depth case study which examines the role of liberal influences on the defense budgets of Brazil from 1960-2000. By focusing on the relationship between liberal factors and military spending in a specific case, the moving parts of the theory and the reality of the liberal influences can be observed in more detail, and context can be provided for how these three forces work together to shape military spending rates. I conclude the project in Chapter 9, where I review the major findings, discuss the limitations of the study, and examine future research opportunities that build on the findings of this project.

³ Data limitations on some questions limit this temporal scope, as does the choice to ensure that many newly independent states are included for the duration of their existence, two issues that will be discussed in Chapter 3.

Chapter 2: The Liberal Tradition and Military Spending

Introduction

The field of political science has produced an array of work examining the influences of military expenditures, including liberal influences (Fordham & Walker 2005; Goldsmith 2007). In this chapter, I work to expand this work by exploring in more depth the role liberal influences have on military expenditures. To examine the influences of military spending, which are layered and numerous, I develop a framework drawn from liberal, constructivists, and realist schools of thought. This project argues that the Kantian Triangle and its related pacific effects on state behavior can be extended beyond the established reduction in conflict in the dyadic context (Russett and Oneal 2001) to a reduction in military spending. A reduction of military spending will follow when (1) when states build robust and strong democratic structures, when (2) states increase the number of international intergovernmental organizations (IGOs) they are members to, and when (3) states increase their economic interdependence with the international economy. IGOs and economic interdependence provide substitutes to military capabilities as tools to achieve state ends and reduce security threats to states, while democratic structures reorganize state spending priorities away from ‘guns’ and toward ‘butter’ spending priorities. In sum, the more liberalized a state becomes, the less the state will spend on the military. I argue that states do not eliminate their militaries when they institutionalize the elements of the Kantian Triangle, or refrain from investing in modern military technology; rather, they begin to rely less on the military as a tool to achieve state interests.

Incorporation of liberal forces into the policy making process is the key mechanism of the theory presented here. Incorporation can in many ways be interchangeable with the concept of institutionalization. Institutionalization is the process by which an institution incorporates a new character, concept, or idea into a formal processes, which in this context is the annual creation of the defense budget, whereas incorporation in this context denotes an additional influence or factor that is considered by policy makers in the decision making process. This project argues that the environment in which defense spending decisions occur is influenced by both ideational and structural elements that shift with the presence of liberal influences. This project builds an argument primarily rooted in a neoliberal or structuralist account of liberal factors and their relationship to military spending, and combines it with a constructivist account that acknowledges the role of normative and ideational influences. Decision makers function in a policy making environment filled with influences that take multiple forms, such as ideas, interests, internal and external structural forces such as democracy and hegemonic powers, as well as basic material factors such as economic strength that shape the choices individual and policy actors make.

This argument is based on the idea that states become accustomed to changes in their environments, internal and external, resulting in a change of behavior. In the relationship between liberal influences and military spending, the mechanisms of democratic structures, IGO membership, and internal trade become common elements of the policy process, and change the structural constraints and perceptions of policy makers. These changes result in a reduction of internal motivation for military spending and external tension, culminating in a change in military policy.

To date, the role liberal factors play in defense budget outcomes have been under studied in scholarly work. The reason for this gap in the literature is that the incorporation of liberal influences into state security decision making occurs in conjunction with a multitude of other factors that shape military spending rates. This project argues that the traditional realist influences such as rivalries, war, alliances, and international hegemonic forces, as well as the normative structures articulated by constructivist scholars such as the prestige, play a role, but that they are simply one of many factors that shape defense spending decisions. Previous contributions to the military spending literature have not been inclusive of the multiple factors that shape military spending decisions (Smith 1989), and few have examined the role of liberal influences (Fordham and Walker 2005; Goldsmith 2007). This project fills this gap by developing a framework that explains decisions around military spending that includes both realist, liberal, and constructivist variables.

In the remainder of this chapter, I first proceed with the development of a framework of military spending based on a marriage between the Bureaucratic Politics Approach and the Domestic Politics Approach. Second, I examine the literature on military spending, detailing the alternative explanations offered by realist scholars. I then move on to examine the role of the liberal and constructivist theories, and general predictions of state behavior. As the liberal tradition informs my argument, I describe it in greater detail. Finally, I move to the main body of the chapter, where I isolate the role individual liberal forces have on military spending. I start with the role of democratic institutions, move to IGOs, and conclude with economic interdependence. Along the way, I outline my hypotheses, which I test in the following empirical chapters.

Section 1: Building a Framework of Defense Spending

In order to understand how the competing influences on military expenditures come together into a single budget, it is important to discuss and build a framework that explains the budgetary process. The framework adopted here, argues that budgets are the product of numerous actors with varying amounts of power and influence, who come together with competing motivations and interests, and clash in the budget process, collectively producing a policy outcome. Likewise, states pursue multiple security solutions simultaneously, including alliances, establishing military competency and strength, and diplomatic relations, and can substitute out one policy options for others in their pursuit of security, leading security policy and defense spending to be influenced by a range of factors (Morgan and Palmer 2000; Palmer and Bhandari 2000). The assumption that the state is a unitary actor is common practice within the field, which places budget decisions in a black box, and leads to theories on military spending which do not specify which actors within the state actually influence the budget. Arguing that all elements of the state respond to information and political pressure to alter defense budgets in the same way is a problematic.

This project argues that the budget process is not solely determined by one threat, material force, idea, set of perceptions, or single actor; rather, it is the combination of a great number of influences, interested parties, and individuals. Previous contributions to the literature examining the determinants of military spending have argued that one factor or the other best describes state decisions on security. This is a useful way to distinguish one theory over another, and prioritize which influences have dominance in military

spending decisions, but ignores the comprehensive story of defense expenditures. Research that downplays the complexity of the policy making process has failed to understand the totality of influences on defense expenditures, especially that of liberal factors. Advancing a framework that provides a more comprehensive approach for the budgetary process, this project aims not only to demonstrate how liberal influences shape military spending, but to articulate a more holistic explanation of military spending influences.

To provide such a framework, this project fuses two arguments on the policy making process, the domestic influence (or interest group model) and the bureaucratic politics approach. Simply put, these two theories argue that individual policy makers and institutions are the two key decision makers in budgetary politics. Combined, they capture the various actors both inside and outside the government who wield influence in decisions in the policy making process, and specifically, defense expenditures. Below, I first examine the role of the bureaucratic politics approach and the domestic politics model, and from there development a framework to understand the totality of influences on military spending.

Bureaucratic Politics Approach

The bureaucratic politics model has a long history in political science. At the core of the model is the notion that policy decisions are not produced from a top down hierarchy, but rather involve a game of politics where competing interests battle for influence on the final product (Kozak 1988). National security policymaking is fragmented, nonhierarchical, non-monolithic, and is best conceived as a confederation of

functional, organizational constituencies and subsystems, involving a bargaining arena rather than a command structure, and ultimately operating in a process best described as a clash of interests (Kozak 1988; Allison 1971; Halperin 1974). Samuel Huntington wrote clearly on the role of interests in the context of the U.S. security policy, claiming, “military policy can only be understood as the response of the government to conflicting pressures from its foreign and domestic environments” (Huntington 1961, pg 167).

Graham Allison’s seminal examination of the Cuban Missile Crisis, which has become a foundational framework for the Bureaucratic Politics Approach, further entrenched this view within the field, arguing that policy was the product of ‘intra-national political outcomes’ and not the solution to the problem at hand, but rather the outcome of “compromise, coalition, competition, and confusion among government officials who see different faces of an issue” (Allison 1969, pg 690). Allison further argued that governments are made up of individual actors with their own agenda and interests, power and position, and personal views, which are influenced by a number of factors (Allison 1969). In a decentralized power structure, of which many democracies could be characterized, there are numerous players that wield influence on the final decision, including those outside of government or the national security establishment, such as legislators, media, and interest groups (Allison 1969). Ultimately, Allison argued that the action the U.S. government took in response to the Cuban Missile Crisis was the product of compromise between multiple players, and this model of decision making can be applied to all policy making. While further work has critiqued and reformulated Allison’s work, the theory of policy making being a competition between multiple actors with

varying interests and levels of success remains a foundational idea in understanding policy outcomes, such as defense budgets (Bendor & Hammond, 1992; Welch, 1992).⁴

This clash of interests within policy debates is also dependent on factors, such as personalities and procedures within institutions (Schwenk 1988). Some individuals bring more charisma to their positions, have relationships with other actors, and otherwise vary in their effectiveness in achieving their interests, which influences the policy making process (Kozak 1988). While institutions have set structures that influence policy over time, the level of influence at times is dependent on the individual personalities who staff security organizations (e.g. The Department of Defense). Moreover, standard operating procedures (SOPs) (Kozak 1988), as well as budget incrementalism (Wildavsky 1986) further contribute to the policy process. SOPs refer to the set ways in which institutions deal with routine matters, while budget incrementalism is rooted in a Weberian notion of bureaucratic growth and mission creep. These dynamics create a situation where multiple moving parts come together to produce a policy, and where the trajectory of the policy process is not entirely predictable, making it unclear what actors will exert the most influence. In sum, the bureaucratic politics approach offers a compelling model for how policy is produced, allowing for multiple actors, interests, institutions, and ideas to play a role in influencing the final product.

Domestic Politics Model

⁴ Bendor and Hammond (1992) in particular attack Allison's (1971) assumption that policy makers have conflicting goals, arguing that many agreements fall along the lines of strategies. This point highlights the argument this project is making, in that various policy makers in the U.S. are responsible for security issues, and see varying ways to achieve said security.

A great deal of work has been conducted in both the American and Comparative fields of political science, examining how individuals and interests groups influence governing decisions. The domestic politics model of decision making centers on the notion that individual citizens form interests groups that coordinate their action, and utilize collective power to influence the decision making of states on foreign policy issues (Keohane and Milner 1996; Putnam 1988). One contribution to the literature that subsumes much of the process of domestic politics is the Selectorate theory, which offers a coherent picture of decision making by leaders based on demands from the constituents that support them (Bueno De Mesquita et al. 2003, 2004). The theory identifies two fundamental groups in a given country, the Winning Coalition and the Selectorate.

The selectorate is a subset of the overall population who governs, and thus represents those who have a voice in government policy. The Winning Coalition is a subset of the Selectorate that is required to select and retain a leader in office. The size of the Winning Coalition has great consequences for domestic and foreign policy alike, including military spending decisions (Bueno De Mesquita, et al. 2003). As Bueno De Mesquita, et al. (2003) demonstrate, states with larger Winning Coalitions are more selective in the conflicts they fight, spend more during war time, and provide more public goods, while states with smaller Winning Coalitions are less selective about which conflicts they fight, spend less during war time, and provide private goods to the winning coalition, which is smaller in size. Large winning coalitions tend to be found in democracies where the selectorate is the electorate with few restrictions on suffrage, and smaller coalitions tend to be found in authoritarian states where the Winning Coalition is the small group of government officials needed to retain the reigns of state power, such as

the security forces. States with large Winning Coalitions produce policy geared toward the delivery of public goods to as many people as possible, whereas, small Winning Coalitions produce states that hand out few public goods, and where state wealth is restricted to those at the top who are able to influence the retention and selection of the executive (Bueno De Mesquita, et al. 2003).

The predictions on the policies that different Winning Coalitions undertake offers a parsimonious but accurate depiction of how individuals and organized groups can influence policy makers. In democracies, this effect plays out through electoral participation among citizens and other activities aimed at raising the level of awareness of other voters, media and policy makers. Ultimately, however, research indicates that members of the Selectorate have the ability to influence military spending in both democracies via public opinion and through the close ties in authoritarian states between the Selectorate the executive (Eichenberg and Stoll 2003; Wintrobe 1998; Gandhi 2004). While specification of the process by which the Selectorate influences decision making is sparse in the Selectorate Theory, it clearly demonstrates that individuals outside the government have an influence in shaping policy.

A great deal of literature specifies the strategies interest groups and citizens utilize to shape the budget process (Lipsky 1969; Rubin 2006; Skocpol 2003; Verba et al 1999). Such processes are subsumed in the Selectorate Theory, which captures the role of domestic actors by articulating the structure of the selectorate and the size of the Winning Coalition. The Selectorate Theory does not specify what tactics, resources, or approaches are needed to influence policy outcomes, just that a majority of the selectorate is needed (Bueno de Mesquita, et al. 2003). This shortcoming is not problematic given that this

project is only interested in demonstrating that the winning coalition *does* influence the policy making process, and that the winning coalition can be separate from the bureaucratic players who also yield power and influence policy outcomes. Authoritarian regimes may have smaller winning coalitions that contain fewer citizens, but research indicates that some amount of citizen preferences are considered in policy making (Wintrobe 1998; Gandhi 2004). In sum, domestic audiences have interests and influence in the policy making process, and while the exact mechanisms are not discussed, they are assumed to be factors present in government decision making.

A Framework of Defense Budgets

I merge the Bureaucratic Politics Approach and Selectorate Theory's account of domestic politics to offer a compelling and coherent story as to how interests, ideas, groups, and individuals work to shape the military budget policy making process. The core assumption of the argument presented here is that a multitude of actors assert influence on budgetary decision making. These actors represent a variety of interests, have varying views on what security issues the state faces, have divergent views on how to meet these threats, and have varying levels of power in the budgetary process. These actors can be legislators, military officers, interest group activists, non-military state security personnel, intelligence officials, business and union leaders, diplomats, groups of voters or citizens with similar interests, and others; all of these actors represent their own concerns and present their own policy agendas. They are drawn from both the ranks of government and regular citizens. Actors may be motivated by specific ideas, norms, perceptions and structural and material factors about budgeting for military spending.

They may also be motivated by a desire to fund other elements of the state budget such as social spending, and hence target military spending for reductions.

{Figure 2.1 About Here}

Figure 2.1 captures these varying influences. The argument in this project, is that liberal influences on military spending are but one of several influences of military spending, including traditional realists variables such as rivalry, system polarization, and others. What the figure 2.1 captures, is the process in which these influences are mediated by the role domestic citizens, i.e. the winning coalition, and the bureaucratic players have in the formation of policy. Various influences, whether realist or liberal, are mediated through the power citizens and bureaucrats have in the policy process. The argument that is elaborated in the following sections of this chapter, is that liberal factors have influence on defense budget decisions, as they change the outlook and strategy of bureaucrats and leaders on how to provide security. Defense budgets compete for the same resources winning coalitions want, and as liberal influences change security strategy, state leaders find they can simultaneously meet the security demands of the state while appease their winning coalition with more public or private goods, which allow state leaders to shift funds away from the military to fund other policy priorities. Figure 2.1 captures this process, as liberal and realists influences are mediated by the winning coalitions and bureaucratic actors, who have influence on budget outcomes, and the defense budget figures.

Consider the case of State Venezuela, for example, a quasi-democratic state in transition from authoritarian rule to a consolidated democracy. Pressure to increase or decrease military spending may come from a number of sources in and outside of the

government. Diplomats and foreign ministers might view military spending increases as cause for concern, given potential friction in foreign capitals such as Washington D.C., particularly with a Colombia with whom they have had hostile relationship, as such action may trigger an arms race; thus the diplomats advocate for a more pacific approach to military spending. Such a motivation may be rooted in the normative environment these diplomats perceive, the material reaction they expect from other states, or the notion that current trading relations serve as a buffer for any possible conflict. Domestic labor groups may want more defense spending to maintain current labor market demands, while legislators may be under pressure to utilize limited state resources for other priorities such as education and health care. Military leaders tasked with defending the country from all threats may see cause for concern where others do not and thus advocate for increases in military spending. For example, military leaders may suspect an invasion from the United States with whom they have a difficult relationship, and may want to increase spending to account for such a scenario. Bureaucratic actors may also be burdened with their own institutional constraints, such as standard operating procedures (Simon 1957; Gormily and Balla 2004), or face pressure to continue demanding funds to further their organizational interests (Waldavsky 1986). In all, these disparate actors take on concerns, interests, and ideas from a multitude of sources, and wield varying levels of power to shape the outcome of policy decisions. Such motivations may be normative and perceptive in nature, and they may also be rooted in the materialist and structural forces that shape state behavior. These factors are then mediated by the winning coalition and the bureaucracy, before the final budget process decides on how much to allocate to the

military. The argument, here is that Realist, liberal, and constructivist theories provide ample explanation of how domestic and international factors shape state behavior.

The Selectorate Theory offers conditions and specifies how smaller winning coalitions influence policy making within authoritarian systems. Under such conditions the specifics of the Bureaucratic Politics Approach can be applied, as some members of the smaller winning coalitions found in authoritarian systems are made up of government officials whose influence, interests, and agenda has a similar pattern to those in democratic systems, in that they all vary and there is more than one person influencing the policy process. In addition, there is evidence to suggest that citizens outside the government wield influence on authoritarian systems (Wintrobe 1998; Gandhi 2004), in that some portion of citizen's priorities are represented in the policy making process. This may have more of an indirect effect on military budgets, assuming citizens are more concerned with social spending priorities in peace time then how to spend security dollars, and that these pressures lower the allocation of budget dollars toward the military (Goldsmith 2007).

A great number of scholars have laid out how varying actors influence the public policy process (Weiss 1956; Easton 1965; Appleby 1949), while others have examined the personality types, motives, means, and interests of actors in more detail (Downs 1976). This project subsumes these processes, and argues that different actors take on the different influences of military spending into their ideas and agendas about the outcome of the policy. Further, the literature has established the methods and means by which various actors influence the policy process and the budgetary process (Rubin 2006). Moreover, I argue that that the norms, structures, perceptions, and ideas contained in

liberal influences and their outcomes within the state shape various actor's ideas, perceptions, and agendas on military spending priorities.

Lastly, this project does not argue that institutions or individuals are solely influenced by one interest, agenda, or idea (i.e. either realist or liberal influences on military spending). Any individual with influence on the military budget may take into consideration both a threat such as a possible rivalry and a possible pacific relationship, such as those codified in a neighboring state or the role of an IGO membership in security calculations. Consider a U.S. Senator on the Appropriations Defense Subcommittee who has to approve budgetary proposals on all branches of the U.S. military. Such a senator might be compelled to increase navy funding for patrols in the Persian Gulf to thwart Iranian influence, but decrease overall navy spending in light of the peaceful relationships and overlapping IGO memberships the U.S. has with other regional powers such Brazil, South Africa, and Nigeria. Any actor may be persuaded and influenced by a multitude of factors, resulting in a layered position in the policy making process.

This section has provided a framework of defense spending that argues that the military budgetary outcome is a combination of forces and influences both in and outside the government. Various factors hold sway for increasing and decreasing the military budget from year to year, and various actors have interests, power, and influence over the policy process. At the core of this model is the notion that a single state can be simultaneously influenced by realist and liberal factors, as well as aspects of domestic politics that have little to do with the acquisition of security, given that citizens, bureaucrats, and state leaders all have power in the budget process. The next section

discusses the alternative non-liberal influences of military spending, and demonstrates the role these factors have on the budget process.

Section 2: Alternative Explanations of Military Spending

In this section, I review military spending explanations which counter the theory presented in this project. I first examine realism, the theoretical rival of liberalism. I then move on to a review of the relevant literature on military expenditures, broken into two sections. The first half of this literature review covers the external influences on military expenditures, such as alliances, arm races and rivalries, IGOs, and regional instability, among others, which come from the international relations literature. The second section addresses the domestic influences on military spending, such as internal conflict, civil-military relationships, economic variables such as national wealth and industrial influences. Table 2.1 summarizes the non-liberal influences of military spending.

{Table 2.1 About Here}

Alternative Explanations: Realism and Neorealism

The realist tradition has long advocated for framing international relations in terms of power acquisition and application. Modern realism was crystallized by the work of Hans Morgenthau, who, in his 1948 work *Politics Among Nations*, listed six principles of realism: 1) realism as a theory is governed by objective laws with roots in human nature, 2) power is the central element guiding the landscape of international relations, 3) power is universal and objective, with no fixed meaning, 4) there are no

universal moral principles, only morals applied to circumstances of time and place, 5) realism does not fuse the moral goals of a particular nation with the moral laws that govern the universe, and 6) realism is not subordinate to other legalistic-moralistic approaches to international politics (Morgenthau 1948). These principles clarified the role of power, its evolutionary nature, its role in international relations, and established the guiding theoretical tradition in the field of international relations for a generation (Lebow 2007). Morgenthau's second assumption on the role of power in state decision making set realism apart from classical liberalism, as the differing notions of power and how to achieve power is at the core of the debate between the two schools. For realists, the anarchic nature of international relations presumes that power is the main commodity, and that each state's decision making is based on the maximization of power, as power is an end in itself (Morgenthau 1948). Therefore, all politics is power based, all interactions between states are a struggle for power, and all interactions between states are decided by power. Combined with this concept, and in stark contrast to liberalism, is the notion of self help. According to realism, each nation is on their own in terms of providing for self defense. No alliance is sufficient to ensure protection, and cooperative acts cannot starve off aggressive behavior indefinitely. Generous acts only occur when power is the main motivator.

Realists propose that given the contrasting goals of states, and the lack of shared interests, the best way to ensure a peaceful coexistence between states is to achieve a balance of power. The balance of power serves to preserve peace through a continued standoff; interactions, alliances, and peace between states in an anarchic world is possible when power is equally divided. In relation to this project, realism would argue that no

amount of liberalization would influence military spending. This argument illustrates the major difference between these two schools, and represents an alternative theory to the argument presented in this project, in that realists argue that states are outwardly focused on conflict and security, while liberals see states concerned more with the possibility of cooperation.

Classic realism was succeeded by neorealism, which shifted the focus to the international system as the unit of analysis. Kenneth Waltz's *Theory of International Politics* argued that 'national-political outcomes cannot be explained reductively, and that systematic structures in the international system are the same, producing identical results' (Waltz 1979). While many of the principles of classic realism were retained in neorealism, the addition of a structural component as a bounded agent in state action is in stark contrast to the state level analysis of realism. In other words, in neorealist theory, state action is no longer determined by state characteristics, but rather the system denotes what actions states take, regardless of specific nation-state qualities, variations in the interactions with one another regime type, culture, and geography (Waltz 1979). Moreover, neorealism argues that the liberal influences identified by Kant, most importantly democratic structures, should have no influence on the behavior of states. Neorealism is also concerned with relative gains, and it is this concept that drives the decisions of states to enter into cooperative relationships with other states. Neorealism explains the network of IGOs as extensions of state power where states participate so that they can achieve a relatively larger benefit than other states. For neorealists, cooperative action in an anarchic world is the product of self interested, utility maximizing states, concerned less with absolute outcomes and more with how well the opposing states are

doing in any relationship. An inherent lack of trust between nations complicates relationships, as cooperation is a fickle thing, being useful one day and not the next, resulting in a need to always maintain military power vis-à-vis other states given the dynamic of a self help world (Waltz 1979). According to Waltz (1979), states are unitary actors working to improve their power in one of two ways: through 1) internal efforts that boil down to increasing military and economic strength, and through 2) external efforts which refers to strengthening one's own alliances and weakening the alliances of others. Neorealism allows for alliances and cooperation, but these are relationships built on power and not a utopian idea of a harmony among interests.

Other versions of neorealism, such as John Mearsheimer's (2001) offensive realism, identify that the state's main goal is to become a hegemon, based on the rationale that it is the best guarantee of survival; however, his work applies mainly to major states. Mearsheimer argues that the international system, absent of a central authority, provides the consistent presence of offensive power in states, and that consistent lack of trust between states, along with unknown knowledge of other state's intentions, results in an all out power grab as the only solution for state security (Mearsheimer 2001). Mearsheimer argues that states are always working to maintain a relative advantage militarily, and while some states halt military spending due to diminishing returns, the overall state policy is to make them a priority regardless of liberal influences.

Realists and neorealists predict that no amount of liberal influence will shape or reduce a state's willingness to pursue their interests through the use of power. Therefore, realists argue that states should be pursuing levels of military spending that are in relative equality to other states or to give an advantage over other states. This argument is echoed

by Schelling's (1960) seminal work *Arms and Influence*, in which he argues for a continued military presence as the only way for states to ensure their safety in an anarchical international system. In sum, the realist position offers a stark contrast to the liberal argument that the influences of the Kantian Triangle can shape and change state behavior.

International Influences on Military Expenditures

Much of the research on military spending, particularly the literature examining external influences, is dominated by realist factors, such as alliances, conflict, and rivalries. These external influences of military expenditures are firmly rooted in the conflict literature and represent the most discussed influences of military spending within the field of international relations. Of particular concern are conflict and the threat of conflict, which can influence military spending in a number of ways. First, if a state is engaged in an armed conflict, the state will increase their military spending (Collier and Hoeffler 2006; Goldsmith 2003). More importantly, however, is the finding that states with past conflicts spend 1.3% more of their GDP on the military in the ten years following a conflict versus states who do not become involved in conflict. This is due to the historical elements and institutional knowledge left behind after such an event (Collier and Hoeffler 2006). Concerns about conflict and the success of the state are central to policy makers in all types of regimes, given that survival of the state and the regime itself may be dependent on successfully deterring or thwarting an attack, and thus we would expect all states to experience some level of pressure from citizens to properly secure the country. Likewise, individual policy makers within the bureaucratic system

would have ample motivation to allocate a proper amount of funds in the event of a militarized conflict. Given the threat that actual conflict has on the state, I expect it to have a greater role than many of the liberal factors with the exception of democracy, which I discuss below in section four of this chapter. I utilize control variables for conflict in the empirical portion of this project.

While actual conflict raises levels of military spending, the threat of conflict is of equal concern for the field and policy makers alike. The role of arms races and rivalries has received a considerable amount of attention by scholars concerned with military capabilities and security decision making. This type of military spending involves responding to one or more states military spending (Richardson 1960), and is best captured by examining the role of rivalries. There is debate within the field on the role of arms races, and their place in determining military expenditures is the subject of a great deal of literature working to perfect Richardson's model (Wallace 1979; Diehl 1983; Morrow 1989; Diehl & Crescenzi 1998). Others, on the other hand, have down played the arms race connection, and have found technological development a more convincing factor for increases in military spending (McGinnis and Williams 1989). This literature has found a connection between an increase in military spending and regional and rivalry military build-ups.

Rivalries are cause for concern, as scholars have made a connection between them and the prevalence of war in these dyads (Thompson 2001; Goertz and Diehl 1993, 1995; Gibler, et al. 2005). Strategic rivalries are relationships between two countries competing over some interest, whether it is territory, regional or global dominance, resources, or belief systems (Thompson 2001). Rivalries can create actual armed conflict or simply

remain hostile in nature in terms of their role in influencing states to maintain a higher rate of military spending. There is no debate on rivalries in terms of their influence on military expenditures. Cases such as India and Pakistan demonstrate a situation where one side increases their spending to match their adversary (Diehl and Crescenzi 1998). I expect rivalries to play a major role in military spending; however, the drive behind increasing military spending in response to rivalries can be countered by liberal factors, in the sense that liberal factors can be substitutes for military power in dealing with potential sources of armed conflict.

While rivalries and arms races determined much of the predictive capacity of the field's theorizing in the Cold War era, more attention of late has focused on regional conflict and instability. Collier and Hoeffler's (2006) work specifies the role these regional conflicts play, especially for developing countries in dangerous regions. Whether it is an inter- or intra-state conflict, policy makers are forced to prepare for the negative effects of spillover into their territory. Numerous examples illustrate this, from the Honduran government's involvement in the Nicaraguan Civil War, to the strain the Congolese Civil War put on the Great Lakes region. As detailed in Chapter 3, I build control variables to capture regional instability and the role it plays in military spending decisions. Given that instability spill over is not a terribly common occurrence, I argue that liberal forces will play more of a role in defense spending decision making.

One option for states to reduce the threat that a rivalry or regional instability plays is to form an alliance. Work by Olson and Zeckhauser (1966) argues for a spillover effect, where in alliances smaller, weaker states are able to reduce their military expenditures because larger, more powerful alliance members protect them. There is

some debate, however, on whether or not alliances increase defense spending. Olson and Zeckhauser (1966) detailed how alliances, such as NATO, increase free ridership, a position backed by later scholars (Treddenick 1985; Gates and Teresawa 1992). Others have argued that burden sharing reduces spending (Morrow 1993). Still, the role of these alliances may be dependent on state size, power, and geopolitical significance. In all, alliances have a conflated role on military spending, as some states spend more and others spend less depending on their role; thus, I believe that alliances will have less of a role than liberal forces, except where weaker states are in an alliance with strong, major states such as the U.S. To ensure that the influence that the hegemonic power of the U.S. and other major powers has on military spending decisions, I divide alliances into two categories: major power alliances, and all other alliances. I believe the latter category will have no major role in military spending, though maintaining an alliance with a major power will result in a reduction of military spending equal to the liberal factors. This is important to note, given that this project does not reject realist factors in an analysis of military spending, arguing rather that liberal factors play a role alongside realist factors in determining military spending levels.

Regional conflict, international dynamics of power, and the role and importance of alliances were all heightened during the Cold War period, when much of the literature on military spending was produced. It is important then to note the findings of Collier and Hoeffler (2006), who argue that the Cold War was a period marked by high levels of military spending. They find that there is a need to control for the effect of the Cold War several years past its end date of 1991, due to the ‘budgetary inertia’ that saw a continued dedication to the military strategy that marked the period. However, it can be argued that

the security umbrella of the U.S. and the Soviets, even in the post Cold War period, continues to be a deciding influence on how states make national security decisions, all of which influence levels of military spending. The end of the Cold War and the post 9/11 period may have resulted in a shift of these relationships. The role of the Cold War is easily translatable to realist arguments regarding how uni-polarity, bi-polarity, and multi-polarity influenced defense expenditures. Along with major power alliance, the role of bi-polarity drove defense spending costs up, as uni-polarity reduced the level of military spending. I believe the Cold War will have a positive effect on military spending, and will rival the power of the liberal factors in shaping military spending rates.

Finally, there is one non-conflict exogenous influence that warrants mention. Collier and Hoeffler (2007) contribute the idea that non-military international aid is fungible, and can free up the budgets of developing countries to allocate more resources toward the military. For strictly military aid, it would be hard to argue that an initial gift or low cost sale from an arms manufacturing state would not result in the recipient state increasing their spending levels. I include a control variable in the empirical modeling to capture the role these funds might have on military spending rates. However, I believe they will have a minor role in the overall budget decision making process.

Domestic Influences on Military Expenditures

The external sources of influence on the military budget are primarily concerned with other states and the threat they pose, whereas the domestic sources of military expenditures are predominantly rooted in the struggle for state power and the subsequent maintenance of state power for political and economic gain. That struggle, most notably

the threat or attempt to wrestle control of the state away from the current regime, is a primary motivation to maintain a strong and resilient military. Several scholars have identified the threat of rebellion, civil war, and coups as a motivation for military spending (Collier 2006; Goldsmith 2003, 2007; Gandhi 2004; Belkin & Schofer 2003). The motivation may be rooted in curtailing the threat of a rebellion from inside (coups) or outside the government (insurgency), regardless the threat itself results in policymakers allocating funds for the military (Collier 2006; Goldsmith 2003, 2007; Gandhi 2004). Developing world nations are more likely to be involved in a civil conflict (Collier 2006; Laitin and Fearon 2003), and the issue remains a concern for a pooled sample such as the one utilized in this project. Further, while some evidence suggests that ethnic fractionalization is not a precursor for civil conflict (Laitin and Fearon 2003) and that states don't allocate resources for internal protection simply based on such diversity (Terrel 1971; Hill 1978), others argue that ethnic fractionalization results in an increased military effort (Rosh 1987). For those same states coup threats result in many governments allocating additional resources to the defense as an attempt to prevent a military coup (Gandhi 2004; Powell Forthcoming), a common tactic in coup-proofing (Belkin and Schofer 2003). Controls for regime type will capture the role of coup proofing in defense budgets, while civil war will be allotted its own control variable (Castellano, working paper). Regime type will play a major role in defense spending decisions, as is elaborated further in the next section, as will civil wars.

Maintaining control of the security situation is a priority, as economic influences are a key element for defense spending. The sub-field of defense economics provides a

robust and detailed examination of some of these causes and their economic outcomes.⁵ From this body of work, it is clear that there are great discrepancies between the size of a nation's economy and their military budget. Numerous scholars have found economic infrastructure, such as balance of payments, growth rates, and economic contraction, to be directly related to defense spending (Rasler and Thompson 1998; Inglehart 1990; Maizels and Nissanke 1986; Harris 1986; Looney and Frederiksen 1987; O'Leary and Coplin 1975; Dunne & Muhammad 1995; Harris 1986). Others, such as Benoit (1973), have found contrary evidence, claiming that defense concerns override any economic considerations in defense spending decisions. As a percentage of the budget, however, this is not always the case. Hewitt (1992) finds that spending increases moderately with low GDP levels and is constant at high levels of GDP. In addition, military spending increases slightly quicker than per capita income (Hewitt 1992). The conclusion from the majority of the literature is that wealthier countries spend more on defense than poorer countries. What is debatable in the field is to what degree economic constraints shape the share of GDP that is allocated toward the military.⁶ To address this, I include a measure of GDP per capita, which I hypothesize will play a sizable role in defense spending decisions.

Spending decisions are also influenced by the proximity of the military to the state decision making, as the military is often in a position where they have the power to influence the budgetary process (Hewitt 1992). Militaries left in the barracks may be motivated to remain there, if their budgets are maintained or increased over time (Gandhi

⁵ For a detailed examination, see *Handbook of Defense Economics Volume 1 & 2*, edited By Hartley and Sandler, 1995.

⁶ Benoit's (1973) work was controversial in this debate, as he argued that states will spend money on defense not matter what their economic constraints are.

2004). Moreover, the military may serve as a redistribution opportunity for a state with mixed ethnic cleavages, where military spending helps redistribute public goods to otherwise dissatisfied groups in society. From this it is no surprise then that states run by, or run in part by, the military are found to allocate more financial resources to the military (Mountjoy 1983; Dunne & Mohammed 1995; Collier 2006). Developing countries with military regimes can expect an additional two percent of their GDP to be spent on defense (Collier 2006). Military regimes have cause to inflate their spending, and in some cases democratic states do as well. While not all authoritarian states are military regimes, all military regimes are authoritarian states, and so the influence of the regime type variable that is included in the model captures this influence. Adding an additional measure to the modeling further complicates what is already a large set of independent variables. Section four of this chapter will discuss in greater detail the literature concerning democracies; while I expect democracies to decrease their military spending, compared to non-democracies, there are some scholars who argue that electoral forces can be a motivation for an increase in spending in democracies as a solution to consistent pressure to maintain low levels of unemployment, something military spending helps alleviate (Nincic & Cusack 1979; Krell 1981; Hartley & Russett 1992; Smith 1977; Fordham 2008). To capture the role of regime type, I include a control for democracy in the statistical analysis.

The alternative views on military spending offer coherent rationales and clear conceptual explanations as to why various influences should shape military spending decisions. It is clear that the realist factors, most of which are contained in the external factors, are clear triggers for increases in military spending, as there are numerous actors

within and outside the government that have a clear motivation to ensure state and regime survival. Likewise, internal conditions also shape decisions on how best to ensure regime survival, as do the demands on state leaders in both democracies and authoritarian states, and the role of resource availability. The argument presented here is not that these factors do not matter in defense spending decisions, but rather that the literature to date has relied on these factors at the expense of liberal influences. The remainder of this chapter details the role of liberal factors in international relations and state decision making, and details the role these influences have on defense spending.

Section 3: The Roots of Liberalism: Classical Liberalism, Neoliberalism, and Constructivist Thought on State Behavior

In this section, I highlight the roots of the liberal tradition, and then examine the approaches of classical liberalism, neoliberalism, and constructivist thought on state behavior. These three traditions frame and provide the larger theoretical context for the argument presented in this project: that liberal institutions work to reduce military expenditures. I conclude this section by outlining the basic tenants of this argument. The purpose of this section is not to provide a review of the literature on how the specific portions of the Kantian Triangle shape military spending and security behavior, as that is done in sections four through six, but to examine the roots of liberal thought and the assumptions inherent in these theories. I examine classical liberalism, neoliberalism, and constructivist theory with the intent of building a comprehensive understanding of the traditions and their core assumptions on state behavior, which serve as the foundation for the argument presented in this project.

Kant and the Liberal Tradition

Liberal theory has a long history within the field of international relations, encompassing the trajectory of classical liberalism to neoliberalism. There is no one theory of classical liberalism, yet this body of theoretical work coalesces around the notion that state actors and structure influence state action. This inside-out approach places state actors, institutions, and practices as the primary explanatory factors for state behavior (Panke and Risse 2007). Classical liberal theory has taken many forms, focusing on either actor or structure and integrating findings from constructivist scholarship that favor the role of ideas, norms, identities, and social learning on actor world view or structure perception (Panke and Risse 2007).

Classical liberalists hold an optimistic vision of power in state action, asserting that states can act out of shared interests and cooperation, and that power is not at the heart of every state decision. The international system is not the story of states competing and battling for dominance, but rather states working toward cooperation in order to protect their shared interests. This tradition operates with the hope that there is a possibility of win-win outcomes for state interactions, and that morality, ideology, emotions, and altruism can be factors that influence the behavior of states (Rourke and Boyer 2008). Many scholars and philosophers have contributed to the liberal tradition, the work of Immanuel Kant has been particularly influential.

Kant's 1795 work *Perpetual Peace* is the foundation for the theory presented here, and the inspiration for the democratic peace theory and the Kantian Triangle of democracy, international institutions, and economic interdependence, which work to

promote the pacific relations of states. Kant argued that non-democratic states are ‘despotic and violent,’⁷ and that democracies are the only form of government that can prevent single elites or small groups of elites from pushing the state into violent behavior. In Kant’s view, not all states have to be democratic; rather, the more democratic, the more peaceful a state will be. Kant’s idea of an international federation was rooted in the suggestion that moral right has no place in war, and that the concept of the democratic system can be extended from states to the international system. Moreover, Kant’s position on wars was clear: winning one did not prove moral righteousness, and therefore a federation of states rooted in the collective right and enforcement of law was needed to prevent wars from occurring. This insight provided a foundation for the League of Nations and the United Nations. Lastly, Kant found that a ‘cosmopolitan right,’⁸ or the ability of economic exchange to occur between nations without violence or conflict, works to establish and maintain peaceful relations between states (Russett and Oneal 2001).

The waters of liberalism have long been muddled by the difficulty in distinguishing between ideology and theory, as liberalism has historically been referred to as both a theory of international relations and as a structured policy. To clarify, it is important to note that the classical liberal tradition views each state as distinct in its action, and sees the state as the main actor in international relations. Understanding that states are distinct entities helps to explain the substantive content of foreign policy and practice (Moravcsik 1997). Classical liberals see the world as transformative: society is evolving, and human nature is not static. Therefore, improvements over time can lead to

⁷ Kant, *Perpetual Peace* in Kleingeld 2006: 79.

⁸ Kant, *Perpetual Peace* in Kleingeld 2006: 84.

the elimination of war and conflict. Those improvements are found in the democratic liberal tradition, which inspires constraint and peaceful intentions in foreign policy (Moravcsik 1997), and are reinforced by IGOs and economic interdependence. Moreover, classical liberal theory argues that actors and governments have a common interest in a cooperative world organized around the rule of law and principles of reciprocity (Ikenberry 2011).

This helps to explain the historic changes and distinct nature of modern international politics, according to liberal theory. Liberal states do not seek power in each exchange with other nations, but rather knowingly surrender 'sovereignty, compromise security, or reduce aggregate economic welfare' in order to gain some trade off, in the direction of collective security (Moravcsik 1997). All of the benefits of the liberal peace, however, are contained to those states. Non-democratic, closed economy countries who do not integrate into the network of IGOs do not benefit from the perpetual peace offered to those who liberalize.

Neoliberal Extension

Building on neorealism, neoliberalism brought a systemic level theory to the liberal tradition, arguing that the international system affects the outcome of state behavior, and predicts aggregate systemic outcomes. Neoliberalism focuses primarily on institutions, further argues that states are rational egoists in a world where agreements cannot be enforced by a central authority; thus, neoliberals adopted neorealist's principles, but argue that states can only expect to obtain cooperation with other states if there are significant common interests (Martin 2007). This adoption of rationality as a

central tenant of the theory, the rejection of classical liberalism's collective security and transformative component, as well as the acceptance of the neorealist's assumption of an anarchic state in the international system sets neoliberalism apart from their classical counterparts (Keohane 1984). Neoliberals see states acting in a payoff structure, where "myopic pursuits of self interests can be disastrous," but cooperation can bring benefits to both sides (Keohane and Axelrod 1984). Cooperation is further motivated by the 'shadow of the future;' in other words, future payoffs of cooperation outweigh here and now opportunities to defect or shun cooperation (Keohane and Martin 1995).

Cooperation then becomes reliant on what the stakes are, the consistency of the stakes, reliable information on other states in agreement, and the ability to quickly acquire information on the others' actions (Keohane and Martin 1995). According to neoliberalism, as more states become involved in cooperation, reciprocity for states who fail to uphold agreements can more easily be accomplished with more eyes on the process. Certain factors, however, must be met, such as 1) defectors can be identified, 2) retaliation can be delivered, and 3) there are long term incentives to punish defectors (Keohane and Axelrod 1984). In essence, other members of the international community can monitor cheating.

According to neoliberalism, cooperation is obtained through international institutions. Institutions can be a range of structures that states belong to (e.g. the UN, NATO, the WTO). These structures enhance the ability of states to cooperate around shared interests by increasing the flow of information. Institutions are formulated out of state interests, and are enhanced by an ability to sanction states that break agreements (Keohane and Martin 1995). Therefore, international institutions shape state behavior by

influencing decisions and actions based on sanction and transaction costs. Well structured institutions based on shared state interests maximize sanctions for defectors, decrease transactions costs, and ultimately deliver on the shared interests of the states, whether it is trading regulations (WTO), a security agreement (NATO), or a range of other agreements (UN), making cooperation a rational option for states. Institutions contain principles, norms, rules, and decision making procedures, are voluntaristic, operate in the absence of a hegemonic power, and are open to negotiation and renegotiation (Keohane 1984). Overall, neoliberal theory explains, on a systematic level, why power and diffusion of interests are not always the driving force of the aggregate outcomes of state behavior.

Keohane (1984) argues that there is little reason to believe that hegemony is a necessary or sufficient condition for the emergence of cooperative relationships, and that cooperation does not necessarily require the existence of a hegemonic leader after international regimes have been established. Keohane (1984) was working in the hegemonic theory literature within international political economy and did not necessarily direct his work to the realist/liberal debate on conflict, but his contribution launched the neoliberal tradition, which further engrained intuitionist ideas about the role of state cooperation in the international system. The neoliberal perspective finds that the self-interested pursuit of interests does not have to result in conflict or a struggle for power if the proper structures are in place. The general theoretical writings of the neoliberal tradition do not speak to the role that liberal influences have on the preparation for conflict or military expenditures. They do not assume that militaries or militarized conflict will be eliminated from the set of acceptable policies in a liberalized state, but

rather that with the proper domestic and international structures, the use of violence as a means to achieve state ends will be used less often the more liberalized the state is and the more that state interacts with other liberalized states.

Constructivist Thought

Constructivists set themselves apart from the other theoretical traditions with a critique of the materialist assumption, and focus on the social, ideational, normative and perceptive elements of international relations. These variables are constantly changing, resulting in shifts in behavior and belief among individuals, groups, and states (Wendt 1999), as they are social constructions, rather than existing independent of human meaning (Fierke 2007). Using materialist factors such as economic and military power or the internal structures of the state as the starting point for building theory is problematic for constructivism; as such theories overlook their role. Social construction is a driving force of interaction within the international system, as each actor or groups of actors are humans who themselves have socially constructed meanings of not only social interactions, but material objects as well. Central concepts such as sovereignty cannot be separated from the normative context in which they exist, meaning that sovereignty is not a material concept, but rather an idea that has a shared meaning by a group of people (Fieke 2007). By arguing that ideas formulate behavior prior to material determinants, and that ideas and norms shift over time, constructivism has provided a unique critique of material based theories, which constitutes a radical, by liberal or realists standards, position on how the international system functions. The idea that there are fixed characteristics of states is rejected by constructivists, who argue that what realists observe

as power based interest is states simply conforming to the present norms of the system. They argue that these norms can explain conflict and cooperation. Such positions are rooted in an alternative vision of ontology that emphasizes the social over the rational.

The concept of mutual construction introduced into international relations theory by constructivist scholars places the role of agency as a key component to international relations (Wendt 1992). Where neoliberal and neorealist theories see static structure as central to understanding the international system, constructivists see perceptions, ideas, and evolving norms as central to how states make decisions, as states form identities and are guided by a logic of appropriateness in their actions (March and Olson 1989; Fierke 2007). States learn over time how to engage the international system, and their behavior, interests, and expectations for the international system is not static. For constructivists decisions on security and foreign affairs are a product of international norms, identity, and perception of possible threats in the system. For example, constructivist accounts argue that state decisions on military spending are dependent on how states perceive the international system (for example, who and what are possible threats, how do they view their own identity within the international system), rather than on structures or even material factors (Wendt and Barnett 1993). Other states may have more military capabilities, but are not considered rivals or threats outright based on these materialist considerations. Constructivist accounts of the democratic peace theory rely on the notion that decision makers in democracies are socialized to embrace democratic norms that favor pacific cooperation over aggressive and violent pursuit of state interests, as opposed to traditional liberal explanations that favor the role of democratic structures (Risse-Kappen 1995).

Constructivist theory offers an alternative ontology from that of the liberal and realist paradigms, and, moreover, provides insight into the role of social factors in explaining international relations outcomes. When examining military spending, constructivists explain state decisions as dependent on various norms, ideas, and identities that are not fixed and open to change. Wendt (1992) outlines this very perspective and articulates the role social interpretation of international events plays in decision making among states. Understanding this component of state decision making helps in building the argument presented in this project.

Liberal Influences and Military Spending

This project advances a hybrid model of the liberal, neoliberal, and constructivist accounts of international relations, arguing that as states build democratic institutions, join IGOs, and expand trade in the international system, they reduce their levels of military spending. I argue that the domestic conditions outlined by liberal scholars, the international systemic properties of IGOs examined by neoliberal theories, and the ideas, norms, and identities detailed by constructivists all constitute influences of military spending. These three general sets of factors are adopted in various capacities by actors with influence in the policy making process, as one individual actor can be influenced by the domestic political calculations, international factors, and the normative, perceptive social knowledge that constructivists argue are present in each human. This framework constitutes a layered, multi-faceted approach to understanding military spending decisions.

Criticism of this approach may rest on the notion that the core assumptions of these three accounts are not compatible with one another. I disagree with this premise, as do a number of other scholars (Fearon and Wendt 2002), and argue that the outcomes of military spending are best described by a theory that combines rationalist and social based accounts of state action, that rests on structural and agency based explanations. The influences of military spending interact with individual actors within governments and citizen groups who pressure policy makers, making the policy process around military spending the outcome of structural and material forces in conjunction with social knowledge and individual actors utilizing their agency to influence policy outcomes. As the field of international relations has slowly come to recognize, state action is complicated, layered, and nuanced, and none of the three main paradigms explain all state behavior (Lake 2011). This project adopts this position, and argues that military expenditures are one state action that is best described by a theory that incorporates a multitude of theoretical perspectives.

Defense expenditures is a well theorized topic within the field, however, liberal influences remained largely under-examined by scholars. This project fills that gap, and provides a framework that incorporates the range of influences on military expenditures. The core argument of this project is that no one single theoretical paradigm or variable can completely explain military expenditures, and that military spending decisions and levels is the outcome of a clash of a variety of factors from domestic economic conditions, to IGOs, to rivalry and military threats. Approaching theory building on military spending from a singular perspective results in scholarly work that tells an

incomplete story, and thus far the literature on military spending has done just that. I now turn to detailing the role of the Kantian Triangle on military expenditures.

Section 4: Democratic Institutions and Military Spending

The first, and arguably the most important element of the Kantian Triangle are democratic structures. The field has lavished an enormous amount of attention on the topic, and has produced the Democratic Peace Theory, sometimes referred to as the one proven law of international relations theory (Levy 1989). Kant's *Perpetual Peace* makes the claim that the security dilemma is the enduring cause of war, and that democratic states are best able to abstain from military adventures and conflict, and that with the incorporation of the three elements of the Kantian Triangle, "Standing armies should gradually disappear." Kant went on to assert that "The hiring of men to kill and be killed, an employment of them as mere machines and tools in the hands of another (the state), cannot be reconciled with the rights of humanity..."⁹ Modern democratic peace theorists building on Kant's thesis have argued that dyadic pairs of democratic states maintain peaceful relationships and abstain from entering into militarized conflict.¹⁰

The theoretical underpinnings and causal mechanisms of this phenomenon are best summarized by Maoz and Russett (1993), who evaluate two general arguments in the democratic peace literature. The first is an institutional argument which posits that democratic structures prevent the rush to conflict, as heads of state need to gather necessary support among legislative and public constituencies before embarking on any foreign adventures. The other is a normative argument, which claims that democratic

⁹ Kant details this position in the third preliminary article of *Perpetual Peace*.

¹⁰ See Russett and Oneal (2001) for a complete discussion

nations contain norms that prevent states from going to war, and that in fact democratic states are more culturally geared toward cooperation and negotiation as opposed to using violence to solve their disputes (Dixon 1994; Morgan and Campbell 1991; Bueno de Mesquita, et al. 1999). The normative argument claims that a key element of a democratic society is that governments, who are representational of their citizens, are less likely to fight, as military conflict is unpopular among citizens (Morgan and Campbell 1991; Bueno de Mesquita, et. al. 1999). These theories typically are constrained to conflicts between democratic states, and establish the idea that democratic states are not inherently peaceful (Ray 1995). Others have found that democracies are more likely to initiate wars with non-democracies (e.g. Levy 1988; Maoz and Abdolali 1989; Oneal and Russett 1997), while still other scholars have argued that democracies pay fewer costs in terms of human life, fight shorter wars, and typically win (Bennett and Stam 1996; Siverson 1995; Bueno de Mesquita, et. al. 2003; Goldsmith 2007). Overall, the field has determined that the democratic structure of society inhibits conflict among democracies, does not prevent conflict with non-democracies, and aids in the successful execution of militarized conflicts.

The bulk of the field has determined a minimal role for the democratic peace theory outside of dyadic relationships, yet two scholarly works have found that open political systems have influence on state budget priorities around security. Democratic participation allows for citizen populations not facing a viable threat to advocate for spending priorities closer to home. Work by Fordham and Walker (2005) and Goldsmith (2007), who build on the liberal tradition, and specifically Kant's *Perpetual Peace*, identify key causal mechanisms in democratic systems that lead to a reduction in military

spending. Fordham and Walker (2005) present two liberal arguments explaining why democratic states reduce military spending: 1) to avoid a security dilemma related spiral, and 2) to protect the 'good life,' where political rights allow for the direct advocacy of education, health care, and other social goods that compete with the military in the budgetary process.¹¹

Goldsmith (2007) finds that democratic states should allocate fewer resources toward the military than non-democracies based on structural conditions. He identifies the work of Bueno de Mesquita, Smith, Siverson, and Morrow (2004), who argue that democracies are more likely to carry a higher defense burden in times of war, but lower in times of peace than non-democracies,¹² as well as, Bennett and Stam (1996) and Siverson (1995), who make similar arguments, support these findings. Such arguments are rooted in the notion that the pluralistic and inclusive nature of democratic systems have a range of social interests and distribution of power to various institutions, making such regimes acutely prone to demands from citizens, and thus leaders must avoid conflicts that are unnecessary. Voters, Goldsmith (2007) argues, are:

...Interested in paying lower taxes, not being conscripted or having their children conscripted, and receiving greater direct benefits from the state. The executive will therefore have an incentive to reduce taxes and the size of the military, and expand social welfare spending (broadly defined) which benefits this voter. Each of these policy motivations will have a negative effect on the defense effort, respectively by reducing the overall state budget, reducing the size of the military and increasing non-military expenditures of the state. (Goldsmith 2007, Pg 195)

This argument is firmly rooted in the structural component of the democratic peace argument, which asserts that democratic states are more likely to reduce military spending given the pressures elected leaders face to provide other public goods. The

¹¹ Fordham and Walker (2005)

¹² A position supported by Reiter and Stam (1998A, 1998B), Biddle and Long (2004)

argument mirrors the work of Bueno De Mesquita, et al. (2004), who argue that democracies that have larger winning coalitions spend more on ‘butter’ than ‘guns.’ The ‘guns vs. butter’ literature has a long history within international relations, with most empirical findings suggesting that increases in military spending result in a reduction in social spending, particularly in poor countries (Sen 1990; Mintz 1992; Lai and Thyne 2007). There is similarly consensus that democracies spend less on the military than non-democracies, with Fordham and Walker (2005), Goldsmith (2007), and Bueno De Mesquita, et al. (2004) all coming to the same conclusion. Moreover, Stoll and Eichenberg (2003) demonstrate the influence citizens have on defense spending decisions, a finding that supports the framework presented in section one of this chapter, with the overall position being that government leaders respond to citizen demands. Central to the argument made here is the notion that citizens in a democracy have the power to influence policy as a collective body, as articulated by Bueno de Mesquita, et al.’s (2003) Selectorate theory, and that policy leaders and bureaucratic players take into consideration the role of the public’s response to policy choices, a position articulated by the bureaucratic politics approach. Thus, the structural constraints and the normative influence of citizens work to limit military spending rates within democracies.

Variation in Democratic Structures

It is clear there is a difference between democracies and non-democracies in how states allocate funds, yet there is little analysis in previous work suggesting which democratic states are more likely to reduce military spending than others, given that all democratic regimes do not have identical structures and characteristics (Clark and

Nordstrom 2005).¹³ While Fordham and Walker (2005) and Goldsmith (2007) offer examinations of the role of democratic structure, they do not provide analysis that examines in more depth how small shifts in the strength, tenure, or style of democratic institutions change the direction of military spending. This project examines three elements of democratic structures: strength, tenure, and structure. Given that democracy is a continuum, in that there are varying levels of development among democracies, those democracies with the stronger, more developed institutions should experience lower rates of military spending than weaker democratic states. Similarly, states that have been democratic longer should have lower rates of military spending, given the arguments that normative structures shape spending decisions (Fordham and Walker 2005). Finally, this project examines the role of structural design, specifically, the role of parliamentary and presidential systems and consensus and majoritarian systems, arguing that while some parliamentary and consensus systems replicate the power distribution among various interests found in presidential and majoritarian systems, overall, these systems offer more representation of divergent views, further limiting hawkish policies that favor higher military spending rates. Parliamentary and consensus systems while different are often combined, with presidential and majoritarian systems sharing a similar relationship.

¹³ Goldsmith (2007) does break down the elements of the democratic systems by utilizing the varying elements of the Polity2 measure, specifically *Executive Recruitment*, *Independence of Executive Authority*, and *Political Competition and Opposition*. None of these measures, however, capture much variation in types of consolidated democracies, nor does it capture the duration of democratic structures, or even the role of political parties. While he argues against it, these measures for the most part correlate with the composite measure they contribute to (polity2), which diminishes their independent influence, and more importantly, what they can tell us about how democracies vary. Moreover, the Polity4 code book (Jagers and Marshall (2005) points out that XCONST, the measure for Independence of Executive Authority that Goldsmith (2007) relies on, is by far the measure with the most coding discrepancies.

Democratic Strength and Tenure

Democratic strength and tenure are two distinct yet related concepts, which tend to correlate, in that states typically strengthen their democratic institutions over time. This project argues that as states strengthen their democracies, and retain their democratic structures, military spending rates will decrease. These two concepts are examined together, given their related nature, and then separated them during the empirical examination. While some states retain their democratic regimes without improving the quality of their democracy significantly, many states do. As discussed above, the democratic peace literature has proposed two general causal mechanisms that make democracies more pacific than non-democracies, the normative argument and the structural argument. Norms develop over time, diffuse through society, and shape the practices. Likewise, structural components of democracy strengthen, either over time or through bursts of improvement based on domestic events. Ultimately, states reach a point where democracy is the “only game in town” (Linz and Stepan 1996: 4). Both of these influences work to reduce military spending levels over time, as democratic regimes move toward consolidation and prolong their tenure.

The normative position argues that democratic states develop norms that guide policy makers in all aspects of governance, including national security backed by public opinion that favors more non-violent means to achieve state interests (Maoz and Russett 1993). Such norms diffuse over time with the democratic system, taking root within the public consciousness and the policy makers that wield influence over state decisions, leading to more tolerant societies (Schmitter and Santiso 1998; Peffley and Rohschneider 2003). Consider the establishment of democracy within the U.S., where civil liberties,

voting rights, and protection from discrimination were uncommon elements of the early 20th century democratic experience for many citizens, and where over time such protections, norms, and values became common place. Other states have similar progressions of normative diffusion and learning processes about democratic functions and how citizens can best influence the process. This learning process includes ideas and norms about how the state should function in foreign policy. The domestic conflict resolution components of democracy that favor solving problems non-violently transfer over to citizen preferences and understanding of foreign policy (Reiter and Stam 2002). The democratic norm of non-violent conflict resolution as the primary tool of resolving differences helps create a democratic identity that favors distribution of power, tolerance and majority rule (Warren 1992). Democratic citizens can be described as wanting war as a last resort; however, democratic states are not less prone to using violence than non-democracies (Reiter and Stam 2002). Consider the U.S. strategy on either the North Korean or Iranian nuclear programs, where instead of outright military conflict, several ideologically varying administrations have opted for negotiations and strategies that have remained primarily non-violent.¹⁴

Over time, these democratic norms shape a democratic identity that become rooted in the ideological position of the state, shape the way in which citizens view themselves as members of a democratic society, and influence how the state creates policy. Policy makers must evaluate the appropriateness of a given policy in the context of the democratic identity, casting aside any policies that are not consistent with the ideas, norms, and ideology of the state. Policies that are considered inconsistent with the

¹⁴ There is some debate as to whether economic sanctions are an act of war or not, see Lektzian & Sprecher 2007.

democratic identity of the society rarely are pursued by policy makers wishing to remain in office (Bueno de Mesquita 2004), and thus act as self-censorship of militaristic policies. Large spending on the military in the absence of a threat is one such policy that is viewed in many democratic countries as inappropriate, and inconsistent with the democratic ideal.

Consider New Zealand's Nuclear Free Zone, Disarmament, and Arms Control Act of 1987, which effectively prevents New Zealand from developing or obtaining the most powerful weapon for national defense to date. While several democratic states possess nuclear weapons, New Zealand's democratic identity prevents nuclear weapons from being considered as a viable option in the pursuit of national security. Likewise, several states opted to forgo nuclear weapon development, such as Brazil, South Africa, Japan, and Germany; such decisions are rooted in democratic based norms and related identities. The U.S. has a retaliatory policy on the use of nuclear weapons, something that is consistent with American's self identity as a peaceful nation only willing to use force in self-defense (Tannenwald 1999). This also helps to explain the strong domestic opposition to the proposed invasion of Iraq in 2003. Similarly, nations whose identity includes helping the less fortunate, or making domestic investments, are going to be more likely to allocate scarce resources toward such domestic concerns over that of military development.

Moreover, leaders who face such domestically based normative constraints in terms of what policies should be prioritized also lose the ability to dehumanize their potential international opponents, which autocratic leaders retain. As Russett and Oneal (2001) explain, democratic leaders are unable without serious political consequence to

scapegoat, demonize, or paint the international opposition as dangerous evil threats, unless such a threat really exists. As citizens become more aware of such threats in an open democratic society, with the help of open media institutions, leaders are less able to use immaterialized threats as cause to allocate resources to the military, and are forced to pursue those policies that are popular with their citizens, such as domestic public goods. Even the U.S., whose concern for domestic security in the aftermath of 9/11, which can be described as extensive, has faced questions on how many resources to allocate to domestic security and defense institutions.¹⁵

Uruguay, for example, transitioned to democracy in 1985, earning a score of nine on the polity scale from the previous negative seven, and then improved to a ten in the early 1990s. Military spending declined during this period from 2.6% of GDP to 1.45% of GDP; and Uruguay now has a President who makes claims such as this: “We should stop being idiots and spending money on arms when we have to spend a lot of money on other things and raise up so many people who are still left behind, crushed, subjected, and ignored.”¹⁶ Uruguay changed the electoral laws in the late 1990s, resulting in a developed, robust party system that allows for more direct transfer of citizen preferences to policy (Cason 2002). The laws reduced restrictions on party participation in elections, bringing several new parties to the political environment (Cason 2002). At the same time, Uruguay was in the process of adopting more liberalized measures for the economy, including entertaining proposals to reduce social spending. The changes in the electoral

¹⁵ Mimi Hall, USA Today, “Rethink Spending on Anti-Terrorism, Report Says,” 10/1/2008 and John T. Bennett, *The Hill*. “With All Eyes on Deficit, Hawks Know Pentagon cuts are Coming.”

¹⁶ Uruguayan President José Mujica made these comments on January 25, 2011 during a media briefing following a summit with Peruvian President Alan García, where discussions on how to further achieve reductions in military spending in South America were an agenda item. <http://www.dialogo-americas.com/>

system, lead to citizens electing policy makers committed to redistributing funds back to bread and butter issues. The Uruguay's continued welfare spending highlights the strong connection between voters and policy preferences (Rudra 2005). For Uruguay, it's clear that strengthening democratic structures further improved the representation of citizen preferences in the policy making process, leading to more social spending and less military spending. In sum, as democracies strengthen, the market place for policy becomes fierce and competitive as structural elements further allow for a stronger link between citizen's preferences and policy outcomes.

While normative developments work to reduce military spending over time, structural developments in the shape of stronger institutions that constrain policy makers emerge as democracies strengthen. Such constraints provide further barriers to unpopular militaristic policies that allocate funds away from social spending and toward the military. The critical component of democratic structures in the context of military spending is the process of elections, given that the causal mechanism that drives the relationship is the proximity of citizen preferences to the tenure of leaders. Consolidated democracies are better able to not only prevent a slide into authoritarianism given a shock (Linz and Stepan 1996), but they also reduce the amount of corruption, clientelism, secrecy on major security initiatives, and overall provide greater connection between policies and citizens preferences via free and fair elections. Stronger constraints prevent leaders from pursuing costly conflicts and high military spending rates in peace time because voters prefer social spending over military spending, and would rather avoid war if possible (Rieter and Stam 2002; Bueno De Mesquita, et al. 2003; Goldsmith 2007; Fordham and Walker 2005).

Democracies are marketplaces for ideas, whose rules and regulations, when strengthened, further intensify the competition for the best product, i.e. the policy that is closest to the preference of the average voter. Leaders whose policy ideas fail lose their office, and successful and popular policies produce political survival. The political survival model, popularized by Bueno de Mesquita, et al. (2003), provides the causal logic, where policy makers must win citizen approval of their choices to stay in office. Bad policies result in loss of office, while good policies mean prolonged tenure, of which it is assumed leaders want. Domestic leaders are less willing to pursue militarization without, as discussed above, the popular approval of their citizens. Media institutions, interests groups, and oppositional parties and leaders gain more freedom to express their views, point out failings of the present leadership, and overall shape the policy process to adhere to the demands of citizens as democracy improves, leading to public policy discourse that helps inform citizens regarding which policy will best benefit them personally. As argued above, citizens in peacetime prefer social over military spending (Goldsmith 2007). Structural changes that strengthen checks and balances in the democratic system further force policy makers to produce successful policies. A single policy maker, while having considerable power and control over the nature of policy, is unable to pursue that policy without consent of other policy makers, whether it is executives compromising with legislative leaders in a presidential system, or varying political parties in a parliamentary system having to alter their position to maintain the coalition. As states develop into consolidated democracies or lengthen the duration of the regime, the various actors within the system develop norms around policy preferences and structural constraints create policy markets where success is rewarded for prolonged

tenure and failure results in electoral losses. In sum, the stronger a democracy's structures are, the fewer resources states will allocate toward the military.

H1: Among democracies, those states with stronger democratic structures are more likely to have lower levels of military expenditures.

H2: Among democracies, regimes with longer durations are more likely to have lower levels of military expenditures.

Institutional Design and Military Spending

The argument that democracies spend less on their militaries than non-democracies rests on the notion that democratic regimes contain structures and norms that prevent executive leaders from pursuing unpopular policies (Ireland and Gartner 2001). While parliamentary and presidential systems are both considered democratic, they vary on the structural elements that shape the policy making process. A number of scholars have examined the relationship between electoral and executive structure and the variation in policy outcomes (Powell 2000; Shugart and Carey 1992; Cox 1997; Dahl 1989; Linz 1986; Mainwaring and Shugart 1997). Presidential systems are led by executives and legislatures with their own electoral mandate, who derive their power separately from the electorate, creating the possibility of institutional conditions that facilitate disagreements and stalemate (Stepan & Skach 1993), but also allow for the majority to pursue policies without the consent of the minority. Parliamentary systems, on the other hand, rely on a design which requires continued cooperation via coalitions that balance objectives through complex compromises, as chief executives require majority support in the legislature, in addition to retaining the power to dissolve the body

(Stepan and Skach 1993). Parliamentary systems encourage executive-legislative cooperation, as each side has the ability to neutralize the other's initiatives, yet both parties are needed to advance any significant policy initiatives.

Electoral designs also offer variation among democracies with two broad categories: "majoritarian" and "consensual" legislative systems (Lijphart 1999).

Majoritarian systems are marked by two dominant political parties in which one party governs and the other acts as the opposition, as the electoral system is a winner take all process with the executive branch controlled entirely by one party. Consensual systems are marked by multiple parties who have power sharing agreements, often with proportional representation systems that force the cooperation of varying viewpoints to build acceptable policy. This project advances the notion that presidential systems and majoritarian systems have fewer views represented in the policy making process, resulting in the creation of more militaristic and aggressive foreign policy. Parliamentary and consensus systems, on the other hand, have more veto players and views represented; resulting in a further reduction of military spending as the preferences of citizens are better represented in government. While majoritarian systems and presidential systems often are matched together, as are consensus and parliamentary systems, this is not universal, as many states utilize parliamentary and majoritarian systems, while others utilize presidential and consensus systems. For example England employs a parliamentary legislative system and a majoritarian electoral system, while Mexico has a presidential system but elects many members of the legislative branch through a proportional representational electoral system.

As argued above, citizen preferences favor ‘butter’ over ‘guns’, i.e. public goods that are social in nature not higher rates of military spending. This is not to say that parliamentary or consensus systems will not go to war, have militaries, invest in research and development, or at times be aggressive; rather, they will be more concerned with providing other public goods for citizens than higher rates of military spending. The argument presented here, is that the structure of both parliamentary and consensus systems work separately to reduce military spending.

Parliamentary systems of democracy have more veto players that exercise control over the policy making process (Tsebelis 1999; Ierland and Gartner 2001). The role of additional veto players in parliamentary systems shapes the decision making on national security in a way which reduces extremism, or in the security world, the level of paranoia or fear that shapes security policy. While groupthink among foreign policy making elite may take hold, such fears, which presumably drive the decision to dramatically increase military spending, must be vetted and checked by a larger number of individuals who can augment or veto the policy. The U.S., for example, can declare war with a simple majority in the legislature, in addition to the War Powers Act, which allows the president to dispatch military forces for 60 days without congressional approval. Belgium’s security elite, however, need support from multiple parties in parliament and their constituents. Moreover, increases in military spending require fewer veto players for approval in presidential systems, allowing for more leeway in pursuing controversial policies. These veto players represent larger numbers of constituents, who ultimately, as Goldsmith (2007) argues, want their governments to provide social benefits over military spending.

Fewer veto players leave policy making to a smaller group of individuals who retain greater power to make decisions. Consider the role of Hawks, who according to Kahneman and Renshon (2007) speak to the psychology of humans who have a built-in bias toward aggressive action in the face of an adversary. The idea, while not new, is clear: policies that offer strength and aggression over the promise of reciprocal cooperation have greater appeal to most voters, citizens, and policy makers. Smaller groups of policy makers, fearing the worst case scenario, and drawing power from aggressive action and military spending, are better able to pursue such policies in political systems with fewer veto players, whereas in systems with more veto players, such policies are more difficult to achieve, as a greater diversity of views maintain power in the decision making process. Parliamentary and consensus systems offer more opportunities for liberals to achieve and maintain power. Likewise, it is not uncommon for policy makers to hold more hawkish views than voters, even conservative parties such as the Republicans in the U.S. (Busby and Monten 2012). Systems that provide more electoral choices produce leaders that are less likely to be dominated by one paradigm or another. Like parliamentary systems, consensus electoral structures increase the probability of coalition governments, characterized by complex power sharing arrangements and the distribution of cabinet positions according to the electoral strength of coalition members, which result in policy outcomes that are products of compromises on all sides and are overall more representational of the public (Ireland and Gartner 2001; Cox 1997). Lijphart's (1999) findings are consistent with the argument that citizens want additional social spending, as consensus states typically have more advanced welfare systems. Such arrangements increase the number of voters whose party maintains real

power in decision making, as opposed to minority views being disregarded in presidential systems. Parliamentary systems are prone to reduce their military spending because often no single party dominates the policy process, and those that do must deliver popular policies given that they have no scapegoat they can lay blame on, unlike presidential systems which offer both legislative and executive leaders the opportunity to blame the other for policy failures. This has several ramifications; for example, foreign policy planning has to allow some compromise and consider opposing viewpoints. Consider the U.S., where, during the Bush presidency, the Republican Party pursued a rather hawkish ‘with us or against us’ approach, while Democratic Party views were left out of the final product even though they wielded considerable legislative veto power. This dynamic transfers over into the budgetary process, where compromises are required to approve budgets.

As mentioned above, one design of parliamentary systems is that the legislature dominates the executive branch. Chief executives are drawn from the majority party’s representatives in the legislature and are members of parliament, which requires the executive to maintain close ties with the legislature. Conversely, in presidential systems, the chief executive often has the ability to wield a great deal of power without legislative approval. This results in policies that have a smaller base of support, and allows for publically unpopular policies to be implemented. This is consistent with contributions to the democratic peace literature, which argues that parliamentary systems are more constrained in mobilizing the state for war than presidential systems (Maoz and Russett 1993; Ireland and Gartner 2001).

The argument outlined above can be summarized as follows: institutional variation amongst democracies produces varying results. The institutional structure that promotes multiple parties, coalition governments, and more veto players will allow for additional voices that will moderate moves to increase military spending.

H3: Democratic states with parliamentary systems will be more likely to have lower levels of military expenditures than presidential systems.

H4: Democratic states with consensus electoral systems will be more likely to have lower levels of military expenditures than majoritarian systems.

Section 5: IGO Membership and Military Spending

The Benefits of IGO Membership

Liberals, constructivists, and realists contest the role of IGOs in international relations, with realists downplaying their influence, and liberals and constructivists highlighting their influence, albeit in slightly different ways. Liberal's assert that IGOs can, independent of their membership characteristics, shape the behavior of member states in several distinct ways. IGOs have the ability to increase opportunities for communication between states by providing a forum for the safe transmission of signals between states (Keohane and Martin 1995; Pevehouse and Russett 2006). IGO's information transmissions also increase transparency between states by forcing them to clarify their position in numerous interactions within the structure of the organization, thus reducing uncertainty between potential adversaries as to their intent (Keohane and Martin 1995; Boehmer, Gartzke, and Nordstrom 2004; Pevehouse and Russett 2006). IGOs have credibility that states lack, and when they communicate their will through

threatening the imposition of sanctions, embargos, or other types of leverage, they can effectively mediate conflicts between states in jeopardy of escalating to a militarized conflict (Pevehouse and Russett 2006). A few IGOs have security related missions, which do a better and more efficient job of preventing states with shared memberships from entering into conflict with one another (Boehmer, Gartzke, and Nordstrom 2004). Finally, IGOs reduce transaction costs of international interactions, providing stability to the system (Keohane and Martin 1995; Pevehouse and Russett 2006). The ability to increase communication, transparency, and reduce transaction costs prevents states with shared IGO membership from engaging in interstate conflict.

Oneal and Russett's (2001) seminal work identifies six causal mechanisms that IGOs perform to help keep the peace: (1) enforce norms, (2) mediate among conflict parties, (3) information conveying = reduced uncertainty, (4) expands nation's concept of self-interested into long term, (5) socialization and shaping norms such as democratic ones, and (6) generating narratives of mutual identification. A number of scholars have defended these causal mechanisms with substantial evidence (Oneal and Russett 1999; Oneal, Russett, & Berbaum 2003; Boehmer, Gartzke, & Nordstrom 2004; Axelrod 1984; Keohane and Martin 1995). In general, IGOs have the ability to "affect the understanding, environment, and interests of states," and are a powerful influence on foreign and domestic policy (Abbott and Snidal 1998). IGOs work to hold states to their committed positions.

While neoliberals base their modeling on the rational choice calculations states make in response to IGO actions, constructivists argue that IGOs teach states new behaviors and alter their identities and thus their priorities (Finnemore 1996; Wendt

1999). Given that IGOs are formulated and designed to facilitate cooperation between states, constructivist's arguments are consistent with the position taken in this paper, that IGO membership has the ability to reorganize the security needs of the state, and hence can reduce military spending. IGOs shape the policy and viewpoints of states, who see the international community as more conflict resolution orientated; in this scenario, the use of military leverage becomes less acceptable, and norms surrounding the use of certain weapons are developed (Tannenwald 1996).

All of the above liberal and constructivist mechanisms are rejected by realists, who see the role of IGOs as merely an extension of state power (Mearsheimer 1994). Even in the face of empirical evidence that joint IGO membership reduces the probability of militarized disputes, realists hold on to the notion that such organizations are not inherently able to independently shape state behavior. This makes examining IGO membership's relationship with military spending all the more relevant, as levels of military spending can capture the influence of the pacific mechanisms contained in IGOs discussed above. While realists may argue that the influence IGOs have is epiphenomenal, the empirical modeling captures much of the realist variables that would otherwise shape military spending and the role of IGOs. I do not argue that realist's variables such as rivalry or militarized conflict do not influence military spending decisions, rather that state decisions on how many resources to allocate toward the military are influenced by a multitude of factors, including memberships in IGOs.

IGO Membership and Military Spending

IGO memberships are able to reduce the military spending of member states through the same mechanisms that work to decrease the probability of conflict between member states. By increasing transparency in interstate relations, increasing the costs of breaking commitments between states, and offering an outlet for communication between states on sensitive issues, IGO memberships lessen the influence of the security dilemma, resulting in a reduction of military spending. Most of all, IGOs reduce tension and the threat of conflict. IGO membership provides states the necessary apparatus to tackle vital economic and security related concerns, without utilizing the leverage associated with military power, and they substitute military prowess for the conflict resolution mechanisms of their IGO memberships. As states build a reliance on IGOs to handle these issues, they begin to reduce their overall financial support for the military. Military spending is largely driven by domestic capabilities in conjunction with international and domestic threats to national security. Because of the reduced threat from others states, and in light of other competing demands on state resources such as social spending, governments make the choice to reduce financial support for the military given the reduced threat and the domestic demands for state resources. Because military action is expensive, risky, and has additional relational costs in the international system, it is considered less of a budgetary priority as states become more embedded in IGO networks. States become reliant on IGOs to play an intervening role when conflicts emerge, and they find that the mechanisms of IGOs diffuse and prevent militarized responses to conflict from becoming an acceptable option to pursue their interests. The substitution of IGO memberships for increases in military spending should not be over

stated; states do not gut, scale down, or otherwise suspend research and development or outwardly facing military doctrines, rather they make an adjustment away from the military as an option, and thus results in a reduction in military spending.

IGO memberships cause this reduction through a number of mechanisms. First, by having additional information about how other states are preparing for possible future military action, states can properly adjust their strategic decisions, as opposed to working with incomplete information. As Jervis (1988) noted, there are many different types of state misperception, and while IGOs do not provide total transparency of other state's military planning, the increased information they provide is more than the limited and questionable information past state military planning has utilized,¹⁷ a situation that often leads to overstatements on an adversary's abilities and fuels arms races. Consider the most conservative of Turkey's security elite, whose tension with Greece continues to occupy substantial portions of their military planning. Turkey's recognition as a candidate for European Union (EU) membership unveiled their capabilities to Greek policy makers, and created new pathways of information that shaped both Turkey and Greece's policy debate about how to properly prepare for a conflict, thus reducing the required amount of military spending in both countries. Specifically, beyond Greece ending their veto to Turkey's EU candidacy, Turkish leaders learned more about Greece's willingness to resolve the Cyprus question peacefully, a major security issue for both states (Önis and Suhanaz 2005). While Turkey still considers Greece a threat, Turkish policy leaders are armed with information obtained through the EU accession process that can inform their decision making. Information exchanges can diminish the

¹⁷ Consider the difficulty in obtaining reliable intelligence on opposing state's military capabilities, which is compounded by misrepresentation of state capabilities.

power of hawks, reduce uncertainty, and result in the adoption of more pacific policies, given that failure to pursue the aggressive security policy may prove disastrous.¹⁸ While some information sharing may empower hawks and confirm suspicions, it is the contention of this research that more often information sharing has a pacific effect, as both states are looking to produce only as much security as needed given the other demands on the state.

Second, IGOs offer an important outlet for disputes between states, by allowing for productive communication on sensitive interests, resulting in agreements and compliance of those agreements. IGOs actively engage in discussions on important and vital security issues and explore possible actions to take in response to them. This exchange of signals, widely theorized and discussed in the literature, provides the kind of exchange and communication that can alter the internal decision making process of states. Even the most contentious relationships can benefit from the structured communication and agreements provided by IGOs. Consider the current feud between Iran, the U.S. and several Western states over the alleged Iranian nuclear program. Current sanctions¹⁹ implemented by the United Nations Security Council (UNSC) are to be lifted only when Iran ceases the suspected enrichment activity. Clearly, one of the adversarial states in this conflict has successfully communicated their position without resorting to a direct military encounter.²⁰ This example illustrates the ways in which

¹⁸ Consider the role of Hawks, who according to Kahneman and Renshon (2007) speak to the psychology humans who have built in bias leaning toward aggressive action in the face of an adversary. The idea, while not new is clear, policies that offer strength and aggression over the promise of reciprocal cooperation have greater appeal to most voters, citizens, and policy makers.

¹⁹ While there are several sanctions currently implemented by the UNSC, here I am referring to Resolution 1737 (2006).

²⁰ Some scholars argue that sanctions are a form of conflict; the point being made here is that no militarized violence occurred (Oudraat 2000). Based on this previous research it is not surprising to find that some policy makers have argued that Iran and the U.S. are fighting a proxy war in Iraq (NYT

IGOs serve as a forum for communication for even the most hostile of dyads. Moreover, the Iranians, if they choose to stop the alleged activity and allow International Atomic Energy Agency (IAEA) inspectors into their alleged nuclear facilities, can expect certain behaviors from the U.S. and the U.N. as the structure of the U.N. facilitates the removal of sanctions. Communication through IGOs differs because IGOs provide structures for states to back up their words with action. Overall, IGOs offer states a non-violent mechanism for communication.

Third, as constructivists and some liberals argue IGOs can build consensus on what is considered correct normative behavior in the international arena and work to socialize states (Finnemore 1996; Finnemore & Sikkink 1998; Russett and Pevehouse 2006; Tannenwald 1996; and Bearce and Bondanella 2007). IGOs construct norms on many different types of behavior, including defense spending. States undertake two types of socialization, Type I and Type II. Type I socialization refers to a process where states learn to “play by the rules of a new social context or institution,” but do not necessarily reshape their interests, and Type II socialization captures when states shift their “social identity, independent of any material incentives to do so, leading to a demonstrable change in their interests over time.”²¹ While many IGOs lack the ability to directly coerce the behavior of states through the use of sanctions, authorized multilateral force, and other such means, they are able to shape the normative environment and socialize states. Norms play a powerful role within IGOs, as states seek to facilitate cooperative

4/12/2008 “*Iran Fighting Proxy War in Iraq, Envoy Says.*”), and it is safe to assume that U.S. Intelligence agencies are working to infiltrate key Iranian institutions for the purpose of sabotage and intelligence gathering. However, the nuclear issue is one of many points of contention, and the ongoing interactions in Iraq and elsewhere do not take away from the fact that the two states have not gone to war directly with one another.

²¹ See Bearce and Bondanella 2007 for a more detailed discussion.

behavior from other states, and make decisions that balance between achieving relationship stability and meeting their own needs. States consider the reaction to security decisions that occur through the coordinated action of IGO memberships. For example, if China continues to arm themselves beyond what is considered necessary by the international community, they will face difficulty in creating bargains through IGOs.²² Any increase in military spending has the potential to draw unwanted attention and reduce the negotiating position of states, making dramatic increases in defense planning less likely as states increase their reliance on IGOs to achieve their foreign policy objectives.

Moreover, IGOs provide strong mechanisms designed to alleviate conflict and reduce the probability of a militarized interaction, increase trade and economic interaction. They have been proven as helpful tools in facilitating state interests. Because IGOs play such a prominent role in state assessment of what policies to pursue, their reactions are considered in defense spending decisions. Any increase in military spending has the potential to draw unwanted attention and reduce the negotiating position of states, making dramatic increases in defense planning less likely as states increase their reliance on IGOs to achieve their foreign policy objectives. States do not necessarily embody the norms they adopt from IGOs, rather they adhere to the standard norms of the international system.

Lastly, IGOs work to facilitate the promotion of social issues that provide further pressure on states to allocate funds away from the military and toward social spending in both direct and indirect ways. Indirectly, states facilitate democratization and the

²² Some states, such as the U.S., may be immune from this element of IGO membership and global governance. Consider the Iraq War, a globally unpopular action has not resulted in limited negotiating power for the U.S.

adoption of human rights (Greenhill 2010), which for reasons examined in Section 4 of this chapter, facilitate a promotion of ‘butter’ over ‘gun’ spending. Directly, many IGOs memberships require various state actions on a host of issues, from E.U. guidelines on education to WTO requirements limiting state spending on subsidies (Nooruddin and Simmons 2009), all which reorganize and realign state behavior on social spending. Consider the influence the Education For All (EFA) movement has had on state spending priorities around the world. Consisting of mainly IGOs and some NGOs, EFA activism has worked to highlight the importance of education spending in a number of developing countries (Mundy 2006), one element of social spending that is in competition for limited state resources. Overall, IGOs work to promote norms and issues that are in direct competition for military dollars, and thus provide further pressure on states to reallocate funds away from the military.

While IGOs can have a negative influence on military spending for some states, some scholars have argued they have a positive influence for others (Hardly and Sandler 1999). Consider the security umbrella of NATO and the Warsaw Pact, where two heavy spenders, the U.S. and the Soviet Union, paid the securitization bills for several additional states, thus reducing those state’s spending levels.²³ While IGO membership can still shape the defense spending calculations of these heavy spenders, as the above described mechanisms reduce the probability of conflict and therefore the need for high levels of spending, they may increase the cost of being the alliance leader as is the case with major powers. However, it is hard to determine whether the U.S. and the Soviet

²³ The U.S. and the Soviet Union were major outliers of military spending within the alliances. See Hardly and Sandler 1999 for further discussion of the U.S.’ role in NATO.

Union would have allocated less on the military without their role in NATO and the Warsaw Pact.

The mechanisms of influence associated with IGO membership reduce military expenditures regardless of the scope or membership restrictions of the international organization. Security focused IGOs should have more influence than non-security IGOs; however, all IGOs reduce the need for a military option given the structures discussed above and the effect they have on state relationships. A number of scholars have examined the role IGOs have on reducing conflict, emphasizing the pacific mechanisms contained in IGOs. While I expect membership in security IGOs to be more productive in reducing arms expenditures, the structures of IGOs allow states to form bonds and avenues of cooperation on all issues, which further integrates their activities in the international system. States who are highly integrated must consider how a conflict will affect their relationships with states on a variety of economic and social issues, from human smuggling to international mail exchange. Even IGOs that handle disagreements on air traffic regulations or other technical and mundane issues allow for communication, transparency, and credible commitments between states. Consider the case of Uruguay, whose defense expenditures were reduced by nearly 1.3% of their GDP over the course of a decade,²⁴ as they increased their cooperation on a number of issues including sugar prices, telecommunications, and oil pollution by joining nearly a dozen organizations. Today the country's leadership is known for its support of continued reduction of military

²⁴ Uruguay reduced its military budget from 2.6% in 1980 to 0.9% in 1990, and while democratization efforts played a major role in this decline in spending, new IGO memberships reshaped the external threats the country was facing.

spending in the region.²⁵ Moreover, I argue that all of the conflict resolution mechanisms contained within IGOs discussed above contribute to reducing military spending levels, as they collectively reduce tension among states and the need to maintain higher military spending. IGO memberships result in a reduction of tension among states, and place pressure on policy makers to reduce military spending in favor of social spending priorities, such as education and health care.

The literature reflects the notion that there are a large number of influences on military spending. These influences are not zero-sum; they collectively culminate into a state's decisions on the size of the military budget.²⁶ States with strong economies, significant defense industries, those ruled by military regimes, engaged in alliances, or facing domestic insurgencies all can expect their defense budgets to vary. IGO membership does more than reduce tension between states that have joint membership; it shapes the overall orientation of policy makers, forcing them to rely less on the military option. While states may be excluded from some IGOs for defense policy decisions, the bulk of IGOs do not prevent membership based on high defense spending rates.²⁷ The more IGOs a state is a member of, the greater number of joint memberships a state has with the nations of the world.

H5: States who are members of an increasingly larger number of intergovernmental organizations will have lower levels of their military spending.

²⁵ *Dialogo America*. Staff, 2011, "Uruguayan President Supports Peruvian Idea of Reducing Military Spending in Region." 1/27/2011 accessed 2/28/2011. http://www.dialogoamericas.com/en_GB/articles/rmisa/features/regional_news-/2011/01/27/feature-ex-1845.

²⁶ See Goldsmith (2003) who provides a more detailed examination of the influences of military spending.

²⁷ Most IGOs have a social or economic mandate as opposed to a security mandate which would demand certain behaviors. Consider the WTO, which has no security requirements for admission.

IGO Membership Duration

An important element in the relationship between IGO membership and a reduction in military spending is time. While I expect an immediate reduction in military spending as states join IGOs, I also expect that over time states continue to reduce military spending as the conflict resolution mechanisms inherent in the structures of IGOs become institutionalized in the state defense and foreign policy planning process, as they work to slowly reshape the confines in which policy makers construct security decisions. Over time, state leaders become accustomed to the pacific effect of their IGO memberships, thus reducing their reliance on hard military based power. Just as the threat of a rival *or* a cataclysmic event influences a generation of policy makers (for example the Cold War and 9/11 in the U.S.), the pacific nature of IGO membership becomes embedded in the paradigm and thought process of policy makers. Policy makers adopt norms of behavior that are shaped by IGO membership, something that does not happen immediately. Consider the two types of norms discussed above; Type I norms may be enacted immediately, whereas Type II norms may take several decades (Bearce and Bondanella 2007). For example, few states risk the international backlash that accompanies utilizing military power without United Nations Security Council (UNSC) approval (Voeten 2005). This development did not occur overnight. Over the course of the U.N. tenure as an IGO, it has instituted among its member states high costs for failing to utilize the Security Council before undertaking military action. The UN has had over 60 years to institutionalize its mechanisms on the behavior of its member states, and other IGOs have similar affects on state decision making.

International relations are a constant negotiation based on the demands of international and domestic actors (Putnam 1988). IGOs shape foreign policy decision making over time by clarifying the demands of international partners, as economic ties create conditions in which relationships must be maintained at the risk of upsetting a domestic constituent. Policy makers must consider the international consequences of their domestic actions. Military spending is an especially salient issue, as state action on military spending can reorder the amount of leverage and power, as well as the international status quo. Consider the role institutionalized norms have on decisions regarding military spending. Increased military spending sends signals to the international community that the state is preparing for conflict or foresees conflict in their future, not that they believe that cooperative relations will provide peace. This reduces the trustworthy nature of states as partners, and ultimately makes building consensus among other states difficult, as the state has clearly communicated that the cooperative efforts currently undertaken are not enough to stem high levels of defense spending. This difficulty is magnified by IGO membership, and the more such memberships a state possess, the more interactions and dependent relationships states have with other states, and thus the increased likelihood of resolving any potential conflict with cooperation and mutual gains rather than military might. This condition and network of relationships makes increases in military spending difficult to enact without complicating international relationships. These mechanisms clearly work to reduce military spending in the immediate, but should have a great impact as states interactions and actions within IGOs bring them greater reliance and connection to fellow member states. In other words, the

longer a state is a member to an IGO, the more the mechanisms of IGOs will work to shape defense spending decisions.

Many IGOs require states to make commitments and carry out policy in some form, whether it is an agreement to hold annual meetings or to reduce government subsidies on domestic corn production. By not adhering to IGO agreements, member states are at risk of being the target of retaliation, whether through simply being considered less trustworthy as an international partner, which increases the costs of entering into a future agreement, or through immediate action such as economic sanctions, a trade conflict, or in the extreme case military action against the state, such as the second Iraq War. States follow through with their commitments because of these costs. The pressure to carry out commitments shapes policy makers in their actions, as many states have overlapping memberships, especially with neighboring states. Such commitments grow stronger and deeper with each successful interaction with fellow member states, in that we can expect repeated positive interactions to generate more complex and detailed commitments, further shaping state decision making. Consider the numerous ties and connections Malaysia has with Indonesia; the two states interact in ASEAN, the UN, IBRD, APEC, among others IGOs. Overtime, the two states have learned to interact, develop norms, and have standard procedures all through IGOs. These ties work to open up non-violent means of resolving conflict, and make conflict less likely. Both Malaysia and Indonesia reduced their military spending between 1988 and 2000 by nearly 1% of their GDP, while at the same time adding nearly a dozen new IGO memberships and maintaining ties in another 60 organizations. Policy makers in both Malaysia and Indonesia learned that their overlapping IGOs reduced the tension and thus

the threat one another posed, given. The removal of that threat reduced the need to maintain higher military spending rates. Over time, states adapt to the pacific environment IGO memberships create, constituting a learning process (Panke and Risse 2007) in which state policy makers recognize that limited state resources can be utilized for other public goods.

The increase in transparency in interstate relations is entrenched as states open permanent offices at IGO headquarters staffed with full time representatives and diplomats, have repeated interactions with diplomats from other countries, and observe the commitments and actions of fellow member states within the context of IGO structures (Hafner 2007). By building entrenched avenues of communication, states develop, over time, an advanced understanding of others state's positions given these required acts of transparency in IGO interactions. This information assists states in developing more moderate approaches to militarized preparation, given that most states work hard to avoid international conflict, as opposed to blindly militarizing in an environment that lacks the transparency of IGO memberships. Repeated interactions, therefore, make a considerable contribution to the role IGOs have in state decision making.

Moreover, the complicated nature of threatening military force and its use as a policy option in a global environment populated with IGOs, combined with the ability to build consensus against such action, has made military action a less useful policy for states. This further reduces the need to spend vital resources on the military and overall leads to state planners and politicians reducing their defense budgets. Turkey is an example of this, where between 1970 and 2000 they doubled their membership in IGOs

and in the same period reduced their military spending by 50%. EU integration has now worked to defuse many of the military related tensions present between Turkey and their main military threat, Greece. While many more influences were at play during the time period mentioned, it is clear that there is a correlation between the number of IGOs a state belongs to, the years that a state has been a member, and the reduction of military spending. Likewise, ASEAN member states Vietnam, Singapore, Indonesia, and the Philippines have all reduced their military spending over the last twenty years.

ASEAN'S non-meddling approach has worked to reduce tension between this set of regional states, in addition to the mechanisms discussed above. States such as North Korea, on the other hand, with few memberships, are less integrated into the international community, and therefore lack the foreign policy tools to defuse or avoid potential conflicts.

H6: The longer states are members to intergovernmental organizations, the more likely they will have lower levels of military spending.

Institutionalized IGOs and Military Spending

A major drawback to the above examination on military spending and IGO membership is that the research did not disaggregate IGOs in its discussion, rather the independent variable of interest was a simple count of the IGOs a state was a member of in a given year. This hypothesis does not specify which IGOs do the work in reducing military spending levels. There is significant reason to believe that the type of organization and the characteristics of the members may influence military spending levels, as IGOs are heterogeneous. This study breaks down IGOs into four categories,

institutionalized IGOs (Boehmer, et al. 2004), security IGOs (Russett and Pevehouse 2006), ‘peace brokering organizations’ (Shannon 2009), and powerful IGOs. All four of these types of IGOs have been demonstrated to act as effective buffers to militarized conflict between member states, but little is known regarding how these specific IGO characteristics shape defense spending. This section argues that each of the three subsets of IGOs have specific characteristics that work to reduce state’s reliance on the military to ensure their security and achieve their goals.

A clear distinction among IGOs is the level of institutionalization that exists, as some IGOs, such as the European Union or the Organization of American States, have established secretariats, bureaucracies that make binding decisions, and thus the resources and power to withhold benefits or sanction, motivators for maintaining behavioral norms in the context of defense spending. Boehmer, et al. (2004) demonstrates in their analysis that it is these highly institutionalized IGOs that do more to reduce the probability of conflict between member states than those organizations without such structures. These highly institutionalized organizations possess the “organs or mechanisms of mediation, arbitration, or adjudication aimed at conflict resolution and the enforcement of organizational decisions” (Boehmer, et al. 2004: 17). These IGO’s efforts to prevent conflict benefit from having a specific security mandate, member cohesion that eliminates competing interests to focus efforts on one goal, and aforementioned institutional structures that have the ability and means to effectively communicate private information, offer credible commitments to states in or contemplating a conflict, and have the structures that can coordinate collective state action on a particular issue or conflict (Boehmer, et al. 2004).

These same structures Boehmer, et al. (2004) identify that work to reduce the probability of militarized conflict between member states also work to reduce military spending. All of the causal mechanisms related to IGO membership discussed above are magnified when the IGO has a security focus and a high level of institutionalization. IGOs with a security focus utilize the mechanisms discussed above to influence state behavior around security related issues, and more importantly, military strategy and planning. Part of the design and the intention of IGOs are to reduce tension among member states by improving communication and information, conflict resolution opportunities and norm development. The design of IGOs facilitates the reduction of arms in general, as the three mechanisms just mentioned reduce the need for states to maintain high levels of military spending (Boehmer, et al. 2004), but will further reduce military spending among member states by significant measure over those organizations without such a focus and such institutionalization. This does not mean that non-security IGOs do not reduce spending, but rather that security IGOs reduce spending to a greater degree.

This study borrows criteria to identify these organizations from Boehmer, et al. (2004), who suggest that highly institutionalized security IGOs have the following three elements in place: 1) a high level of institutionalization, 2) member cohesion, and 3) a specific security mandate. IGOs without these three elements will be less effective in reducing military spending (Boehmer, et al. 2004). Boehmer, et al. (2004) break IGOs down into three categories of institutionalization: minimal, structured, and interventionist. Minimal organizations have committees, meetings and conferences, and possibly a secretariat, but no bureaucracy. Structured organizations contain assemblies, secretariats,

bureaucracy to implement policy, as well as formal rules and procedures. Interventionist organizations have the above elements combined with mechanisms for mediation, arbitration, and adjudication and other means to coerce state decisions, as well as the means to enforce organizational decisions and norms.

Beyond institutionalization, security IGOs that are most effective have high levels of membership cohesion. Member cohesion is important, as the credible commitments and costly signal mechanisms contained in IGOs are strengthened when states are coordinated in their actions (Boehmer, et al. 2004). This is sometimes only possible if member states are willing to come together on particular issues, and enforce shirking by other states (Boehmer, et al. 2004). Without membership cohesion, the pacific effects of IGO membership are reduced.

Lastly, highly institutionalized IGOs need to have a security focus. IGOs have a security focus when their founding documents indicate a security intention of the organization, and they have the level of institutionalization needed to provide such security (Boehmer, et al. 2004). This does not mean that security IGOs have to have the ability to deploy security or peacekeeping forces or the ability to intervene in interstate conflict. Rather, a security focused IGO simply has to have the intention of mediating and reducing conflict between member states. Empirically, the ability to mediate and intervene will be captured by the institutionalization variable of IGOs, mentioned above, and in more detail in the research design portion of this paper. Certainly all IGOs have some ability to coordinate state action, but those with a sustained structure are better positioned to carry that out than states that do not have such a structure. The mechanisms of information sharing, dispute resolution opportunities, and norm diffusion all carry

greater influence with greater resources, more significant mandate, and a bureaucracy to carry out the duties of the organization.

H7: As states join an increasingly larger number of highly institutionalized intergovernmental organizations, they will have lower levels of military spending.

H8: As states join an increasingly larger number of security focused intergovernmental organizations, they will have lower levels of military spending.

Peace Brokering Organizations

While institutionalized and security focused IGOs reduce member state's reliance on the military as a political tool, and therefore reduce levels of military spending, there is another genre of IGOs that contribute to this trend. Of the more institutionalized group of IGOs that have been identified by Boehmer, et al. (2004), there is a group of IGOs that have demonstrated their ability to reduce the probability of territorial disputes among members. This group, Peace Brokering Organizations (PBOs), have been shown to play an important and intricate role in the most salient of disputes between states (Shannon 2009). Shannon's (2009) research on PBOs yielded some compelling results, such as the ability of joint membership in PBOs to reduce the probability of territorial disputes.

PBOs distinguish themselves by not only having security mandates, but also a mandate to manage territorial disputes among member states. PBOs typically have charters that spell out the specific mechanisms that will be enacted to prevent or resolve conflicts between member states. Shannon (2009) points out article 24 in the Organization of American States' (OAS) charter, which outlines their party's conflict management mechanisms. This is an important function of PBOs, and is one that is not

shared by all IGOs. Having the combined power to get involved and the mandate as directed by the organization's charter propels PBOs into the security decision making of countries. Knowing that aggressive member states will be checked by the PBO shapes the calculations states make on military spending, given that the probability of any major conflict getting out of hand without major intervention from a PBO is greatly reduced, and thus reduces the need for higher rates of military spending. Shannon's (2009) analysis of territorial disputes among member states to the 27 PBOs she identified found that PBOs intervene, sometimes with the help of third parties, to resolve salient conflicts concerning territory between member states. This finding demonstrates the important role PBOs play in state security decisions.

H9: As states join an increasingly larger number of Peace Brokering intergovernmental organizations, they will have lower levels of military spending.

Powerful IGOs

The ability of IGOs to increase transparency, raise the costs of breaking commitments, and offer an outlet for communication between states on sensitive issues increases when backed by raw material power and the cultural influence that goes with it. The larger share of the global economy and military power an IGOs membership base accounts for, the more able an IGO is to maximize the mechanisms of conflict resolution, enforce norms, and lower transaction costs. This project argues that IGOs reduce tensions between states, and thus reduce the need to maintain higher levels of military

spending. These mechanisms are contained in every IGO, but IGOs that are backed by greater sums of economic and military power have more influence on state behavior given that the magnitude of these mechanisms is increased.

Consider the role of maintaining commitments by IGOs. Non-violent types of leverage and conflict prevention mechanisms such as intelligence sharing, economic sanctions, and trade incentives, are all increased when additional resources are available. With information sharing, IGOs either (a) have their own institutions collecting pertinent information that would alleviate information asymmetries between states, which is a cause of conflict, or (b) they benefit from member states providing such information. In the former, IGO institutionalization is facilitated by large monetary contributions; in the later, major states with resources have extensive intelligence gathering capabilities. Economic sanctions play a similar role. The more economically developed members an IGO has, the greater the amount of power a coordinated effort has in applying pressure to the target state. The literature on economic sanctions has clearly established that multilateral sanctions are more effective at applying power (Bapat and Morgan 2009). The promise of trade ties has greater leverage when larger economies are making the offer of cooperation.

The power of member states also informs what IGOs can do with the available options of leverage. Organizations such as the U.N. and NATO have the capacity to authorize or implement coordinated military force. States who are considering a military build-up face the added cost of reacting to a coordinated reaction in response. When such a response from an IGO is backed by more material power, the cost for the states in question rises, and their incentive to continue is decreased. In addition, more powerful

IGOs have the credibility to enforce mediated agreements between conflicting members. Mitchell and Hensel (2007) cite the example of Nigeria and Cameroon's mediated conflict by the United Nations, which was possible given the resources and influence of the UN, arguing that the "United Nations had ample resources at its disposal to help the parties reach a settlement and ensure that both sides carried out its terms (Mitchell and Hensel 2007, Pg 725) Likewise, a possible conflict between Peru and Ecuador would best be mediated by the Organization of American States (OAS) as opposed to the Andean Group, as the OAS has not only more states and overall a larger share of the world's power, but also includes powerful members such as the U.S. and regional leaders such as Brazil and Argentina.

IGO's leverage options are more powerful and credible when their member states hold an increasingly larger share of the world's power, and thus are better able to reduce the tension among states and influence security policy. The leverage options available to IGOs are inherently stronger as they coordinate the capabilities of numerous states. Mechanisms such as information sharing, audience costs and forums for communication have more effect when an IGO has more powerful member states. This coordination is further backed by the credibility that is attached to any IGO agreement, as member states have the added incentive of carrying out their commitments. In sum, the more powerful the IGO the more influence they have in reducing military expenditures.

H10: States who are members of an increasingly larger number of powerful intergovernmental organizations will be more likely to have lower levels of military expenditures.

Section 6: The Argument on Economic Interdependence and Military Spending

The third element of the Kantian Triangle is the notion that economic interdependence reduces conflict in bilateral relationships. This liberal position argues that as states become economically interdependent with one another, they are less likely to enter into militarized conflict. Kant argued that the freedom of movement associated with trade between states and common markets was a key element that would contribute to peace in the global system (Kant [1795] 2001). A number of scholars have developed this theory, and have empirically shown a connection between economic activity among states, as measured in volume of trade or capital investment, and peace between states (Maoz and Russett 1992; Bliss and Russett 1998; Keohane and Nye 1989; Gartzke 2007; Gartzke, Li, and Boehmer 2001).²⁸ Others, such as Oneal and Russett (2001), have found that trade in general reduces the likelihood of conflict. Further supporting this notion is the high level of economic integration that has occurred between states in the past several decades. The argument presented here extends Kant's position to argue that economic interdependence in the global economy results in a reduction of military hostilities with states that share economic ties, and hence a reduction in military spending.

As argued earlier, the outcome of military budgets is the combination of numerous factors, influences, ideas, and structural forces that are processed by various actors who have influence in the policy making process. The mechanisms contained in economic interdependence work to reduce tension, as it offers states more options in

²⁸ There are some who argue that interdependence in some cases can lead to conflict (Barbieri 1996; Crescenzi 2003). Barbieri's measurements of interdependence have been called into question (Gartzke et al. 2001) and Crescenzi's argument poses an interesting challenge as he claims some disputes are zero sum and can lead to conflict, but this is a rarity as the empirical findings support.

resolving conflicts, raises the costs of conflict, and collectively reduces tension. While states, especially democratic ones, do not make day to day decisions regarding what and with whom to trade with, states do retain control over some elements of trade policy, and leaders directly benefit from healthy economic conditions that prolong their tenure in office. Thus, there is reason to believe that states maintain an understanding of what amount of trade the country collectively has with various states. In other words, someone in the government, and certainly a portion of the citizens, are aware of the trading relationship the country has. By having this information, there are numerous actors that have power in the policy making process to influence the direction of foreign policy and budget decisions.

There are several key mechanisms that allow trade to have a pacific effect on state security policy. First, trade works as a communication tool, allowing states to address the complex information problems that give rise to militarized conflict (Gartzke, et al. 2001). Trade manifests itself as credible and costly signals, where states have to stake their position on the backs of important economic decisions. For example, the United State's decision to trade openly and widely with China sends the signal that the U.S. has no intention of fighting a conflict with China in the foreseeable future. Such decisions are easily interpretable, and lack the credibility issues that sometimes characterizes traditional diplomatic exchanges or 'cheap talk' (Gartzke, et al. 2001). Utilizing trade as a communication device reduces the probability of conflict within dyads. As trade increases, states become accustomed to situations where states can threaten or implement economic sanctions or tariffs during a crisis or on-going conflict, replacing military posturing or outright military conflict in the process. The use of economic sanctions is

especially illustrative of this dynamic. Consider the on-going conflict between Iran and the U.S.²⁹ While the U.S. has positioned military personnel and equipment such as aircraft carriers in the Persian Gulf, neither state has engaged in actual militarized conflict in an effort to resolve the impasse over the suspected Iranian nuclear program.

Additional military spending associated with an actual conflict has been substituted for economic weapons. The Iranian case is just one such example; the U.S. currently has sanctions implemented against Cuba, Zimbabwe, Sudan, North Korea, among others.

When states utilize trade as a communication tool, it substitutes for military spending in addition to serving as a conflict resolution mechanisms, and in the process reduces tension, the probability of conflict, and the need to maintain higher rates of military spending. If state leaders know they can effectively work to resolve their differences, state their position, and demonstrate their commitment through means other than military force and threat of force, such as trade, the need for military spending decreases. States with higher rates of trade have more opportunities to use that trade as a device to achieve their interests, as opposed to using military force.

Second, trade works to reduce military spending indirectly, by reducing the probability of conflict. As discussed above, conflict is very expensive, not just to the bilateral trade relationship, but to overall economic standing in the global economy. For the bilateral relationship, the stakes are clear; when two states go to war; their economic relationship is more or less ended due to the hostile nature of relations. This can mean very little, or it can be a substantial shock to the overall economic stability of the country,

²⁹ What is important here, is not any on-going trade between the U.S. and Iran, but the absence of trade. By refusing to trade with Iran, the U.S. is communicating it's position with a costly signal, as opposed to using a more costly signal, such as military force. The use of this signal is what results in a reduction of military spending.

depending on the volume of trade between the two nations. Zimbabwe and Bolivia do not have a substantial trading relationship, so in bilateral terms a conflict between the two would mean very little. However, if Ukraine and Russia were to go to war over stalled natural gas shipments, then the two states, whose trade contributes to a substantial percentage of each other's GDP, would have more at stake. While the bilateral relationship poses a clear threat to the stability of the domestic economy, when a country is at war, or under the threat of war, then it is difficult to attract foreign investment and stable business relationships. War reduces the ability of the state's economy to function properly, as the threat of tension reduces the willingness of investors to commit capital to various projects, thus reducing the overall economic activity. Those most likely to suffer from conflict or the threat of conflict are those business interests whose operations are dependent on foreign materials or markets. Such interests often have a great deal of power to influence policy makers, given the necessity of leaders to maintain strong economic conditions for political survival. Moreover, as Gartzke (2007) argues, states in trading relationships may have trade related conflict, but the gains are not zero sum. Therefore, as states who have higher rates of trade have more to lose from a conflict, and this take great pains to avoid such situations. The end result of this is a reduced reliance on military force; thus, trade works indirectly to reduce military spending by reducing the probability of a conflict.

As discussed above, scholars have established a link between the costs of conflict and international trade, as states who trade with one another do not want a conflict to threaten the economic benefits of the relationship (Oneal and Russett 2001; Bliss and Russett 1998; Gartzke, et al. 2001). This has an indirect effect on military spending, as it

reduces the probability of conflict and thus defense spending. The cost to the overall economy is the driving mechanism; however, there is a more direct relationship surrounding the cost associated with trade. States with low levels of debt to spending ratios, lower taxes, and minimal public budgets are attractive targets for foreign direct investment (FDI). Neoliberal or 'Washington Consensus' economic policies have become commonplace ideological guides in states around the world. Consider the current discussions around the European Debt crisis, as well as the situation in the U.S., where states are working to slash government spending, including defense budgets. Defense spending is a major target of austerity measures, aimed at improving the economy and attracting FDI and subsequent trade.

These three mechanisms have led to the institutionalization of trade issues being a deterrent to conflict and have had a negative influence on military spending. As states become accustomed to the pacific relations in the system, it becomes common policy to substitute the role of military spending for trade relationships. The argument is an institutional one, based on the premise that state leaders build practices and behavior around the status quo and immediate history. Overtime, as trade issues have become a deterrent to conflict and have been used as a method for states to communicate credible commitments, the need and use of military force has declined. This influence on military spending goes hand in hand with membership in IGOs, which helps facilitate the numerous conflicts that arise through trading relationships. This is not to say that trade begets conflict. Rather, it is a normal byproduct of any economic relationship that often times requires additional effort to maintain stability.

Trade considerations are responsible for states reducing their military expenditures. As a country's level of trade increases, the state's willingness to allocate resources to the military declines. Certainly additional economic interests may increase the need for strong military power. For example, the threat of Somali pirates has drawn the navies of Italy, India, France, the U.S., and Sweden, among others, to the Indian Ocean, no doubt creating a motivation to maintain or expand blue water navy capabilities to ensure important trading routes remain open and safe for passage. These costs, however, are off-set by the larger, more expensive investment in military might that was once required to deter attacks when economic diplomacy was not an option. Now that so many of the key state relationships in the international system are dependent on trade, the need to maintain an advanced military has decreased.³⁰ This does not mean, as mentioned earlier, that states halt military spending, Research & Development, or other related expenditures. Rather, they simply reduce the overall spending on military hardware.

H11: States whose external trade takes up a greater share of their total GDP will have lower levels of military spending.

Regional Trade and Military Spending

While I argue that all trade should work to reduce military spending, trade with neighboring states should have a significantly larger impact on security planning than trade with states outside the immediate region. For most states, strategic planning for defense considers the possibility of a conflict with a neighboring state, as neighbors are in

³⁰ There is not a single dyadic pair of major or middle power states that do not have trading relations in the current system.

a better position to threaten the territorial integrity of the state. This notion has been supported by empirical research that has found contiguity to be a strong predictor for interstate conflict (Vasquez 1993; Russett and Oneal, 2001). The mechanisms theorized above to have a pacific effect on the security policy of highly integrated states into the international economy are particularly relevant when states have strong trading relationships with their neighbors. Regional zones of peace developed by interest conversion work to reduce the probability of militarized conflict and by extension the requirements for military spending. This argument is further supported by the emergence of regional integration agreements in recent decades that have further entrenched regional identities and cooperation, and have facilitated a reduction in military conflict (Haftel 2007).

The mechanisms theorized above take on new meaning in the regional context. Consider the role of costs in deterring conflict and thus reducing tension. Regional trade for neighboring states may have a more significant influence on security policy, given the dependence that can be created by having trading partners, sources of resources, or labor so close to the border. As Haftel (2007) points out, many industrial zones use resources from neighboring countries, where the risk of conflict is decreased given the direct costs. The cost of conflict between two neighbors, whose economic conditions are dependent on strong ties, is higher than with conflict from states outside the region whose markets or imports can be replaced by another state. There are exceptions to this, such as trading partners who have unique and important markets or are the source of rare or cheap resources. It is a lot cheaper to move products smaller distances, and thus reduce the overall price of doing business. The role of cost is more salient and constitutes a direct

threat to economic conditions, whereas tension with another state outside the region does not have the same influence on business relations, given the great cost to transport goods. Moreover, the salience of conflicts between neighboring states means that economic exchange and reduced tensions results in a stronger reduction in military spending as the probability or threat of conflict decreases with economic exchange.

Further, regional trade plays a special role in the communication between states, as traditionally hostile neighbors can repair damaged relationships with high profile trading relationships and related agreements. Pakistan and India recently agreed to liberalize trade between the two nations, heralded as a route to peace between the two nations (Bajoria 2011). Trade ties and flows can act as a signal between states that cooperation is more profitable than hostility, and can reduce tension between states. The Pakistan and India relationship is one such example, but others include the continued development of trade ties between Greece and Turkey (Kutlay and Catalano 2010), Argentina and Brazil (Oelsner 2005), and the well documented present day relationship between Germany and France. The influence of trade as a communication and signaling tools is not limited to former rivals.

While regional trade historically has made up a smaller portion of GDPs outside of Europe, such relationships are growing in non-European countries. Between 1970 and 2000, the average state had nearly 10% of their GDP associated with regional trade, certainly not a majority of economic activity within states, but large enough to notice and shape decision making around security. Trading relationships are transparent, as citizens and policy makers alike are aware of the role economic exchanges have on business and political support. Ensuring that the state maintains friendly relationships with trading

partners is in the interest of the business communities who exercise influence over foreign policy decision making (Jacobs and Page 2005). Further, the argument being made here is that regional trade reduces tension between groups of states who have traditionally had the most salient and long lasting conflicts.

H12: The more a state trades with their regional neighbors, the more likely a state will have lower levels of military spending.

Globalization

In 1795, Immanuel Kant could not have possibly foreseen the extent to which international economic development would foster exchanges that extend beyond simple social and cultural exchanges. In this project, I argue that states that have an increased exposure to both international economic activity, but also cultural and social ties, will reduce their military spending. Economic globalization can be defined as all elements of state policy that open up the country to trade and international investment, including the volume of trade. The removal of restrictions on trade, tariffs, taxes, foreign direct investment (FDI), and portfolio investment all combine to make up economic globalization. These elements extend the interaction the state has with the international community, develops ties and connections to other states that alter the perception, decrease tension, and serve as grounds for cooperation, all diminishing the possible utilization and usefulness of conflict, and the need for large and well developed standing armies. Such an effect ultimately leads to the reduction of military spending among states that expose themselves to cooperation.

Social globalization can be defined as the “spread of ideas, information, images, and people” (Dreher 2006, Pg 1). An extension of Kant’s theory argued here is that the social elements of globalization produce the same pacific effects as democratic structures, trade, and IGOs. Social elements such as the movement of people, TV programs such as *Baywatch*, books, and the internet work to break down barriers that otherwise existed.

Nationalistic populations would be less likely to support governments, both democratic and non-democratic, from engaging in militarized conflict with rival states in which populations from that state resided, or with rival states they were culturally influenced by, via books, TV programs, movies, or music. Furthermore, high levels of media consumption representing international viewpoints, particularly newspaper readership, or influences such as tourism and other forms of personal contact between rival states would reduce the ability of populations to harbor resentment, thus inhibiting their support of military action or military build-up with the rival state in mind. For example, the 2003 Iraqi invasion may have been headed off by strong public opinion if there had been high levels of readership of Arab newspapers, books, and other cultural exports among American voters, who would be better educated on the pitfalls of the invasion. Personal contact is often a cornerstone tactic for track-two diplomacy, which can provide the building blocks for peaceful settlements between rivals or divided communities residing in a singular state, such as Cyprus and Israel/Palestine. Such personal contact reduces the fear brought about by political propaganda. The Bush administration has been widely criticized for using scare tactics to gain Congressional support for the Iraq invasion; perhaps a deeper understanding of Iraq would have reduced the ability of the administration to effectively campaign for approval.

While social globalization works to reduce tension and support for militarized conflict directly (Choi 2010), it influences military planning and budgets indirectly. As states increase their exposure to the social elements of globalization, the probability increases that those states will reduce their military spending as people are less supportive of arming themselves against foreign populations that they find less threatening than before the exposure to social globalization. This position rejects Huntington's (1997) hypothesis that cultural differences will promote conflict, and rests on the premise that exposure to diversity lightens tension and hostility as bridges over cultural gaps are formed and understanding and acceptance of differences becomes the norm. Huntington's position has been rejected by several scholars (Chiozza 2002; Oneal et al 2000; Fox 2002), including Oneal, et al. (2000), who find through an empirical examination of conflict that cross-civilization states are less likely to go to war than others. Moreover, Fox (2002) finds a similar non-pattern among ethnically based civil conflicts, and concludes that Huntington's thesis is mistaken. In sum, increased economic and cultural ties reduces the ability of leaders to use fear of the other to maintain higher rates of military spending.

H13: The more a state experiences all types of globalization, the more likely a state will have lower levels of military spending.

Conclusion

This project argues that the Kantian Triangle works to reduce military spending levels. As states liberalize, they shift the internal dynamic in how resources are allocated, and interact with the international system in cooperative and productive ways that reduce

tensions and the material incentives to utilize the military to achieve state interests. The influences of military spending are numerous, and liberal aspects are just one set of factors that come together to produce defense budgets. These influences are mediated through the power winning coalitions and bureaucratic plays have on the policy process. Such actors wield considerable power, and as security bureaucracy reacts to the pacific influence liberal forces have, state leaders facing demands for public goods from citizens shift money away from defense and toward other policy goals of the state. Liberal influences shape state action, but not before being mediated by citizens and government policy makers. In this process, I do not expect a highly liberalized state in a militarized conflict to reduce their military spending, nor should liberalized states be expected to disband their militaries or halt research and development into defense technology. Rather, liberal influences simply work to lower the overall defense burden of states.

Chapter 2 Tables and Figures

Figure 2.1: Model of Budgetary Process

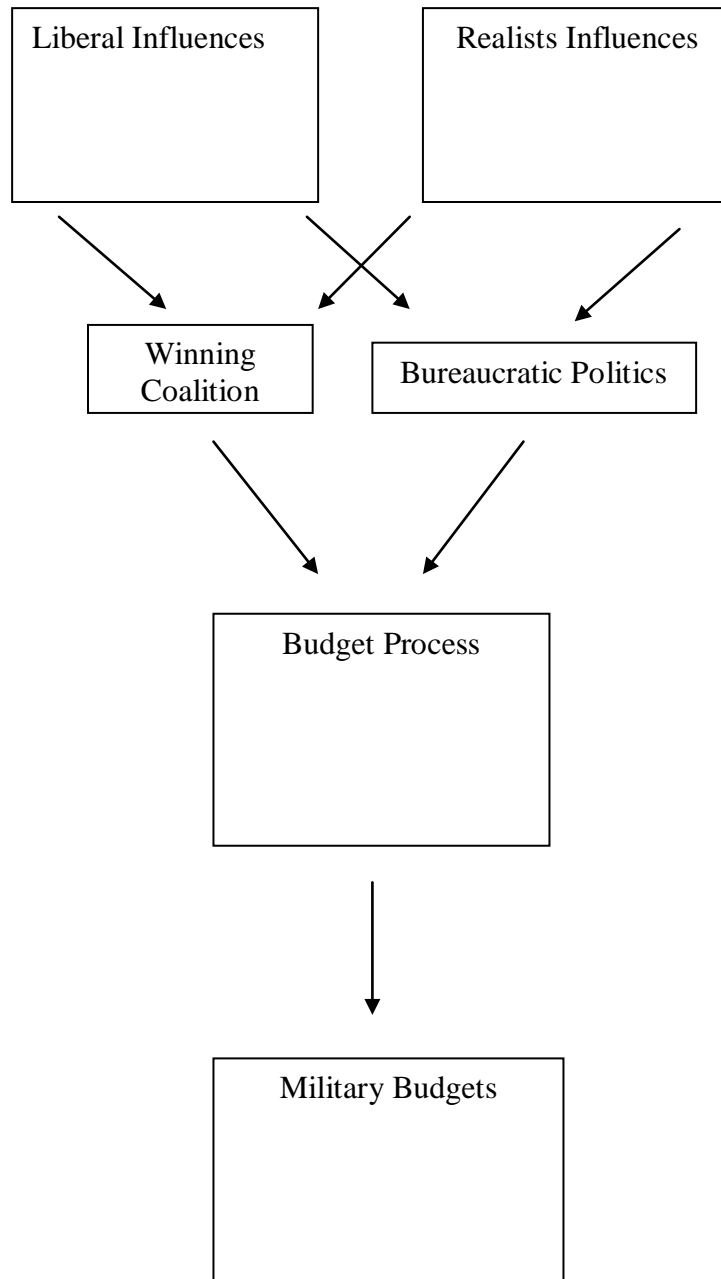


Table 2.2: Non-Liberal Determinants of Military Spending

Concept	Measurement	Expectation of Spending Direction
Arms Races	Rivalry	Increase
Economic Strength	GDP Per Cap	Increase
Alliances	Defense Alliances	Neutral effect
Major Power	If the country is a major power	Increase
Inter-State Conflict	If the country is in an inter-state war	Increase
Democracy	The regime type of the country	Decrease
Regional Military Spending	Average Spending of Neighbors	Increase
Cold War	Cold War Dummy variable	Increase
Major Power Ally	Count of how many major powers a state has a Defense Alliance with	Increase

Chapter 3: Testing the Argument

Introduction

As chapter 2 details, this project argues that as states institutionalize elements of the Kantian Triangle they reduce military spending levels. As states liberalize, they shift the internal dynamic in how resources are allocated, and interact with the international system in cooperative and productive ways that reduce tensions and the material incentives to utilize the military to achieve state interests. Specifically, this project argues that democratic structures allow voters to successfully demand more social spending over military spending, as democratic structures are institutionalized that bring voter preferences closer to the policy making process. Within democracies, states that strengthen their democratic institutions retain their institutions, and build parliamentary and consensus electoral systems which are more representative and produce policies closer to the center of the political spectrum than other states that do not. The second point of the Kantian Triangle, IGO memberships, works to reduce military spending by altering the security environment of states. Not all IGOs are created equal, and some, such as security IGOs, are better able to shape the security environments of states. Lastly, exposure to the international marketplace works to reduce military spending by creating closer links to other nations, and facilitating internal spending patterns that focus on economic stability and growth. The role of the international marketplace extends beyond trade, as other elements of globalization also alter state decision making on how many resources to allocate toward the military. Overall, as states liberalize they experience a reduction in military spending.

To test these propositions, a large quantitative dataset including all states was built. This chapter lays out the research design for the quantitative portion of this project, detailing how the concepts discussed in chapter two are operationalized into data, and the source of the data used. Statistical issues and choices on what modeling techniques are utilized to estimate models are handled in chapter 4, while decisions surrounding what variables to include in the model are handled here.

Table 3.1 provides the summary statistics for the variables used in this project, presenting their sources, standard deviation, minimum value, mean, and maximum value. For this project, I utilize pooled time series data, with the unit of observation being country-year. The time period of the analysis is from 1960-2000 for the economic interdependence and democracy portions of the project, and 1965-2000 for the IGO portion. This is done because several control variables end in 2000, and the first year of continued IGO membership data is 1965. Prior to 1965 the IGO data are recorded every five years. Every nation where data are available for the range of variables is examined in the study. Section one examines the dependent and independent variables of interests, while section two discusses control variables.

{Table 3.1 About Here}

Section 1: Variables of Interest

The Dependent Variable

Military Spending

The dependent variable is the share of the total economy that is devoted to military expenditures (Military Expenditures/ Total GDP), also referred to as the

‘Defense Burden’ (Goldsmith, 2003). The defense expenditure data are provided by the Correlates of War Project (COW) (Singer and Small 1993; Singer, Bremer, & Stuckey 1972) and the GDP data are from Gleditsch (2002). The defense expenditure data contains all financial resources available to a state’s military in time of war, and contains all resources that could be deployed in a time of conflict, regardless of their active or reserve status (Singer and Small 1993; Singer, Bremer, & Stuckey 1972). This data uses *Defense Burden* as opposed to direct military spending data because nations have varying levels of population, land mass and economy size that influence the raw amount of spending. Using raw defense spending data would create a measurement error, as it would be difficult to tell whether or not the change in defense spending was a function of size and population, as opposed to a function of the independent variables of interest in this study. The decision to do this is consistent with previous contributions to the literature (Goldsmith 2003, 2007; Collier and Hoeffler 2006). The data are changed into 1996 dollars using an inflation index to provide an accurate measure across the five decades this study examines, and is in thousands of US dollars.³¹ Figure 3.1 captures the average military spending level of states for the period of study.

{Figure 3.1 About Here}

Military spending data has been criticized for being inaccurate and difficult to properly measure given the political consequences for states who release such information. Lebovic (1999) criticized the COW dataset in particular, which builds from both the Stockholm International Peace Research Institute (SIPRI) and the U.S. Arms Control and Disarmament Agency (ACDA, now Bureau of Arms Control). His main

³¹ Putting the defense spending figures in constant US dollars is necessary to provide a measurement that is comparable across time and space.

concern was the use of data in studies that focused on limited samples arranged by year or geographic region. He concluded, however, that the use of the data was appropriate for larger samples, such as the one employed here (Lebovic 1999; Goldsmith 2003). The argument that Lebovic (1999) makes is that while specific values of defense spending may be inaccurate, the general directionality is correct. Therefore, this research, which aims only at uncovering directionality, is not harmed by this set of issues with the data.

To offer an alternative measure of *Defense Burden* as a robustness check, I utilize the alternative dependent variable of *Human Defense Effort* which is utilized in the robust modeling chapters (chapters 5-7). This measure is a simple ratio dividing the number of military personnel by the total population of the state, with the data coming from the COW CINC dataset. *Human Defense Effort* captures the percentage of the population that are military personnel intended for use against foreign nations (Singer, et al. 1972). *Human Defense Effort* captures two outcomes of state security policy. First, it captures, albeit indirectly, increases or decreases in military spending, as a substantial portion of military spending is contained in labor costs. Second, while states increase their fighting force for several reasons, they primarily do so when they fear the onset of a conflict, an event that the institutionalization of liberal influences should reduce. In sum, both *Human Defense Effort* and *Defense Burden* both capture the process of militarization. The two variables correlate at the .57 level, indicating that they represent similar but not identical variables or concepts. They both capture the allocation of state resources toward the mechanisms and processes in which the state can wage organized violence against other states, but also internal threats to state power and authority. Figure 3.2 captures the distribution globally, and in comparison with Figure 3.1 demonstrates that not all states have similar

distributions of both variables considering global averages. Australia, for example, maintains higher *Defense Burden* averages than *Human Defense Effort*.

{Figure 3.2 About Here}

Human Defense Effort corrects the issues with *Defense Burden*, as it is a constant percentage of military personnel and is useful in comparisons across time and space, whereas *Defense Burden* captures the percentage of the economy that is dedicated to military spending, and does not necessarily capture increases in the context of economic growth. As a measurement it assumes that as a state's economy grows, so do their interests and need for additional military spending. For example, if the U.S. spends 2.5% of their GDP in 1992 on the military, and then the same percentage in 1993, but the GDP experiences a 3% growth rate, the actual dollars spend on the military has increased from 1992 to 1993, but *Defense Burden* does not capture the increase. *Human Defense Effort* does not capture changes in population, so it suffers from the same issue of *Defense Burden*; however it is much easier to dramatically increase spending than to dramatically increase the size of the population or the military. *Defense Burden* remains the preferred cross national measure for militarization, as it is more appropriate for capturing state fears of the international environment and domestic influences of militarization. For example, capturing capital investments is not evident in values of *Human Defense Effort*, therefore it serves as a robustness check, in addition to providing insights into what states consider an appropriate number of active military personnel given the influence liberal indicators.

The drawback to *Human Defense Effort* is the influence the Revolution in Military Affairs (RMA) has had on the needed personnel to defend the nation and secure

interests overseas. While this issue pertains mainly to the last decade of the period of study, and arguably for a small number mostly western industrialized nations, it has reduced the number of personnel that have been retained for the purpose of national defense as militaries rely less on infantry and more on mechanized weapon systems. Overall, conscription rates in western societies have been decreasing over time, with states abolishing mandatory military service.

Independent Variables of Interest

The independent variables of interests are broken into three categories consistent with the Kantian Triangle. I first discuss the variables used to capture democratic institutions, including democratic strength, duration and institutional design. I then move on to examining IGO membership, and conclude with an examination of economic interdependence.

Democratic Strength and Duration

As outlined in hypotheses 1 and 2, I posit that as a state strengthens or extends the duration of their democratic institutions, they reduce their military spending. Both concepts are captured by the Polity dataset (Marshall and Jaggers 2005), where democratic institutions are measured on a -10 to 10 scale.³² The Polity IV dataset's polity2 measure capturing regime type is a composite of six indicators including openness and competitiveness of executive recruitment, institutionalization, regularization, and competitiveness of citizen participation. There is no need to alter the polity4 measure to capture democratic strength. The Polity IV measure is well known

³² The closer a state is a -10 the more their regime type resembles an autocracy, while the closer states get to a 10, the more democratic they are.

and its use is well established in the field, making it an easy choice for measuring democracy. Figure 3.3 captures democratic strength among all states.

{Figure 3.3 About Here}

The same data source is used to measure democratic duration. To do so I count the number of years a state maintained a policy score of seven or above. If a given state had a seven or higher on the scale the previous year, than the following year democratic duration would be a one, and for each additional year one was added to the value for the democratic duration variable. For example, the U.S., according to the Polity dataset, has been a democracy since 1809, so that for year 1810, the value of democratic duration is one. I coded the data back to the first year of which the Polity data are available (1800), so that in the first year of the period of study for this project, 1960, the democratic duration value for the U.S. is 151 years. For every year following, one additional year is added, so that for the last year in the period of study (2000) the value for the U.S. is 192. The time span of this variable is 1960-2000. This variable will be used to evaluate hypothesis 1, which examines the role of the tenure of democratic institutions on military spending levels. Figure 3.4 captures the geographic distribution of democratic duration.

{Figure 3.4 About Here}

The field has produced considerable discussion on the merits of the Polity IV data set, and while the measure is widely used within the field, there is some apprehension about the measure. First, there is no consensus on what constitutes democracy, or a state being democratic (Coppedge 2011). Measuring democracy then becomes a subjective exercise that can produce quantitative measures that do not deliver the precision that they claim to, or provide consensus. For example Coppedge, et al. (2011) point out that the

Polity2 measure from the Polity4 dataset tends to pool observations around -7 and +10, indicating that the measurement may not distinguish between states as well as it could. While the various measures tend to correlate, they do so because for the most democratic of nations, whereas there is great variation among autocracies (Coppedge, et al. 2011). While these differences exist, the use of an alternative measure for democracy is not warranted given the level of correlation between the Polity4 data, and the two alternatives of Freedom House and Vanhanen democracy score for the period of study. In addition, modeling that I conducted produced no deviation from the findings in chapter 4, and therefore are not reported or examined any further.

Parliamentary and Presidential Systems

As argued in chapter 2, democracies tend to spend less on the military than non-democracies (Goldsmith 2007; Fordham and Walker 2005). An extension of this argument is codified in hypotheses three and four, which posit that parliamentary and consensus systems, respectively, also spend less than presidential and majoritarian systems given that they bring citizens closer to the policy making process. The argument made in this project is that citizens in democratic states are capable of demanding social spending, such as health care and education. Consider the ‘third rail’ reference to social security in American politics or the 2012 protests over Greek austerity measures, both of which illustrate public support for social spending and the politically difficult task to cut it if necessary. Of democracies, parliamentary systems are more representative, and thus make it more difficult compared to presidential systems for any one faction to take the reins of power. Therefore, such systems have greater pressure to allocate funds to a

wider field of social programs and issues, and away from the military. Such systems prevent leaders from engaging in diversionary conflict, unneeded military build-ups, or patronage politics that fund unneeded defense programs to please small portions of the electorate. Lijphart (1992) argues that presidential systems concentrate power in the hands of a simple majority and even sometimes a plurality. Such systems allow for small portions of hawkish leaders or those financially dependent on military spending to drive the patterns of allocation.

To distinguish between parliamentary systems and presidential systems, I utilize the Database of Political Institutions (DPI). The data for this measurement spans from 1975-2009. DPI defines presidential systems as “systems with presidents who are elected directly or by an electoral college,” and parliamentary systems as “Countries in which the legislature elects the chief executive are parliamentary” (Keefer 2009:4). Presidential systems are coded as zero and parliamentary systems are coded as one (Keefer 2009). The DPI database does contain a mixed systems, which DPI defines as systems with both a prime minister and a president, along with the following factors: a) Veto power: president can veto legislation and the parliament needs a supermajority to override the veto, b) Appoint prime minister: president can appoint *and* dismiss prime minister and / or other ministers, c) Dissolve parliament: president can dissolve parliament and call for new elections, and d) Mentioning in sources: if the sources mention the president more often than the PM then this serves as an additional indicator to call the system presidential. The system is presidential if a, b or c is true. If no information is available or if only ambiguous information is available on a, b, or c then d determines the coding (Keefer 2009). Furthermore, DPI has the following exception: “if that assembly or group

cannot easily recall him (if they need a 2/3 vote to impeach, or must dissolve themselves while forcing him out) then the system gets a 1” (Keefer 2009: 5). States that are mixed systems removed from the analysis, which is less than 5% of cases.

The legislative institutions variable is employed in models where the samples include observations that have a 7 or higher on the Polity IV scale. This is in order to capture the role parliamentary systems have on military spending among democracies themselves. Having a model with democratic and non-democratic states will result in the possibility of spurious results, as retaining all states in the sample and including the parliamentary variable may result in the Polity4 variable picking up much of the variance in the dependent variable, and thus confusing what is actually reducing military spending: democratic structures in general, or particular types of democratic structures.

While the measurement of presidential vs. parliamentary systems works to capture the variation among executive structures within democracies, the DPI dataset provides a measure that captures variation in electoral systems and captures the role proportional representation or consensus systems have on military spending decisions. The DPI dataset defines proportional representation systems in which “candidates are elected based on the percent of votes received by their party” (Keefer 2009). However, it should be noted that not all parliamentary systems utilize proportional representation, such as England. This measure will capture the influence electoral structures have in terms of reducing military spending, rather than the structure of the legislative branch. The legislative and electoral institution variables correlate at the .35 level.

Total IGO Membership

While the connection between democracy and state decision making has been detailed by a large body of literature (Maoz and Russett 1993), the relationship between IGOs and state decision making has a shorter and more contentious history in the field. IGOs are considered vital actors in the international system, and were and are created by states to deal with a variety of political, economic, and social issues which have arisen as the international system has evolved. The hypothesis examining IGO membership posits that increasing IGO memberships of various types work to reduce military spending, as IGOs help provide collective security, information, and socialize states into relying less on their military options in favor of diplomacy, cooperation, and coordination.

IGOs generally contain three or more states, with a shared need to address a particular problem in the international system (i.e. issues of economics, security, or coordination of procedures). The authors of the COW IGO dataset³³ have three components that constitute an IGO:

- (1) An IGO must consist of at least three members of the COW-defined state system;
- (2) An IGO must hold regular plenary sessions at least once every ten years;
- (3) An IGO must possess a permanent secretariat and corresponding headquarters.

The COW IGO dataset contains 490 intergovernmental organizations, each having a variety of regional, policy, and temporal characteristics. Many IGOs only cover certain policy issues and have restricted membership based on economic exports or regional placement. Further, many IGOs in the dataset are no longer in existence, while others have been formed more recently. The original data are coded in the following way:

No Membership=0
Full Membership= 1
Associate Membership= 2

³³ Pevehouse, Jon C., Timothy Nordstrom, and Kevin Warnke. 2004. "The COW-2 IGOs Dataset Version 2.0," *Conflict Management and Peace Science* 21(2):101-119, provides an in depth description of the data coding process.

Observer= 3
Missing data= -9
State Not System Member= -1

For the purposes of this research, I have dropped observer and associate membership in creating all IGO variables used in the study. In addition, I have coded all missing observations to zeros, given that it is unlikely in most cases that the state in question is a member to the IGO.³⁴ Moreover, tests using alternative measures of IGOs, such as the Volgy, et al.'s (2010) data, produced no deviations from the findings produced using the COW data examined here.

To test hypothesis five, the variable *Total IGO Membership* was created by adding up for each country-year the number of IGOs that a nation was a member of. For example, if the U.S. was a member of 96 organizations in 1993, then *Total IGO Membership* for the U.S. in 1993 was 96. The trajectory for this measure, as expected, grows from a mean of 31 in 1965 to twice that in 2000, indicating the growth around the world in IGO memberships. Military alliances, such as NATO and the Warsaw Pact, are removed from the sample given their primary role as alliances. As argued above, however, all IGO memberships have the ability to deliver information, lines of communication, and socialize states regardless of their focus, and Total IGO Membership captures the level of integration states have in global governance. That integration serves as the undercurrent to the theoretical argument presented above: as states become more and more integrated into the international community, the number of ties they have with other states in the IGO context produces more options for resolving conflicts, and thereby reshapes the security planning of the state. Figure 3.5 captures the geographical

³⁴ There is little reason to believe that transforming missing observations to zero, results in coding that omits memberships from the totals. Moreover, the majority of the missing data observations are for states that were not members in other years.

distribution of Total IGO Membership, indicating that western nations are more likely to have higher rates of IGO memberships.

{Figure 3.5 About Here}

Total IGO Membership- Duration

To evaluate hypothesis six, the effect of IGO membership duration on military spending, the variable *IGO Duration* was created. *IGO Duration* is the average duration of membership a state has had with IGO's in its portfolio. To calculate *IGO Duration*, each year a state was a member of an individual IGO was summed, then for each country year the total number of duration years was summed, and finally that value was divided by the *Total IGO Membership*. For example, for year C, state A was member to IGO X, Y, Z, and had been members of those organizations for 11, 13, & 18 years respectively, the value for *IGO Duration* would be 14 ($\{11 + 13 + 18\}/3$). For example, Gabon in 1990 had 87 IGO memberships, with an average duration of 20 years. *IGO Duration* captures a state IGO portfolio's average length of time, which speaks to how institutionalized the effects of IGO membership have become on state decision making. The higher the value of *IGO Duration*, the more time states have had to learn how IGO memberships produce lines of communication and information, credible conflict resolution mechanisms, and norm diffusion, all of which, when incorporated into foreign policy decision making, reduce military spending. *IGO Duration* speaks to how integrated the effects of IGO membership are on state security decisions. While *IGO Duration* captures this relationship, it does have a weakness in that some organizations, such as GATT or the European Commission, have transformed themselves into new

organizations, with new names and technically new organizations, something that *IGO Duration* does not capture.³⁵ The alternative measure of lagging *Total IGO Membership* accounts for this weakness, as well as the problem of newly independent states developing high levels of IGO membership.³⁶

Total IGO Membership-Institutionalization

As discussed in Chapter 2, not all IGOs are created equal, and there is reason to believe that IGOs that have a security focus, have member cohesion, and are institutionalized will do more to reduce military spending than other IGOs, a position codified in hypothesis seven. Many IGOs, such as NATO, take on security related tasks which involve them in state military spending decisions, and therefore have the ability to provide collective security, information, and socialize states into relying less on their military options in favor of diplomacy, cooperation, and coordination. Several previous scholars have worked to narrow down the set of IGOs that meet this requirement, including Boehmer, et al. (2004) and Shannon (2009). As the reader can recall, I borrow the Boehmer, et al. coding scheme in theorizing about the differences between IGOs and the influence they have on state behavior. Boehmer, et al. identify three required elements for IGOs to be considered as security related: high level of institutionalization, member cohesion, and a stated security mandate. Boehmer, et al.'s. (2004) coding creates a three point scale: minimal, structured, and interventionist IGOs. As discussed in

³⁵ To account for this, I test the hypothesis using a lagged version of *Total IGO Membership* at five and ten years in section 5 of chapter 6. This measurement captures the state of military spending after the year in which the IGO membership total was observed, thus accounting for the inertia that is common in defense budgets.

³⁶ Consider many of the Eastern European countries whose independence or regime change in 1989 or 1991 reshaped their IGO portfolios as well as leading to a dramatic increase in IGO membership, which would not necessarily show up in *IGO Duration*.

Chapter 2, these three groups are distinguished as follows: minimal organizations have committees, meetings and conferences, possibly a secretariat, but no bureaucracy. Structured organizations contain assemblies, secretariats, and a bureaucracy to implement policy, as well as formal rules and procedures. Interventionist organizations have the above elements combined with mechanism for mediation, arbitration, and adjudication and other means to coerce state decisions, as well as the means to enforce organizational decisions and norms. The data for this measure comes from Boehmer, et al. (2004), and is therefore consistent with their theoretical criteria.

Member cohesion is captured on a yearly basis using UN General Assembly voting patterns. While UN voting patterns are symbolic and have little meaning in terms of state action, there are few other forums in world politics where data on state preferences can be captured in a uniform manner. Alliances, another measure of state cohesion, are problematic as changes in alliance structure do not happen often (Boehmer, et al. 2004), while UN voting is a constant event over the course of the study, and provides a measure of how closely aligned states are on major issues. Boehmer, et al. (2004) have completed this coding, and I utilize their data and their coding scheme in creating my own measure. To create the measure, I simply sum the institutionalization scores for each country year. For example, the Soviet Union held 47 IGO memberships in 1982, which totaled 73 on the institutionalization score. Like Total IGO Membership, and IGO Duration, the IGO institutionalization measure increases with time, as in 1965 the measure had a mean of 65, and in 2000 it grew to 95.

Because the institutionalization score correlates highly with *Total IGO Membership*, I parse out the security organizations from the rest of the IGOs, and

examine their relationship on their own. Security IGOs are not required to have the ability to deploy security or peacekeeping forces, rather, an IGO simply has to have the intention of mediating and reducing conflict between member states. This project argues that all IGOs have some ability to coordinate state action and reduce tension, but those states with substantial structures and members able to coordinate and work together, combined with a security mandate, are better positioned to carry out the influences that ultimately shape security decisions by states compared to those who do not have such structures. The result of these memberships is that states have less incentive to increase their military spending, as they know that IGOs are willing to step in to mediate and help resolve conflicts that arise. Security organizations are considered as such if they meet the highly institutionalized criteria set forth by Boehmer, et al. (2004) and have a security mandate. A list of these organizations can be found in the Appendix A, and they are those organizations that score a three on the Boehmer, et al. (2004) institutionalization measure. Security organizations, independent of other organizations, should have a powerful and negative role on military spending rates.

The security IGO variable is calculated by summing the number of security organizations a state is a member to in a given year, much like *Total IGO Membership*.³⁷ Like the other IGO variables in the study, security IGOs have increased over time, with a mean of 8 in 1965 and a mean of 12 in 2000. Malaysia, who in 1965 was member to 3 organizations and in 2000 was member to 10 organizations, is representational of this growth. Lastly, a modified version of the *Total IGO Membership* that eliminates the security IGOs is included in the modeling. States who are members to security IGOs are

³⁷ A list of PBOs can be found in the Appendix A. The criteria are drawn directly from Boehmer et al's data.

more likely to be members to other organizations, therefore omitting non-security IGOs from the model will bias the results as it is not possible to evaluate whether any reduction in military spending is caused by the security IGOs or non-security IGOs. Figure 3.6 captures the geographic distribution of Security IGOs, with a clear indication that western states maintain higher rates of Security IGOs, along with the Middle East and several countries in Latin America.

{Figure 3.6 About Here}

Peace Brokering Organizations

As discussed in Chapter 2, there are some organizations that are positioned to play a more influential role in state security decisions than others, especially around salient issues such as territorial disputes. Shannon (2009) selected IGOs that score a 3 on Boehmer, et al's. measurement, and then consulted the Correlates of War Project's Multilateral Treaties of Pacific Settlements Data Set, where she identified IGOs that 'specifically call for peaceful settlement and have the ability to diplomatically intervene in member's disputes' (Shannon 2010, pg 9). Not only do these organizations have a specific security mandate and strong, well developed institutional structures, they also have specific mechanisms designed to resolve disputes between member states. Shannon (2009) found that 27 organizations met her criteria for being a *Peace Brokering Organization*, of which I use 21.³⁸ I operationalize this by creating a sum count of how many *Peace Brokering Organizations* a state is a member of in a given year. For example, England was a member to five *Peace Brokering Organizations* in 1965, and

³⁸ There are several organizations Shannon (2009) uses that are out of the time frame of my period of study, such as the German Confederation.

seven in 2000. Unlike the other IGO measures, *Peace Brokering Organizations* have grown much slower during the period of study.

Total IGO Membership-IGO Power

As discussed in Chapter 2, all IGOs have the ability to influence the military spending of member states, but of these organizations, some are better equipped than others to reduce member state's levels of military spending. This chapter has already detailed the measurements for institutionalized and security IGOs, and now turns its attention to powerful IGOs. As hypothesis ten argues, IGOs whose member-states make up a greater share of the world's power are better able to shape military spending decisions. To test this argument, I utilize a newly created variable unique to this study. This variable captures the share of the world's power capabilities that are contained in a given IGO, as determined by the cumulative power scores of the IGO's member states. This variable is generated from two separate datasets, both from the COW: the National Material Capabilities Data set 3.0, and the International Governmental Organizations Data Set 2.1, discussed above.

Measuring power in the international system is a difficult task. Power is often defined as the ability of one actor to force another actor to do something they would not otherwise do. Power derives from more than just material capabilities, it is also the cultural, social, and ideological influence one international actor has over another. While it is argued that material capabilities correlate with cultural, social and ideological influence, these *types* of power are separate concepts with separate measurements. Unfortunately, at this time, the field of political science only possesses the ability to

accurately capture material aspects of power. I follow this format using the National Material Capabilities Data set 3.0, which compiles data on military expenditures and personnel, total and urban population, and energy and steel consumption, to create an index of a nation's power capabilities, referred to as a CINC score. CINC scores 'reflect the full breadth and depth of the resources that a nation could bring to bear in instances of militarized disputes.'³⁹ CINC scores sum to one for a given year in the data, so that each country year observation is the percentage of power that country holds. For example, in 1970 the CINC score for the U.S. was 17%, while Botswana came in at .00003%. The gap between these two scores illustrates the assumed difference in power capabilities. Moreover, the expectation each nation would bring to an IGOs ability to shape the behavior of other member states is implied in the material power each possess, i.e. astute observers would expect more from a IGO with the U.S. as a member than one with Botswana.

IGO Power is calculated using a two step process. I first determined the membership base of each IGO for each year between 1965-2000. For example, for GATT in 1965 I created the variable $GATTCINC1965 = U.S. CINC 1965 + Canada CINC 1965 + Member N CINC 1965$. I then summed all of the CINC scores for GATT members in 1965. I repeated this calculation for each IGO for the years 1965-2000. Second, I added these scores up for each country year, so that every country has an IGO Power score based on the calculations completed in step one.⁴⁰ For example, Romania in 1996 has an *IGO Power* score of .34, indicating that the collective members of all the

³⁹ From National Material Capabilities Codebook, which contains a more detailed description of the coding process and the algorithm used to produced the CINC scores from the materials listed above.

⁴⁰ Recall that CINC scores sum to one for each year, thus we already know the share of the world's power a given state has in a given year.

IGOs Romania was a member to accounted for 34% of the world's power in 1996. As CINC is a percentage of the total power a state has in a given year, adding up the CINC scores of the members of the IGO produced the power ratio for that IGO in a given year. Thus *IGO Power* is calculated by adding all the power ratios up for each IGO a state is a member to. The data for this measurement spans from 1965-2000.

Interdependence on the Global Economy

As discussed in Chapter 2, and codified in hypothesis 11, I argue that trade works to decrease military spending, as it offers states more options in resolving conflicts, raises the costs of conflict, and collectively reduces tension. To capture the role of trade on military spending, I use the share of the total GDP that is related to trade. This measure, referred to as *total trade*, is created by adding together the total imports and exports in a calendar year and dividing that by the total GDP. This measurement is consistent with the work of Oneal and Russett (2001), and is a ratio. I utilize the expanded GDP and trade dataset compiled by Barbieri, et al. (2008) to create the trade portion of the measurement, and the Gleditsch data for GDP (2002).⁴¹ There is a great deal of debate over what constitutes dependence. In this project, interdependence simply refers to the level of interaction that a nation has with the global economy, with the logic that the larger amount of interaction a country has with the international market, the more dependent the country's economic overall well being is on the market. The larger the value of *total trade*, the more dependent a nation is on the trading relationships. For

⁴¹ Trade values are taken from version 2.01 of Barbieri's (2008) data set. I recode missing data as zero, as it was one of the steps Gleditsch (2002) advocates in improving such measures due to the enormous amount of missing data. For a more detailed analysis on Barbieri data see: Barbieri et al. 2009. "Trading Data: Evaluating Our Assumptions and Coding Rules." *Conflict Management and Peace Science*. Vol. 26 (5): 471-491.

example, Italy in 1995 had 39% of their overall GDP associated with trade, while the average for the year was 22%, indicating Italy's above average trade dealings.

{Figure 3.7 About Here}

Contiguity Trading Relationships

As argued in Chapter 2, regional trade has a more powerful and salient role on security issues than trade outside the region, given the role of contiguity in predicting conflict. Regional trade is considered trade that occurs between states with 150 miles or less of open water and/or open land separating states. I consider this a prudent cut off because modern technology allows for rapid movement between states in terms of both trade and militaries. This is important because many states are geographically close but do not border one another. For example, Ghana and Benin do not share a border, but are only 35 miles apart,⁴² which allows them to quickly reach each other's territory in the event of a militarized dispute. Moreover, the same 35 miles can help facilitate trade and bolster economic ties. While 150 miles may be considered an arbitrary number, regionalism and distance have to be distinguished by some distance. The *Regional Trade* variable is determined by summing both imports and exports, that are conducted between all states within the 150 mile radius. For example, Italy, who has a high level of trade associated with its GDP, had nearly 22% of its GDP associated with regional trade, indicating that a majority of its trade was regional in nature, given that all its trade amounted to 39% of their total GDP. Moreover, 22% is far above the average for the period of study, indicating that Italy's economic integration with its neighbors may serve as an example of a country where regional economic ties reduced tension, threat, and necessity of high military spending rates. Lastly, I include non-regional trade in models

⁴² As measured at the coastline.

examining regional trade to ensure that the regional trade variable captures the influence of only that type of trade. Excluding it might result in coefficients that are biased by non-regional trade, in that the influence of the non-regional trade variable may be wrapped up in the regional trade variable. Figure 3.8 captures the relationship globally, and concentrations can be seen in highly liberalized countries such as those in Western Europe.

{Figure 3.8 About Here}

Globalization

Trade is not the only component to globalization, nor the only economic tie states have with the global market place. As argued in Chapter 2, this project posits that globalization of all types, specifically social, political, and economic globalization, works to reduce military spending. To capture globalization, I utilize the KOF globalization index, which incorporates the three types of globalization (social, political, and economic). The KOF data are only available for the 1972-2000 time period, and has number of missing values for countries in Central and Southeast Asia, Eastern Europe, and the Middle East. For example, there is no economic data on Saudi Arabia for the period of study yet there is social and political data, and therefore no overall globalization index value. Other nations, including Iraq, Sudan, and Eritrea face a similar problem. This is a significant drawback to using this data, given that many of the countries with missing values are potentially on the lower end of the globalization scale. However, there are enough countries in the sample to draw some conclusions about the role of globalization on military spending.

The most valuable portion of the globalization examination to this study is economic globalization, given that it provides a more complete examination of the role of economic interdependence on military spending patterns. The KOF Economic Globalization index captures trade levels, foreign direct investment flows and stocks, the percentage of the GDP that is portfolio investment, income payments to foreign nations, hidden import barriers, mean tariff rates, taxes on international trade, and capital account restrictions (Dreher 2006). These elements have become more common as the Washington Consensus has taken hold on international financial institutions and economic behavior in general. There is strong evidence to conclude that exposure to economic interdependence on the global marketplace is more than just trade, given that capital and profit flows in and out of countries, shaping the political and therefore security dynamic. Moreover, trade, while central to this analysis, is only part of the process, as foreign investors purchase businesses that produce products for the domestic market in addition to the global one. Further, the substantial influence capital flows have on the domestic political dynamic has been established, and observers must only examine the role of capital flows in the 1997 Asian Financial Crisis that left several countries in political turmoil and resulted in the ouster of President Suharto of Indonesia, to be convinced. Moreover, these are interactions with the international market that are not necessarily captured in the trade data utilized in this study. While the average country had a score of 46 for the period of study, there was significant range, with some countries such as Afghanistan averaging 18, and other countries averaging on the higher end, such as Canada with an average of 73. As discussed in Chapter 2, and summarized in hypothesis 13, I expect all of these elements of economic interdependence that are

captured in the KOF measure to result in a reduction of military spending. Figure 3.9 captures the KOF Economic globalization measure graphically, with the developed world clearly having higher values.

{Figure 3.9 About Here}

In addition to the economic elements of globalization, the KOF measure also captures social globalization which includes tourism, remittances, telephone and mail exchanges, foreign residents, information flows via internet, TV, and material cultural imports such as IKEA, McDonalds, and foreign book readership (Dreher 2006). As is argued in Chapter 2, these social elements work to create bonds and ties between nations, which reduces the overall threat and ability of political elites to mischaracterize opposing nations. As with the economic elements, these social exchanges are calculated into an index, which then demonstrates the overall exposure to social globalization. Lastly, the KOF political measure captures political globalization and consists of IGO membership, embassies, UN peacekeeping missions, and international treaties (Dreher 2006). Figure 3.10 captures total globalization graphically, with the developed world clearly having higher values.

{Figure 3.10 About Here}

For the purpose of this study, I examine economic globalization on its own in Chapter 4, given the additional economic exchanges that are captured by the measure giving further empirical depth to the analysis of the proposition that economic interdependence with the global marketplace results in a reduction of military spending. In addition, I examine the overall exposure to globalization. I do not test social and political globalization on their own, however, results not included in this project indicate

that social globalization in isolation does not have any significant influence on global military spending rates, yet political globalization does, and has similar patterns to the models examining IGO memberships.

Section 2: Control Variables

Modeling military expenditures has historically been limited to a small group of variables, including conflict, arms races and alliances, budget incrementalism, regime type, and economic strength (Smith 1989). Additional variables such as international aid (Beenstock 1993; Collier and Hoeffler 2007), civil wars (Collier and Hoeffler 2006), ethnic fractionalization (Rosh 1987)⁴³, regional military spending rates (Flores 2011) and population and territorial variables (Hewitt 1992) have been addressed in the literature. Given this multitude of factors, statistical modeling examining military expenditures has the potential to employ ‘garbage can’ models (Ray 2003; Achen 2005). Such models may be capturing a multi-equation system, in that some control variables are contributing factors to others. To this end, I build a model utilizing the specifications made by Smith (1989), which include the control variables of budget incrementalism, economic strength, regime type, major power status, alliances, arms races, and militarized conflict.⁴⁴ In Chapters 5 through 7, I build models that depart from the Smith (1989) model to assess the robustness of the results discussed in Chapter 4, and add to the model several important and salient influences of military spending that are not included in the Smith model. These additional models take into consideration the array of factors shaping military spending, including major power ally, regional military

⁴³ Terrel (1971) and Hill (1978) contest this relationship, arguing none exists.

⁴⁴ The exception to this is models examining regional trade, where non-regional trade is included in the model.

spending rates, and the cold war. The rest of this chapter first examines the control variables used in the basic modeling analyzed in Chapter 4, and second examines the alternative control variables examined in Chapters 5-7.

Basic Control Variables

As mentioned above, the main control variables are budget incrementalism, economic strength, regime type, major power status, alliances, arms races, and militarized conflict. They are broken into two groups, external and internal. In models that do utilize the Prais-Winsten modeling technique, which is discussed in chapter 4, the first internal variable is budget incrementalism, which is essentially the previous year's budget. It is necessary to capture the process of incrementalism, given the role that retaining the institution of the military plays in the budget making process. Chapter 2 details the various actors within and outside of the government who benefit from increases in military spending, or in the very least from a maintenance of status quo spending levels. Further, bureaucrats work to increase the power of their institutions, and the military for many countries is a key institution in the preservation of the state based on internal and external threats. Moreover, not including the variable in the modeling process becomes difficult, given that assessing a figure that changes from year to year, but remains close to the previous year's budget, may result in estimates that overstate the influence of the independent variables in the model. The variable *incrementalism* is created by simply lagging the dependent variable, *Defense Burden*, by one year. As the results will demonstrate, the previous year's budget is the single largest

predictor of *Defense Burden*. However, this variable is not used in the modeling given the use of Prais-Winsten.

The second variable in the internal group is economic strength, which is captured using the measure of GDP per capita. As discussed in Chapter 2, it is well established in the literature that highly economically developed nations are more likely to spend more on defense (Rasler and Thompson 1998; Inglehart 1990; Maizels and Nissanke 1986; Harris 1986; Looney and Frederiksen 1987; O’Leary and Coplin 1975; Dunne & Muhammad 1995; Harris 1986). While the dependent variable is a function of economic strength of a country, it does not actually reflect the economic size or power of countries, just the share of the country’s economy that is dedicated to military spending. Including GDP per capita, therefore, does not bias the results in terms of an independent variable being drawn from the dependent variable. I expect this economic strength to account for a sizable amount of the variation in the dependent variable and to be positive and significant. The data are held constant in 1996 dollars across all observations, and are drawn from Gleditsch’s (2002) expanded GDP data (Gleditsch 2002). Lastly, I log this variable, as it is highly skewed. The data for GDP per capita in Table 3.1 are the pre-lagged figures.

The third internal variable is regime type, which has been demonstrated to play a major role in security decision making (Goldsmith 2007; Fordham and Walker 2005). Therefore, in models not examining the relationship between democracy and *Defense Burden* it is included as a control variable, while modeling examining democratic intuitions utilizes samples of only democracies. I utilize, as discussed above, the Polity2

data set (Marshall and Jaggers 2005), which captures regime type by measuring several attributes of regimes.

The last internal variable is major power status. Major powers have a wide range of interests in the international realm, and have the capabilities and economic strength to project power. Realist's models of conflict posit that states increase military spending to counter balance possible threats, and represent a willingness to utilize military force to achieve their agenda (Most and Starr 1989). Of all states, major powers are best able to increase military spending given their resources and their role in the international system. A materialist example of this dynamic is found in Harris (1986) and Hagelin's (1988) contributions to the literature, where they argue that foreign military bases may lead to an increase in military spending, as partnership with a foreign country requires joint participation. Major powers are vastly more likely to have such bases, as the majority of foreign bases are maintained by major powers. Therefore, it is important to take into consideration the role that power status plays. To address this, I use a dummy variable, which comes from the COW Project, who identifies France, Russia, England, the U.S., and China as the five major powers for the entire period of study, and Japan (1991-2000) and Germany (1991-2000) for a more select period of time. Major power status is coded by the COW project, and reflects the economic and military power of those countries. I expect this variable to be positive and statistically significant.

The external control variables are alliances, arms races, and militarized conflict. Alliances have received a great deal of attention in the literature given the importance of predicting alliance behavior during the Cold War. Many states outside of the formal institutions of IGOs enter into security alliances with other states. The reader can recall

from the discussion in the literature review the dueling arguments in the field as to the influence of alliances on defense spending, and the lack of uniformity in the contributions to the literature. Data on alliances comes from the COW data set. I use the variable of alliances coded as 1=security alliance, 0= if not (Gibler and Sarkees 2004). I expect alliances to have a neutral effect on defense spending, given that some states protect weaker members of their alliance, and others benefit, thus leading to opposite outcomes in defense spending levels. In Chapters 5 and 6, I break alliances into two groups: alliances with non major powers, and alliances with major power. Some have argued that having a major power as an ally, such as NATO member states who allow the U.S. and other countries to carry the heavier burden on military spending, can reduce their own spending (Hartley and Sandler 1999). Likewise, the Warsaw Pact serves as another example, where weaker states free ride on the efforts of the Soviet Union. Because of this dynamic, it is important to control for such a set of relationships. Thus, I parse out alliances with the above mentioned major powers, and subtract the value of major power alliance from the alliance variable. I expect that states with major power alliances will spend less on their militaries, and for the opposite reason major powers will spend more given the security umbrella they offer to states under their influence.

The second external variable is arms races, which for conceptual purposes is pooled together with rivalries, a key component of predicting military spending rates given that rival states account for a majority of MIDs for the period of study. Rivalries are defined by Thompson as relationships between two countries competing over some interests whether it be territory, regional or global dominance, resources, or belief systems (Thompson 2001). Rivalries can create armed conflict or remain simply hostile

in nature. There is no debate on rivalries in terms of their influence of military expenditures. Country-years with a rivalry are coded as a 1, with a coding of 0 for otherwise, with the data coming from Goertz and Diehl (1993). I expect arms races to occur in rivalries, and I utilize the rivalry data to capture arms races. An arms races involves “interactive competition between two rival states using the strength of their armed forces” (Gibler, et al. 2005: 134). From this perspective, it is difficult to parse out what would constitute an arms race that would not be considered a rivalry. This use of rivalry data to capture arms races is consistent with the literature (Goldsmith 2007). I expect rivalries and arms races to have a positive and statistically significant effect on *Defense Burden*.

The last internal influence is militarized conflict. Wars and to lesser degree Militarized Interstate Disputes (MID) are state authorized and directed militarized action toward another state in the international system. MIDS are an explicit, non-routine, militarized incident⁴⁵ in which at least one member of either state is killed,⁴⁶ which can include an occupation of territory, a clash, blockade, raid, or a declaration of war.⁴⁷ A MID can be conceptualized as a series of related militarized events, each building on the previous as an outgrowth of an earlier conflict. To capture MIDs, I chose to utilize the *Hostility Level* variable, which lists in hierarchical order the magnitude of militarized events. *Hostility Level* is coded as following, and comes from the Maoz dataset. Recall that these events all include at least one fatality, with the exception of dyad-years with no militarized action:

⁴⁵ Militarized actions are excluded from the incident category when they are provided for by treaty with, or occur at the invitation of, the targeted state such as peacekeeping operations.

⁴⁶ Ghosn and Bennett (2003)

⁴⁷ Jones, Bremer, & Singer (1967)

0= No militarized action
1= Display of force
2= Use of force
3=War

As Pevehouse and Russett (2006) point out, the greatest concern for states in the international system are fatal MIDs. MIDs constitute the actual fighting and ‘hot’ conflict, which both liberal and realist schools of thought have identified as the *a priori* issue for states (Pevehouse and Russett 2006). The management and avoidance of serious conflict is at the forefront of state decision making. I predict that states engaged in fighting, both domestically or internationally, should expect to experience an increase in defense expenditures. I expect this variable to be positive.

Additional and Alternative Control Variables

The following section discusses the additional control variables utilized in the robust chapters. While some control variables are incorporated into the base Smith (1989) model, others are alternated for individual controls discussed above. The project, as discussed, is concerned with building ‘garbage can’ models, but there is significant reason to believe that adding additional variables, especially given the strong theoretical justification for doing so, will not bias the results. Consider the approach taken by Collier and Hoeffler (2006; 2007), Goldsmith (2007), Smith and Walker (2005), among others who have built such models with as many as a dozen control variables. While this project does not endorse such an approach, it is difficult to build a model that leaves out important factors that have been theoretically verified in the literature, and have been

done since the seminal work of Smith (1989). This project argues that there are three additional variables that should be examined when considering the causes of *Defense Burden*: major power ally, regional military spending, and the cold war. Based on this assessment, the robust chapters will examine the relationship between liberal influences and military spending while taking into consideration these additional influences on military spending.

The first additional control variable is Major Power Ally, which has been theorized to play a major role in military spending decisions. While the project already includes alliances in the modeling process, all alliances regardless of characteristic are grouped together. This has led to the lack of consensus within the literature as to what role alliances have on defense spending decisions, as it is unclear whether states free ride or carry an additional burden (Olson and Zeckhauser 1966; Treddenick 1985; Gates and Teresawa 1992; Morrow 1993). Hegemonic theory and conventional wisdom among security analysis posits that smaller states maintain lower spending rates when partnering with more powerful states, while those more powerful states carry an additional burden. The U.S. nuclear security umbrella is an illustrative example of this, as many countries such as Japan, South Korea, Brazil, Germany, and others have maintained lower rates of military spending given the security guarantees they have. Furthermore, including major power alliances in the modeling process allows for a more coherent examination of the role of IGOs, given their close theoretical proximity to alliances. The major power alliance data are drawn from the same data as regular alliances and major powers discussed above. I expect this variable to be positive and significant.

The second external variable utilized is Cold War, which captures the instability caused by the series of proxy wars fought between the U.S. and Russia, and the regional instability this period of time created. Historical analysis indicates that conflicts, such as the Vietnam War and the fight against communism in Latin America, led to the emergence of conflicts that resulted in military build-ups, partly in response to instability, and partly in response to the Major Power-Client state relationship. Moreover, this time period had just come to an end right when Smith (1989) was writing. Lastly, work such as Hammond 1993 outlines how the end of the Cold War resulted in a reduction in military spending for many states. I expect this variable to be positive and significant.

Lastly, regional military spending has been demonstrated to have a substantial effect on military spending decisions by states. Flores (2011), Wendt & Barnett (1993), among others have demonstrated the substantial role the capabilities of neighboring states have on state military decisions in the absence of other threats, a notion consistent with the conflict literature that promotes contiguity as a major factor in conflicts. The mere placement of a well armed military in the region forces other states to maintain or increase their level of military spending to ensure they do not fall behind a more advanced state. With this in mind, I include in these additional models the average *Defense Burden* for all states that are within 150 miles. I expect this variable to be positive and significant.

In the robust chapters, I add in and also substitute these additional control variables. Each of the variables have their own theoretical justification for being included in modeling of *Defense Burden*. There are numerous other variables that have been associated with military spending, including domestic arms industry, civil war, regional

instability, ethnic conflict, and foreign aid. Various alterations of the modeling utilizing these control variables did not produce significantly different results, indicating that the exclusion of them from Chapters 5 through 7 does not result in omitting a robustness check.

Conclusion

This chapter has examined the data to be used in the modeling procedures found in Chapters 4 through 7. In addition, it has established the base model to be utilized. I now turn to the basic analysis of the hypotheses presented in Chapter 2.

Chapter 3 Tables and Figures

Table 3.1: Descriptive Statistics for independent and Dependent Variable

Variable	Min	Mean	Max	SD	Source
Dependent Variables					
Defense Burden	0	.031	.58	.050	COW
Human Defense Effort	0	.007	.07	.008	COW
Independent Variables					
Democratic Strength (Democracies Only)	-10	-.50	10	7.4	Polity IV
Democratic Duration (Democracies Only)	0	11.2	191	28.1	Polity IV
Legislative Institutions (Democracies Only)	0	.49	1	.51	DPI
Electoral Institutions (Democracies Only)	0	.69	1	.48	DPI
Total IGO Membership	2	49	131	24.9	COW
Total IGO Membership-Duration	0	12.8	26.3	8.27	COW/Own Coding
Total IGO Membership Institutionalization Score	3	81	210	38.7	COW/Boehmer et al Coding
Security IGOs	0	13.8	18	.08	COW/Boehmer et al Coding
PBOs	1	4.1	7	1.66	COW/Shannon 2010
IGO Power	.00006	.38	13.9	1.96	Own Coding
Total Trade as a share of GDP	0	.16	.33	.09	COW
Regional Trade as a Share of GDP	0	.05	.763	.07	COW
Economic Globalization	7.9	56.9	95.6	17.5	KOF
Total Globalization	1.99	36.94	94.78	17.8	KOF
Control Variables					
Rivalry	0	.11	1	.40	Goertz and Diehl
GDP Per Cap (pre Logged Version)	\$281	\$6,120	\$46,064	\$7,098	Gleditsch
Alliances	0	1.1	4	1.6	COW
MIDS	0	.88	4	1.6	COW
Major Power	0	.03	1	.18	Own Coding
Regime Type	-10	-.50	10	7.4	Polity IV
Major Power Ally	0	37	1	.48	Own Coding
Cold War	0	.67	1	.46	Own Coding
Regional Military Spending	0	.027	.45	.03	COW/Own Coding

Figure 3.1 Average *Defense Burden* 1960-2000

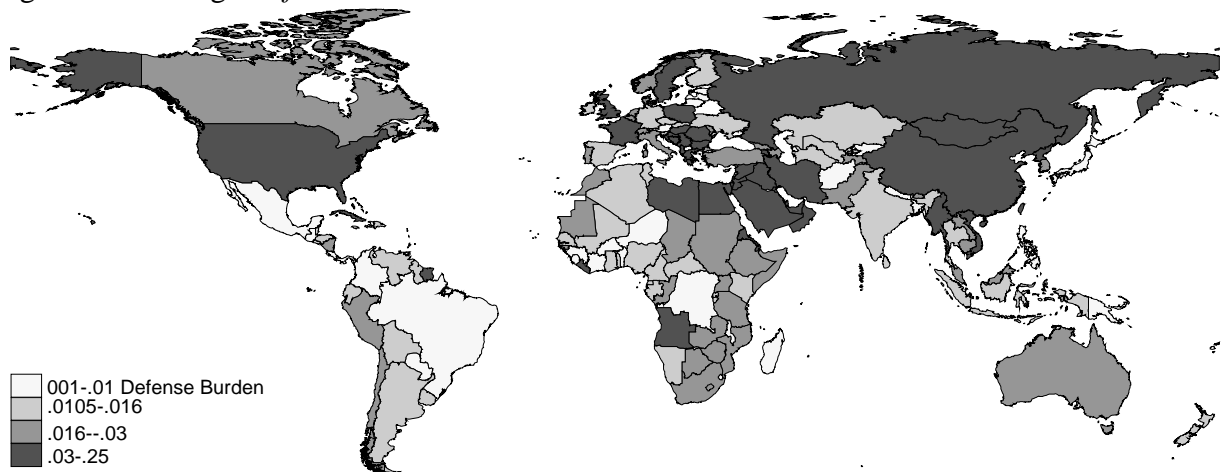


Figure 3.2 Human Defense Effort 1960-2000

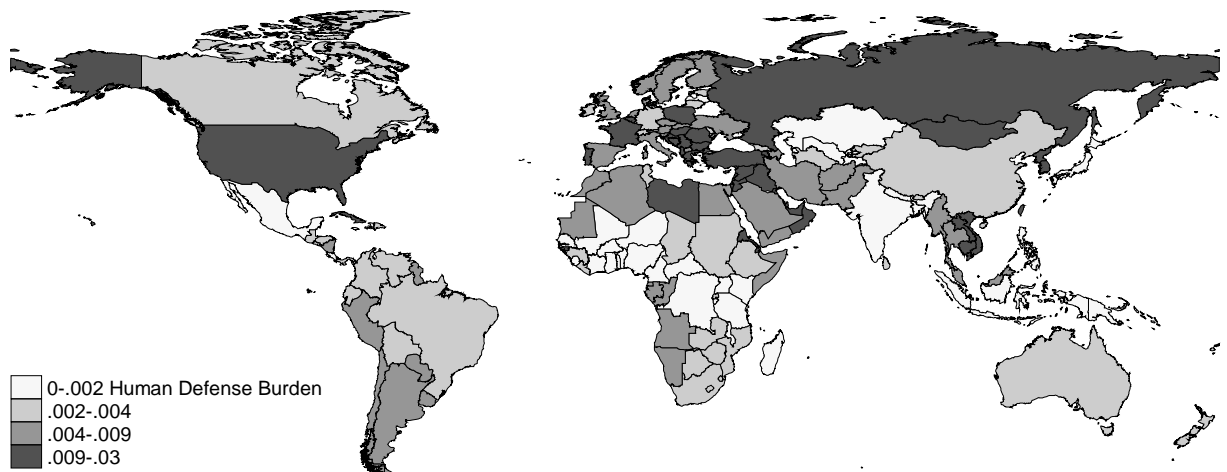


Figure 3.3 Average Democratic Strength 1960-2000

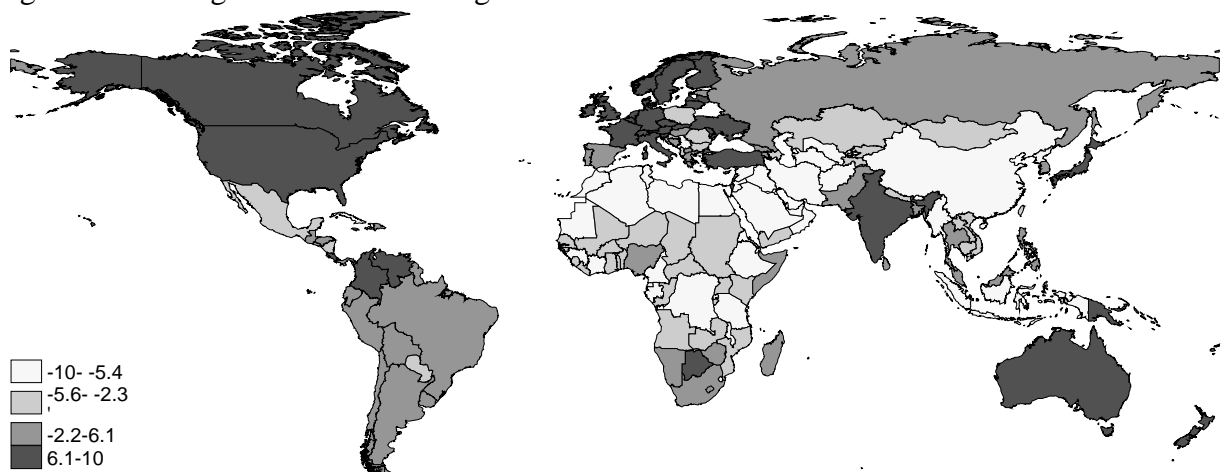


Figure 3.4 Average *Democratic Duration* 1960-2000



Figure 3.5 Average *Total IGO Membership* 1960-2000



Figure 3.6 Average *Security IGO Membership*



Figure 3.7 Total Trade 1960-2000



Figure 3.8 Average Regional Trade 1960-2000

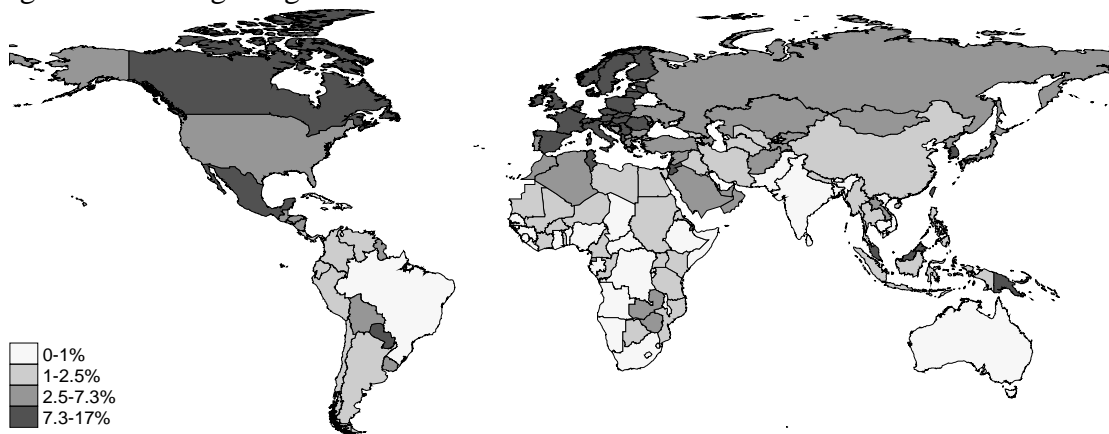


Figure 3.9: Average KOF Economic Globalization Score 1972-2000



Figure 3.10 Average Total Globalization Score 1972-2000



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Chapter 4: Evaluating the Kantian Triangle and Defense Burden

Introduction

In this chapter, I present the findings from statistical tests of the 13 hypotheses outlined in Chapter 2. I build and examine one model for each hypothesis, each with the identical control variables of conflict, arms races and alliances, regime type, and economic strength. Chapters 5 through 7 each examine a different point of the Kantian Triangle, and tackle a number of variations in the modeling, including an alternative dependent variable, spatial and temporal issues, and alterations in the control variables utilized. All models were estimated using a Prais-Winsten regression with panel corrected standard errors (PCSE), with the assumption of a first order autoregressive error process. This is a safe assumption to make given the dependent variable, defense budgets, are generated from one year to another based on the previous year's budget. This estimation strategy is consistent with previous contributions to the literature on the determinants of military spending (Fordham and Walker 2005; Goldsmith 2007; Nordhaus, Oneal, and Russett 2012), and prevents autocorrelation from biasing the results.⁴⁸ Such an approach is warranted as the data is time-series and cross sectional with a large number of cases and time periods (Beck and Katz 1995). PCSE is utilized as it tolerates temporally and spatially correlated errors, as well as heteroscedasticity (Beck and Katz 1995). As Beck and Katz (1995) point out, for OLS to work properly, "all of the error processes have to have the same variance and [...] all of the error processes [must be] independent of each other." This creates a problem, not of bias, but of efficiency. PCSE corrects these issues by taking into account the correlation of the errors, and eliminating them prior to calculation of the panel corrected standard errors.

⁴⁸ Tests of the PCSE model without Prais-Winsten demonstrated autocorrelation in the modeling.

As the reader will recall, the coefficient values for the independent variables of interest are averages of what percentage of the GDP is allocated to the military. In other words, the coefficients capture the percent of GDP increase or decrease in military spending given a one unit increase of a given independent variable of interest. Therefore, the exact amount of spending that is altered by liberal factors will be different for each state, and dependent on the size of the GDP. Each coefficient provides the percentage change of GDP that is allocated toward the military that a country can expect with an increase in liberal influences. In short, the coefficients in all the modeling where *Defense Burden* is the dependent variable are GDP figures, not actual dollar figures associated with military spending. In order to provide more context and information about how the Kantian Triangle shapes military spending, I calculate the dollar effect for each independent variable of interest that is significant, across a range of economic sizes, which are presented in Table 4.2, and discuss them in more detail as I move through the chapter. This provides a more complete picture of the actual monetary influence each variable has.

In addition, I calculate the marginal effects using the clarify program (King, Tomz, & Wittenberg 2000; Tomz, Wittenberg & King 2003) for each independent variable of interest that is significant. The marginal effects figure allows us to see the expected value of change in military spending, the dependant variable, as each independent variable is adjusted from one standard deviation (SD) below the mean to one SD above the mean for continuous variables, and 0 to 1 for dichotomous variables,⁴⁹ while holding all other variables constant. The chapter starts with the role of democracy

⁴⁹ The legislative and electoral system variables are the only dichotomous variables in the project, the rest are continuous.

on military spending, moves on to international intergovernmental organizations (IGOs), and concludes with economic interdependence. Lastly, the chapter discusses the role of the main set of control variables for the entire study.

Section 1: Democracy and Military Spending

Democratic Strength and Duration

The first portion of the study examines the role of democratic strength and duration. As discussed in Chapter 2, I argue that as democratic states further develop their democratic institutions and the longer those institutions are in place, they less those states will allocate toward the military. Model 4.1, displayed in Table 4.1, tests hypothesis 1, and the findings indicate little support for the theory. The coefficient for democratic strength is negative, but does not reach significance ($p < .30$). As democratic countries strengthen their democratic institutions, they enjoy no additional reduction in military spending. As the reader will recall the Polity2 variable is used to capture democratic strength, and the sample used in Model 4.1 includes only those states scoring a '7' or higher on the scale, resulting in a sample of only democracies. Model 4.2 adds in non-democratic states and serves to replicate the work of Goldsmith (2007) and Fordham and Walker (2005). The coefficient for democracy is clearly negative in Model 4.2, indicating that democracies spend less than non-democracies, but once states become democratic, they no longer can expect further reductions as they strengthen their democratic institutions. Figure 4.1 captures the relationship between democratic strength and *Defense Burden*. As the reader can see, democracies scoring a nine on the Polity2 score tend to increase their military spending levels, which explains the findings of

Model 4.1. One possible explanation for this outcome is that as states consolidate their democratic institutions, they experience higher economic output which results in increases in military spending. If this is the case, then the results indicate that while democratic institutions have a significant effect, other variables such as economic strength can override their influence resulting in an increase. However, the GDP Per Capita variable in Model 4.1 is significant, and consistent with the other models indicating that the economic strength hypothesis does not have much strength. Other options include the notion that newer democratic states or recently transitioned states are driving the results (Mansfield and Snyder 1995), however, testing of the role newly transitioned states⁵⁰ have on military spending found no such relationship. In sum, it is unclear why strengthening democratic institutions among democracies does not lead to a reduction in military spending. Further examination of this relationship may yield a clearer picture of this causal process in democracies.

{Table 4.1 & Figure 4.1-4.2 about Here}

While democratic strength resulted in no additional reductions in military spending, democratic duration clearly has a negative influence on military spending. As hypothesis 2 posits, the longer a state is a democracy, the stronger the connection between the people and the policy making process via the diffusion of democratic norms within society, leading to a reduction in military spending. Model 4.3 captures this relationship, which, like Model 4.1, utilizes a sample of only democracies. The coefficient for democratic duration is negative and statistically significant ($p < .049$),

⁵⁰ Mansfield and Snyder argue that newly transitioned states are more likely to increase their probability of entering into a militarized conflict because of a drive to consolidated the new regime around a common enemy. Newly transitioned states are those states that have experienced a change in democracy in the last five years.

indicating support for the argument that the longer a nation is a democracy, the less they will spend on the military. Figure 4.2 demonstrates this decrease in military spending as states retain their democratic institutions. This finding offers an interesting insight into the varying arguments about how democracy shapes military spending decisions. As the reader will recall, the argument made in Chapter 2, and codified in hypothesis 1, is that as states increased the strength of their democratic institutions, they would experience a reduction in military spending. That argument rests on the notion that the structure of democratic institutions restricts the actions of executives and other elected elites, and results in the enactment of policies that are closer to the public's preferences, which in general favor less military spending over social investments. Such structural arguments are captured by the work of Bueno de Mesquita and Lalman (1993) as well as Bueno de Mesquita, et al. (2003). The normative argument captured by democratic duration posits that the diffusion of norms created a base of public support that then changes the strategic choice and agenda of elected officials. This normative argument can trace its more modern roots back to Doyle (1986). While the structural argument has strong merit given a comparison with authoritarian states, the difference among democracies, at least according to these results, strongly favors the normative position, which posits that as states continue to hold on to even basic democratic institutions, they build a normative environment that preempts elite action, and shapes budgetary decision making.

A key question remaining from Model 4.3 is whether the results are the product of a conflation of both normative and institutional factors determining the outcome, given that the democratic duration variable may capture some of the influence of democratic strength. To account for this, I present Model 4.4, which includes both the democratic

strength and the democratic duration variables, with results indicating that among democracies, increasing institutional strength does little to reduce military spending. In fact, it increases it, while democratic duration maintains a negative and statistically significant coefficient. These results support the findings from Models 4.1 and 4.3, and confirm the position that the normative argument has supremacy over the institutional one.

Using the Clarify program, I derive first differences for Model 4.3, which can be seen in Figure 4.3. The graph demonstrates that the confidence interval for democratic duration is completely to the left of zero, indicating strong support for the hypothesis. States that move from one standard deviation below the mean (0) to one above (75), experience a -.006 reduction in the percentage of GDP associated with the military, or a 25% reduction in military spending for the average state. This indicates that the diffusion of democratic norms takes times, a notion supported by the literature. Further, Table 4.2⁵¹ displays the average savings states can expect based on the coefficient value for democratic duration. Democratic states in the 90th percentile of GDP size save upwards of \$23 million dollars in defense costs for each additional year the state has remained a democracy, and \$242,000 for the poorest of nations. Using the coefficient from Model 4.4, which utilizes both democratic strength and democratic duration, results in a slight decrease in these figures.

{Figure 4.3 and Table 4.2 about Here}

In sum, democratic duration and the normative diffusion it creates results in a reduction of military spending, while democratic strength results in no significant change, but the coefficient for democratic strength is positive and nearing significance in Model

⁵¹ All figures in Table 4.2, and similar tables in Chapters 5-7, are in 1996 US dollars.

4.4, indicating stronger democratic institutions among democracies leads to an increase in military spending. These results do not counter the findings from previous contributions to the literature examining the relationship between democratic structures and military spending (Goldsmith 2007; Fordham and Walker 2005), given that those samples included both democracies and non-democracies. It does raise questions as to how to account for the difference between democracies and non-democracies given the findings that among democracies strengthening institutions does not further reduce military spending. It may be that the difference between democracies and non-democracies in how they allocate resources has more to do with how authoritarian states function than how democratic states do, in the sense that if norms play a larger role than structure, how does the lack of structure make a difference in authoritarian states? Further, these results provide limited support for the notion that liberal factors make a significant difference, as the findings provide mixed support for the role of stronger democratic institutions in military spending decisions among democracies. If highly democratic states and authoritarian states produce the same policy in terms of military spending, what is the cause of this similar policy choice? Such questions, while not addressed here, would offer the field greater understanding of the role of liberal influences.

Parliamentary and Consensus Systems

As discussed in Chapter 2 and codified in hypotheses 3 and 4, parliamentary and consensus systems are expected to reduce their levels of military spending at higher rates than presidential systems and majoritarian ones. To examine hypothesis three, I run Model 4.5 which utilizes a sample containing only democracies. The results of the model

are displayed in Table 4.3, and the coefficient for parliamentary systems is negative but is far from being significant. Figure 4.4 indicates that parliamentary systems have slightly higher military spending rates⁵², but the relationship is not conclusive. This finding indicates that there is little difference between legislative institutional designs, once states build those democratic institutions. If there is no difference, the argument presented in Chapter 2 that parliamentary systems reduce military spending at higher rates than presidential systems has little merit. While some studies have demonstrated that parliamentary systems have more veto players which can reduce the ability of the executive to enter into conflict against the wishes of the legislative branch or other leaders (Ireland and Gartner 2001), that hypothesis does not hold up in defense spending decisions. This finding is rather interesting given the substantial differences among democracies, and indicates just how important basic democratic institutions are for reducing military spending.

{Table 4.3 & Figure 4.4 about Here}

Model 4.6 examines the role of electoral design on military spending levels, with the coefficient indicating no support for the hypothesis that consensus systems reduce military spending rates at higher levels than majoritarian systems among democracies. Rather, the coefficient is positive and significant ($p < .002$), indicating that majoritarian systems work to decrease spending over that of proportional representation based democracies. This finding counters the position that proportional representation systems increase rather than decrease military spending. Figure 4.5 demonstrates the increase in spending that occurs in proportional representation systems, further debunking the

⁵² The reader will recall that 0 = presidential system, 1 = parliamentary system. The graph clearly indicates that if anything, parliamentary systems spend more on the military than presidential systems; even if the coefficient is not significant, it does near significance.

argument that military spending rates decline when the average voter is brought closer to the policy making process. While the finding is disappointing, it does highlight the theme of this section of the chapter, which is that potential advancements in liberalization among democracies does not have a universal impact on military spending.

{Figure 4.5 About Here}

I derive first differences for Model 4.6, which can be seen in Figure 4.6. The graph demonstrates that the confidence interval for electoral systems is completely to the right of zero, indicating strong support for the position that proportional systems increase rather than decrease military spending. States utilizing a consensus system in place of majoritarian systems increase their military spending by 16%. Further, Table 4.2 displays the average savings states can expect based on the coefficient value for democratic duration. Democratic states in the 90th percentile of GDP size increase their defense budgets by \$1.2 billion dollars each year the state has remained a democracy, and \$143,000 for states in the 10th percentile. This finding is a considerable reversal from the hypothesized relationship, and indicates that there is some element within proportional representation systems driving the results. One possible reason for this outcome, is that majoritarian systems have wider swings in ideological position as one party takes power from another, resulting in substantial changes in security policy in that more liberal parties may defund the military when in power.

These findings can be summarized as follows: democratic states spend less on the military than non-democratic states, and there is variation among democracies that further shape military spending in significant way. The diffusion of democratic norms that comes with democratic duration works to decrease military spending, while proportional

representation systems increase their spending in comparison to majoritarian systems. Democratic states do not increase their spending as they strength their institutions, and parliamentary systems have no advantage over presidential systems in carrying lower defense burden levels. The mixed findings indicate that variation among democracies is important, and that the close relationship norm diffusion shares with institutional strength and correlation between electoral systems with legislative system designs offer conflating notions of what causal elements of democracy work to reduce military spending.

Section 2: IGOs and Military Spending

Total IGO Membership

This section examines the role of IGO membership on military spending, and unpacks IGO membership into six categories, (1) Total IGO Membership, (2) the average duration of membership, (3) the role of highly institutionalized IGOs, (4) security IGOs, (5) peace brokering organizations, and (6) membership in organizations with a higher portion of the world's power among its members. The findings from this section support the notion that IGO membership reduces military spending, but that security orientated organizations work to reduce military spending at higher rates than non-security organizations.

The first model in this section, Model 4.7, which is displayed in Table 4.4, captures the influence that Total IGO Membership has on military spending. As the reader will recall, Total IGO Membership is the number of IGOs, regardless of characteristics that a state is a member of in a given year. In Model 4.7, *Total IGO Membership* is negative and statistically significant, and translates substantively into a .0003% decrease in military spending as a share of the national economy for each

additional organization a state becomes a member of. Figure 4.6 captures this relationship graphically, as the downward trend is visible in the figure. Displayed in Table 4.2 is the average savings countries can expect for each additional IGO they join. The richest countries can expect an \$89 million savings for each organization, while the average state by GDP size saves slightly over \$5.6 million. Further, the average state holds 47 memberships, meaning those states in the 90th percentile for GDP can expect a \$4.1 billion annual reduction in military spending, while the average state by GDP experiences a \$263 million annual reduction.

{Table 4.4 & Figures 4.6 about Here}

Consider Canada, who in 1970 had a GDP of over \$300 billion.⁵³ Based on the results, Canada could expect to have an average reduction in military spending of nearly \$27 million (1996 US dollars) for each IGO membership they held that year. For Cambodia in 1970, the national economy was \$10.4 billion, and could expect to have an average reduction of just over \$936,000 for each organization the country became a member of that year. As these examples illustrate, it is important to caution that the estimated reduction is a simple average, which does not translate into the same amount of funds for each country, and for each IGO they join. With that said, however, there is strong evidence to suggest that IGOs reduce military spending, and while the actual dollar amount is small, it constitutes a substantial reduction.

Figure 4.8 displays the first differences for Model 4.7, which indicates that Total IGO Membership has a negative influence on *Defense Burden*. As states move from one standard deviation below the mean (26) to one above (68), they experience a -.01 reduction in the percentage of GDP associated with the military, or a 58% reduction in

⁵³ These figures are also in 1996 US Dollars.

military spending for the average state.⁵⁴ Moreover, as states move from the minimum to the mean value they can expect a -.004 decrease, from the mean to the 100th percentile a -.008%, reduction and from the 75th percentile to the maximum, a -.006% decrease. This indicates that the majority of the influence of *Total IGO Membership* is concentrated in the 75th percentile of the variable, suggesting that it is the states with the highest rates of IGO membership that experience the largest reductions in military spending. However, as states move from having zero IGO memberships to one, they can still expect a -.00009% decrease in military spending rates, indicating that the results are not a product of just the highly networked European states making substantial reductions in military spending given the umbrella protection of the United States or a European Defense Pact, but rather a more concentrated effect for states highly integrated into IGO networks. With that said, European states have benefited the most from the relationship between IGO membership and military spending. Chapter 6 examines models that accounts for regional variation among states, and produce results consistent with the results presented here.

(Figure 4.8 about Here)

This research provides the first systematic examination of IGO membership on *Defense Burden*, and findings indicate that IGO membership works to reduce military spending. These findings suggest that IGO memberships have a pacific influence on security policy by changing the internal calculations of states who substitute IGO membership for military strength, and that the influence of IGOs extends beyond dyadic relationships. IGOs have established their role in the international system by

⁵⁴ As with all first difference estimates examined, this is based on the average state's military spending levels as a share of GDP.

coordinating the actions of numerous states on a number of vital issue areas, including security. The findings also suggest that IGOs are important in the international system because they shape and encourage pacific domestic behavior in the form of lower military spending rates, in addition to providing stability and peace between member states. It also suggests that the Realist notion that states will militarize, develop power, and advance their interests through military means at all times lacks the power to explain the influence IGO memberships have on military planning.

The expectation and prediction of the theory presented above is that states will reduce their military budgets, not eliminate them, dramatically reduce them, or completely diminish the ability of a state to defend itself. With that said, it is apparent based on these results that IGO membership shapes the way states view the world they live in and the security threats contained within. How IGOs shape military planning is still unclear. This modeling has demonstrated this relationship, but has not isolated the specific element of IGOs that change state behavior, or a specific subset of organizations. Likewise, the dependent variables are not disaggregated, so the results do not communicate what weapon systems or what types of personnel states are going without as they join more IGOs.

IGO Duration

IGO memberships continue to reduce spending not just in the year following the portfolio being established, but at relatively similar rates years after the membership has been established. Model 4.8, which examines hypothesis 5 and can be found in Table 4.4, indicates that states continue to reduce their levels of military spending as the duration of

their IGO membership portfolio grows. In other words, the longer states are members to larger number of organizations, the more they can expect to reduce their military spending. The coefficients, however, indicate that states do not have a substantially higher reduction in *Defense Burden*, indicating a more level approach to military spending reductions as time progresses. Figure 4.9 shows a clear decline in military spending as values for *IGO Duration* increases. The directionality of the relationship is clear, but the results indicate no exponential decline in military spending rates compared to that of Total IGO Membership. Given that the coefficients for both *Total IGO Membership* and *IGO Duration* are the same size, the predicted reductions in military spending in real dollars is the same, with the largest countries experiencing a \$89 million dollar reduction for each additional average year their IGO portfolio membership increases, and a little under \$600,000 for the poorest of countries.

{Figures 4.8 and 4.9 about Here}

Figure 4.10 displays the first differences for Model 4.8, and it is clear that the confidence interval for *IGO Duration* is completely to the left of zero indicating strong support for the hypothesis. As states move from one standard deviation below the mean (2.1) to one above (17.1), they experience a -.005 reduction in the percentage of GDP associated with the military, or a 16% reduction in military spending for the average state.⁵⁵ Likewise, as states go from the minimum value of *IGO Duration* to the maximum value, they can expect a -.005% decrease, from mean to maximum value, a -.0009 decrease, from mean to 75th percentile a -.001%, and from the 75th percentile to the maximum, a -.003% decrease. This finding indicates that the effects of *IGO Duration* are

⁵⁵ As with all first difference estimates examined, this is based the average state's military spending levels as a share of GDP.

concentrated on the states with the highest levels of *IGO Duration*. This demonstrates the importance of each additional year a state maintains and grows its IGO portfolio, in that there is not a specific threshold states must reach before they reap the benefits of their IGO memberships, yet the bulk of the influence is retained to the states with the largest values. This is a vital and important finding that reinforces the argument presented in Chapter 2. Each year that a state maintains an IGO membership reinforces the pacific elements contained in those organizations.

{Figure 4.10 about Here}

It is important to note that the *IGO Duration* variable is its own measurement, as it only correlates with *Total IGO Membership* at .69, indicating that the results presented in this chapter tell us a great deal about how the duration of membership shapes military spending. The results indicate that as states average membership increases, they spend less on military spending. This measure is not a count of memberships but the average duration, giving support to the notion discussed above that states that have lower rates of IGO memberships also enjoy the pacific benefits of those ties. Further, as Chapter 6 touches on briefly, lagged versions of *Total IGO Membership* at five and ten years produce similar patterns of military spending reductions as *Total IGO Membership*, which is set at t-1. These results demonstrate the power of IGO memberships, and speak directly to the conflict resolution mechanism of the organizations which become embedded in the security decision making process of states. As states maintain memberships, they become reliant on IGOs to serve as a substitution for high rates of military spending.

Institutionalization and Security IGOs

As the reader will recall, I argue in Chapter 2 that as states increase the number of memberships in more highly institutionalized IGOs and IGOs that have a security focus, they will reduce their military spending at higher levels than if they do not have a security focus, and at higher levels than Total IGO Membership. Model 4.8, displayed in Table 3, tests this proposition with results that indicate support for hypothesis 7. The coefficient for variable Total IGO Membership-Institutionalization is negative and statistically significant, indicating that as states increase the number of IGO memberships, and as those memberships are with IGOs that have higher scores on the aforementioned institutionalization coding scheme borrowed from Boehmer, et al. (2004), they will reduce their level of military spending. Figure 4.11 demonstrates this relationship graphically, and the downward slope is clearly discernible. Figure 4.12 displays the first differences, and the confidence interval for Total IGO Membership-Institutionalization is clearly to the left of zero. As states move from one standard deviation below the mean (45) to one above (107), they experience a -.019 reduction in the percentage of GDP associated with the military, or a 61% reduction in military spending for the average state, a very similar figure to that of *Total IGO Membership*.

{Figures 4.11 and 4.12 about Here}

Table 4.2 captures the estimated dollar amount states can expect to save for each additional unit of their Total IGO Membership-Institutionalization score. For the smallest of economies, states can expect nearly a million dollar reduction, with the average state saving just under \$2 million for each additional unit increase, while the largest economies can expect a \$29 million reduction with each additional score,

indicating the strong influence that highly institutionalized IGOs have on military spending decisions. The findings are rather similar to that of *Total IGO Membership*, and indicate further support for the notion that as states increase the number of IGOs which are progressively more institutionalized the more reduction in military spending they can expect to experience.

What we learn from this relationship, however, is clouded by the high rate of correlation between the Total IGO Membership variable, and the Total IGO Membership-Institutionalization measure (.90). To account for this, I run Model 4.10, which splits the *Total IGO Membership* variable into two groups, one that contains only IGOs that are considered to be security orientated, and another variable to capture all others. The coefficient for security IGOs is negative and statistically significant, while the remaining non security IGO variable remains negative but does not reach significance. This finding demonstrates the power of strongly institutionalized and security orientated organizations to shape the security decision making, but discounts much of the findings thus far, in that while IGO membership clearly influences military spending rates, it is a small sub-set of these organizations that have the bulk of the influence. A list of these organizations can be found in Appendix A.

Table 4.2 captures the estimated savings states can expect when adding an additional security IGO to their portfolios. The average state by GDP size saves nearly \$18 million annually for each additional security IGO they are members to, indicating substantial savings given that many countries are members to several security organizations. The wealthiest of states can expect a nearly \$229 million reduction, while the poorest around \$1.5 million, both substantial sums in relative terms. Figure 4.13

captures this relationship graphically, while figure 4.14 examines the first differences for Model 4. The confidence interval for security IGOs is clearly to the left of zero in Figure 4.14, indicating strong support for the argument that security IGOs work to reduce military spending. As states move from one standard deviation below the mean (6.8) to one above (14.2), they experience a -.019 reduction in the percentage of GDP associated with the military, or a 59% reduction in military spending for the average state.⁵⁶ This indicates that the vast majority of *Total IGO Membership*'s influence on military spending can be accounted for by security IGOs.

{Figure 4.13 and 4.14 about Here}

The coefficient for the non-security IGOs indicates that there are some non-security IGOs that influence security spending given that it neared significance (P. <.28), but that the relationship is not universal for all IGOs regardless of the organization's characteristics. Moreover, this finding indicates that security organizations reduce military spending at three times the rate of the average organization. These findings also provide an important finding in that the model includes all of the non-security IGOs, whose coefficient is negative but does not reach significance. In sum, security IGOs have the bulk of the influence, and while this finding contradicts the argument that all IGOs work to decrease military spending, it still represents a substantial advancement of liberal theory, that some IGOs work to shape state behavior in pacific ways.

Peace Brokering Organizations

⁵⁶ As with all first difference estimates examined, this is based on the average state's military spending levels as a share of GDP.

While security specific IGOs work to reduce military spending, Peace Brokering Organizations (PBOs) do not. As Model 4.11 featured in Table 4.4 demonstrates, PBOs have no significant influence on military spending. When a control variable for non-PBOs is put into the model, it is negative and significant, while the PBO variable is negative, but does not approach significance ($P < .30$), indicating that there may be some PBOs that work to increase military spending, but that it is not a universal relationship across the entire group. The reader will recall that PBOs are a subset of those IGOs that score a three on the Boehmer, et al. (2004) institutionalization index, but also demonstrate the ability to intervene in the conflicts of member states and resolve salient disputes (Shannon 2010). The coefficient for PBOs in Model 4.11 is positive and nearing significance. The model includes all IGO Memberships that are not PBOs. Figure 4.15 demonstrates the negative relationship between PBOs and defense burden graphically. These findings offer an interesting counter punch to the analysis presented above. Additional modeling presented in Chapter 6 demonstrates that while there is some overlap between PBOs and Security IGOs, as they correlate at .62, there are clearly some security IGO that reduce military spending while others increase it. Moreover, in Model 4.11, non-PBO organizations are included and the coefficient is negative and significant, indicating that not all security organizations work to decrease military spending rates among member states. These organizations are listed in Appendix A, and offer an insight into the functioning of IGOs on military spending levels. Clearly more work must be conducted to parse out which security IGOs work to reduce spending and which ones do not, but what is clear is that some PBOs work to increase spending while Security IGOs reduce it.

{Figure 4.15 about Here}

IGO Power

The last IGO characteristic examined in this project is the power base of the members. The variable used to capture this is *Total IGO Power*, which as the reader will recall captures the power base of a state's IGOs portfolio. Model 4.12 presented in Table 4.4 displays the results, with the coefficient for *Total IGO Power* being negative but not reaching statistical significance ($P. <.28$). These results indicate that just because states join more powerful IGOs in terms of their membership base, they cannot expect to reduce their military spending. These results hold up when controlling for membership in IGOs with a security mandate. Figure 4.16 demonstrates this relationship in graphical form, and it is clear that there is not a positive relationship with the fitted values. The takeaway from this finding is that there may be a great number of IGOs created and driven by a powerful membership base, but that does not mean such memberships will drive military spending down.

{Figure 4.16 about Here}

Section 3: Dependence on the International Economy and Military Spending

Total Trade

Thus far, the results have, for the most part, supported the arguments presented in Chapter 2, and have offered support for the notion that the Kantian Triangle works to reduce military spending in many instances. However, the last point of the triangle, interdependence on the global economy, has a strong positive influence on military spending, a finding that contradicts the theoretical position of the project. Total trade, regional trade, economic globalization, and overall exposure to globalization were

theorized in Chapter 2 to decrease military spending, as states build networks and tools to avoid conflict and reduce tension. Table 4.5 contains the models for this section, and Model 4.13 tests the proposition that total trade, calculated as a share of national GDP, has a negative effect on military spending. The reader can see that the coefficient for total trade is positive and statistically significant, indicating that as states increase their trade flows they can expect to spend more on defense. Figure 4.17 demonstrates the relationship graphically. Substantively, the results indicate that if a country's entire GDP consisted of trade, then they could expect a 1% increase in their military spending as a share of GDP, which in practical terms means a nearly 30% increase in military spending given that the average state spends 3.1% of their GDP on the military for the period of study. Given how such an outcome is unlikely for most states, a mere 30% of GDP being associated with trade would result in a 10% increase in the average state's defense budget. Table 4.2 presents the dollar figures states could expect their defense budgets to fluctuate based on the size of their GDP, and the results indicate substantial increases in military spending. For the largest of economies, the figure is over \$35 billion, and the smallest economies experience an increase of \$238 million, indicating substantial increases in military spending as the flow of trade increases. Consider the military budget of Norway in 1993, which was \$3.4 billion. A mere 30% increase in trade would result in a \$340 million increase in military spending, a substantial sum even for a wealthy country.

{Figure 4.17 about Here}

The first differences analysis yields interesting findings as well and are presented in Figure 4.18, with the confidence interval clearly to the right of zero, indicating strong

support for the notion that trade increases military spending. As states move from one standard deviation below the mean (.082) to one above (.25), they experience a -.02 reduction in the percentage of GDP associated with the military, or a 51% increase in military spending for the average state.⁵⁷ This indicates that the liberalization of the economy further entrenches the need to maintain high levels of military spending. This is a complete reversal from the predicted outcome this study has advanced, in that military spending should decline as states create more fruitful and cooperative exchanges with other nations, thus reducing tension, and increasing non-violent alternatives to conflict and opposing interests.

{Figure 4.18 about Here}

The results, while disproving the theory offered in this project, yield substantive and theoretically interesting findings that help shape the field's understanding of military spending. If trade increases military spending, then the adoption of liberal policies, especially neoliberal policies, raises serious questions as to the pacific effect liberalism as a whole has on states. While liberalism has a pacific effect among dyadic pairs, there is no universally pacific monadic relationship between states and liberalism. In other words, the examination of the monadic relationship states have with liberalism has not produced a universal pacific outcome, indicating that liberalism's influence and reach in shaping state behavior as Kant argued is limited.

Any explanation or theory offered here to explain these results would be a post hoc attempt. Nevertheless, there are a number of explanations that might help explain this disappointing finding, at least in terms of the predictions made in this project.

⁵⁷ As with all first difference estimates examined, this is based the average state's military spending levels as a share of GDP.

Clearly, one explanation can be found in the realist literature, which argues that states with higher volumes of trade have more influence and power to assert those interests in the international realm. Another explanation, which is explored in more detail in Chapter 8, which examines Brazil's experience with liberal influences and defense spending, is that prestige and international influence, which is often associated with increases in trade volume, results in state leaders looking to demonstrate their ability to project power and to be important players in the international system. Having military capabilities sends the message that if the time comes they have the power to resist influence on all issues, including trade.

Regional Trade

While international trade works to increase military spending rates, high levels of regional trade work to decrease the level of defense spending a nation undertakes. Model 4.14 captures that relationship, with the coefficient for regional trade being negative and statistically significant, while Figure 4.19 captures the relationship graphically. Model 4.14 also includes a non-regional trade variable that captures all trade conducted outside the region to ensure that the value for regional trade is not conflated with non-regional trade. The coefficient value of .03 indicates that if regional trade were to make up the entirety of the economy, that states could expect a 3% increase in the overall amount of GDP that is associated with military spending, which would amount to a nearly 100% decline in military spending for the average state. The average state, which has around 9.5% of their GDP associated with regional trade, has a 10% decline in military spending on account of regional military spending. The first differences calculations presented in Figure 4.20 clearly demonstrate that the regional trade confidence interval is left of zero

while the non-regional trade confidence interval is clearly to the right of zero. As states move from one standard deviation below the mean (.08) to one above (.27), they experience a -.009 reduction in the percentage of GDP associated with the military, or a 29% reduction in military spending for the average state.⁵⁸ The monetary values for total trade presented in Table 4.2 are also consistent with the influence total trade has on military spending, with the largest of economies experiencing an \$11 billion decrease in spending, and the smallest economies a \$73 million decrease, on average. Figure 4.20 demonstrates the relationship in graphical form.

{Figure 4.19 & 4.20 about Here}

This finding offers strong support for the hypothesis that regional trade works to decrease tension among neighbors, who are the center focus of state security policy in many countries. Maintaining strong economic ties with neighbors clearly has a negative effect on military spending. The finding further advances the field and makes a considerable contribution by outlining the areas in which some types of trading ties can work to reduce military spending, furthering the liberal notion that economic openness is a pathway for more pacific behavior.

Globalization

Economic liberalization is not confined strictly to trade. Table 4.5 holds Model 4.15 which examines the two KOF measures of economic globalization and total globalization and their role in influencing defense spending levels. It is clear from these models that economic globalization, which as the reader will recall includes FDI,

⁵⁸ As with all first difference estimates examined, this is based the average state's military spending levels as a share of GDP.

portfolio payments, and trade restriction, works to increase military spending. However, overall globalization that includes the economic indicator as well as social and political globalization, which are detailed in Chapter 3, does not work to increase or decrease military spending. In essence, the findings indicate that the varying levels of globalization cancel each other out, given that the coefficient is negative but does not near significance. The reader will recall that the KOF's Total Globalization Index includes social, political, and economic globalization with political globalization, capturing IGO memberships which have a negative relationship with military spending. Further modeling not reported here shows that social globalization does not have a definitive impact on defense spending. It is difficult to parse out the influence of the additional elements of economic globalization beyond trade levels, however, an examination of FDI's role on military spending indicates no significant relationship. Figure 4.21 captures the relationship between economic globalization and *Defense Burden*, while Figure 4.22 examines the role of total globalization and *Defense Burden*. It is clear from Figure 4.21 that as states increase their level of exposure to the forces of globalization they increase the share of the overall GDP that is dedicated to military spending, while Figure 4.22 illustrates the inconclusive nature total globalization has on *Defense Burden*.

{Figures 4.21 & 4.22 about Here}

Figure 4.23 captures the first differences from Model 4.15, and as the reader can see the confidence interval for economic globalization is clearly to the right of zero, indicating strong support for the notion that economic globalization increases military spending. As states move from one standard deviation below the mean (28.4) to one

above (68.6), they experience a .008 increase in the percentage of GDP associated with the military, or a 25% increase in military spending for the average state. In dollar terms, each additional value of the variable results in a \$3.7 million increase for the average state by GDP size, and \$90 million for the largest states. With the average state having a value of 46 on the scale, this means that the average state in both GDP size and globalization experiences a \$170 million increase in military spending annually given their exposure to the international marketplace.

{Figure 4.23 about Here}

Why does economic globalization and trade increase military spending rates? In part, the story is contained in the fact that trade correlates highly with GDP. But as Chapter 7 will demonstrate, models that control for GDP and growth do nothing to slow down the influence trade has on military spending, indicating that the story is more complicated than simple economic strength explaining the relationship. In Chapter 8, I argue that Brazil's mid 1990's increase in military spending, which occurred during an explosion of trade, is due in part to the desire of the nation's leaders to demonstrate their proficiency in economic matters as well as security. Building a capable modern military is one way states can communicate to the world their interests and their ability to achieve their interests.

Section 4: Connections and Interactions: How Does the Kantian Triangle Come Together?

This section provides an examination of how the pieces of the Kantian Triangle work in tandem to shape military spending levels in countries. Thus far, this study has demonstrated that varying changes among democracies rarely lead to changes in military spending, that IGO memberships, especially security orientated ones, work to reduce

military spending, while international trade and economic globalization work to increase military spending. Given the contributions of Goldsmith (2007) and Fordham and Walker (2005), I included measures for regime type in all modeling conducted thus far, with the exception of models that utilize democracy-only samples. Therefore, the conclusions that have been drawn on the relationship between IGO membership and economic interdependence have been conducted while considering the role of regime type. This section examines if all aspects of the Kantian triangle work to shape military spending consistently when jointly considered.

Table 4.6 captures Models 4.17-4.22, which examine a range of combinations of trade and IGO variables, while omitting the regime type variable. The results indicate strong support that neither the trade variables or the IGO variables are causing the significance we see in those variables in the modeling presented in sections 2 and 3 of this chapter. Models 4.23 & 4.24, which are displayed in Table 4.7, examine all points of the Kantian Triangle. Model 4.17 captures regime type, *Total IGO Membership*, and Total Trade. All three of the variables remain consistent. Model 4.24 exchanges Total IGO Membership for security IGOs, given the finding that security IGOs are responsible for the bulk of the influence that IGOs have on military spending. This model indicates similar findings to that in Model 4.23, with each variable maintaining its directionality and significance level, indicating that these three factors operate independent of one another. No one pair of the three main variables correlates above .50. Further, the strength of the coefficients, as indicated in Model 4.24, indicates that the three main variables influence military spending rates at similar levels as is found in the modeling throughout the project. The conclusion that is drawn from this is clear: these three forces

work together to shape military spending, albeit in different directions. Moreover, not one of the liberal variables is functioning as an omitted variable in the main modeling. In other words, the significance of security IGO coefficients is not dependent on including trade variables. Likewise, removing the regime type variable does not alter either the economic interdependence or IGOs coefficients, indicating that neither of these elements are dependent on one another.

{Table 4.6 and 4.7 About Here}

Section 5: Control Variables

This section discusses the performance of the control variables for all modeling in the project, including Chapters 5 through 8, with the exception of the additional control variables in the robust chapters. The choice to discuss the performance of the variables in one place was made for a number of reasons, the primary one being that the dependent variable is the same in almost every model presented in this project, with the exception of the alternative measure for *Defense Burden, Military Population*. Given this, a discussion of control variables for each model would be redundant, and quite frankly would add more unpleasantness to what is already a rather long document. With that said, the second reason is that few, if any, of the control variables are controversial choices, and for the most part they have performed as expected. Where criticism could be levied, if it were to be levied, would be the overall choice of control variables. However, in terms of accurately capturing the relationship between the Kantian Triangle and military spending, the choices have been defended in previous sections as well as through the robustness checks in Chapters 5 through 7. Moreover, the discussion of the

basic model in Chapter 3, and the fact that the modeling choices are consistent with the major contributions to the literature on the topic, lead to the conclusion that the specification of the model is correct. I first discuss internal and then external factors.

As the reader will recall, the main internal variables are GDP Per Capita, regime type, and major power. There is not much to add to a discussion about the role of GDP Per Capita in the modeling process. This is by far one of the most consistent control variables that is positive and statistically significant in most models. GDP Per Capita is clearly one of the strongest predictors of military spending. Major power was typically positive and significant, indicating that major powers spend more on their militaries than non-major powers. This finding is consistent with previous contributions to the literature, and offers an indication of the proper specification of the model. While not every model produced a statistically significant coefficient, overall, the coefficients neared significance if they did not reach it. The last internal control variable, regime type, which was discussed in section one of this chapter in more detail, maintained its directionality and significance level throughout the various changes to the modeling strategy.

External factors take up considerably more of the modeling process. The first variable, alliances, was positive and significant or approaching significance in all of the modeling. In very few instances, and usually with the alternative dependent variable or an assortment of control variables, was the alliance variable not positive. This is consistent with previous contributions to the literature on the relationship between alliance memberships and military spending. As is the case, varying states spend more or less depending on their position in an alliance.

Rivalry and military conflict were both typically positive and significant throughout the study. While military conflict as captured by the hostlev variable from the MIDS project was more consistent than rivalry, they both clearly play a positive role on military spending. This indicates that military spending is greatly influenced by the threat and occurrence of militarized conflict with other states. While this is not a surprising result, it does, however, demonstrate the importance of including it in the modeling process. As the robust chapters will demonstrate, modeling that removes the lagged dependent variable produces larger coefficients and stronger z scores for the main control variables discussed here. This offers further evidence as to the proper specification of the modeling conducted in this project.

Conclusion

This chapter has provided the basic analysis of the hypotheses presented in Chapter 2, and has examined the combined effect of the Kantian Triangle's relationship on military spending. It is clear from the analysis that the Kantian Triangle does not have a universal effect on military budgets. States who establish democratic institutions dramatically reduce military spending, and that variations of these established democracies vary significantly in terms of democratic strength, duration, electoral and legislative institutions. The longer a state is a democracy the more they reduce their military spending levels, indicating support for the normative hypothesis outlined in Chapter 2, while proportional representation systems work to increase military spending.

IGOs work to reduce military spending, as do the duration of those memberships. IGOs with higher levels of institutionalization and a security focus work to reduce military spending at higher levels than organizations without such focuses. Not all security focused organizations reduce spending, as the results indicate that Peace Brokering Organizations do not. Lastly, I established that exposure to the international marketplace works to increase military spending, yet regional trade decreases military spending leading to the overall conclusion that the Kantian Triangle does not have a universal pacific influence on defense spending decisions. The next three chapters examine the three points of the Kantian Triangle in more detail, making important changes in the modeling, and parsing out how temporal and spatial issues shape the results.

Chapter 4 Tables and Figures

Table 4.1: Democracy and Defense Burden 1960-2000

Variable	Model 4.1 Democratic Strength (Democracies Only)	Model 4.2 Democratic Strength (All States)	Model 4.3 Democratic Duration (Democracies Only)	Model 4.4 Democratic Duration and Democratic Strength (Democracies Only)
Democratic Strength	-.0001 (.0004)	-.001*** (.0002)		-.00007 (.00005)
Democratic Duration			-.0002** (.00008)	-.001* (.0008)
Alliance	.003*** (.0006)	.003** (.001)	.002** (.0009)	.003*** (.0006)
Rivalry	.006** (.002)	.005** (.001)	.006* (.002)	.006** (.002)
GDP Per Capita (Logged)	.008** (.003)	.008** (.002)	.008* (.004)	.01* (.004)
MIDS	.00008 (.0002)	.0005^ (.0002)	.0003 (.0002)	.00008 (.0002)
MAJ Power	.226 (.001)	.017* (.007)	.04*** (.006)	.009** (.002)
Constant	-.046* (.022)	-.044* (.021)	-.04 (.03)	-.05^ .02
Adjusted R ²	.15	.03	.12	.15
N	1464	4579	1515	1462
Rho	.771	.773	.796	.767

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10
Coefficient (Standard Error)

Table 4.2: Calculated Costs Savings by GDP Percentile (in 1996 US Dollars)

Variable	10%	25%	50%	75%	90%
Democratic Strength (Democracies Only)	-\$781,000	-\$2,570,000	-\$9,160,000	-\$54,300,000	- \$243,000,000
Demduration (Democracies Only)	-\$242,000	-\$974,000	-\$3,280,000	-\$19,780,000	-\$23,400,000
Electoral System	\$143,264	\$576.608	\$1,941,760	\$1,170,976,000	\$1,207,680,000
Total IGO Membership & IGO Duration	-\$597,000	-\$1,749,000	-\$5,610,000	-\$29,160,000	-\$89,700,000
Institutionalization	-\$398,000	-\$583,000	-\$1,870,000	-\$9,720,000	-\$29,900,000
Security IGOs	-\$1,990,000	-\$5,830,000	-\$18,700,000	-\$97,200,000	- \$299,000,000
Total Trade	\$238,800,000	\$699,600,000	\$2,244,000,000	\$11,664,000,000	\$35,880,000,000
Regional Trade	-\$73,630,000	215,710,000	- \$691,900,000	- \$3,596,400,000	- \$11,063,000,000
KOF Economic Globalization	\$398,000	\$1,116,000	\$3,740,000	\$19,440,000	\$90,800,000

Table 4.3: Democratic Institution Variation and Defense Burden 1975-2000

Variable	Model 4.5 (Democracies Only)	Model 4.6
Legislative System	-.003 (.002)	
Electoral System		.004** (.001)
Alliance	.002*** (.0006)	.002*** (.0006)
Rivalry	.006** (.002)	.007** (.002)
GDP	.006* (.003)	.006* (.002)
MIDS	-.00004 (.0002)	-.00001 (.0002)
MAJ Power	.02** (.008)	.02** (.007)
Constant	-.03 (.02)	-.04^ (.02)
Adjusted R ²	.12	.15
N	1381	1364
Rho	.882	.784

Table 4.4: IGO Membership and Defense Burden 1965-2000

Variable	Model 4.7 Total IGO Membersh ip	Model 4.8 IGO Duration	Model 4.9 Institution alization Score	Model 4.10 Security IGOs (Level 3 Only)	Model 4.11 Peace Brokering Organizati ons	Model 4.12 IGO Power
Total IGO Membersh ip*	-.0003*** (.00009)			-.00008 (.0001)	-.0004*** (.001)	
IGO Duration		-.0003* (.0002)				
Institution alization Score			-.0002*** (.00006)			
Security IGOs				-.001*** (.0005)		
PBOs					-.001 (.0009)	
IGO Power						-.001 (.0009)
Alliance	.002** (.0009)	.003** (.001)	.003** (.001)	.003 (.001)	.003** (.001)	.003** (.001)
Rivalry	.006** (.002)	.005** (.001)	.005** (.001)	.005** (.001)	.005** (.001)	.005** (.001)
GDP	.01*** (.002)	.008** (.002)	.01*** (.002)	.01*** (.003)	.008** (.002)	.008** (.002)
MIDS	.004^ (.0002)	.0005^ (.0002)	.0005^ (.0002)	.004^ (.0002)	.0005^ (.0002)	.004^ (.0002)
MAJ Power	.01** (.006)	.01* (.006)	.025*** (.007)	.022** (.007)	.019* (.007)	.024** (.007)
Regime Type	-.001*** (.0002)	-.001*** (.0002)	-.001*** (.0002)	-.001 (.0002)	-.001*** (.0002)	-.001*** (.0002)
Constant	-.04 (.02)	-.042** (.021)	-.045** (.021)	-.04* (.022)	-.04* (.021)	-.04* (.021)
Adjusted R ²	.04	.03	.04	.04	.03	.03
N	4579	4579	4579	4579	4579	4579
RHO	.775	.783	.783	.786	.782	.779

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

* In models 4.10 and 4.11, the total IGO Membership variable is the number of IGOs that are either non-Security IGOs in model 4.10 or non-PBOs in model 4.11.

Table 4.5: Economic Interdependence and Defense Burden 1960-2000

Variable	Model 4.13 Total Trade	Model 4.14 Regional Trade	Model 4.15 KOF Economic Globalization	Model 16 KOF Total Globalization
Total Trade*	.12*** (.024)	.09*** (.014)		
Regional trade		-.037*** (.009)		
Economic Globalization			.0002*** (.00001)	
Total Globalization				-.0001 (.0001)
Alliance	.0007 (.0004)	.0006 (.0004)	.0002 (.0003)	.001* (.0006)
Rivalry	.003* (.001)	.002* (.001)	.002^ (.001)	.006*** (.001)
GDP Per Capita (Logged)	.005^ (.003)	.01** (.004)	.003 (.002)	.006** (.001)
MIDS	.0003 (.0002)	.0003 (.0002)	-.00002 (.0002)	.0001 (.0002)
MAJ Power	.006 (.007)	.006 (.007)	.012 (.011)	.01* (.006)
Regime Type	-.0004 (.0001)	-.0004*** (.0001)	-.0003^ (.0001)	-.0009*** (.0002)
Constant	-.004 (.004)	-.02 (.016)	.009^ (.003)	-.06* (.028)
Adjusted R ²	.04	.03	.07	.04
N	3855	3855	2751	2613
Rho	.796	.815	.842	.797

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

*Model 4.12 includes not total trade, but total trade minus regional trade.

Table 4.6 IGO Membership and Economic Interdependence 1970-2000

Variable	Model 4.16 IGO Membersh ip and Total Trade	Model 4.17 IGO Membersh ip and Regional Trade	Model 4.18 Security IGOs only and Total Trade	Model 4.19 IGO Membersh ip and KOF Economic Globalizati on	Model 4.20 Security IGOS Only and Regional Trade	Model 4.21 PBOs and Total Trade
IGO Variable	-.0001** (.00007)	-.0003** (.0001)	-.00** (.0003)	-.0002* (.0001)	-.001** (.0004)	-.001* (.0009)
Trade Variable	.12*** (.024)	-.005* (.002)	.118*** (.023)	.0001 (.0001)	-.03* (.01)	.011*** (.002)
Alliance	.001^ (.0006)	.003* (.001)	.001^ (.0006)	.001** (.0004)	.003** (.001)	.003** (.001)
Rivalry	.003^ (.002)	.005* (.002)	.003^ (.002)	.005** (.001)	.005* (.001)	.005** (.001)
GDP Per Cap (Logged)	.002 (.003)	.007* (.003)	.008* (.003)	.008* (.004)	.009** (.003)	.008* (.002)
MIDs	.0003 (.0002)	.0005^ (.0002)	.0003 (.0002)	-.00004 (.0002)	.0004^ (.0002)	.0005^ (.0002)
Major Power	.013* (.007)	.02** (.007)	.01* (.007)	.02** (.007)	.02** (.007)	.021* (.007)
Constant	-.004 (.011)	-.04* (.02)	-.0002 (.01)	-.041 (.028)	-.03 (.024)	-.04* (.021)
N	4505	4505	4505	2749	4505	4505
Adjusted R ²	.03	.03	.03	.04	.03	.04
Rho	.794	.780	.803	.819	.800	.791

Table 4.7: The Combined Effect of the Kantian Triangle on Military Spending 1965-2000

Variable	Model 4.22 Polity2, IGO Membership & Total Trade	Model 4.23 Polity2, Security IGO only, Total Trade
Regime Type	-.0004*** (.0001)	-.0005*** (.0001)
IGO Variable	-.0002* (.0001)	-.001** (.0005)
Trade Variable	.150*** (.031)	.141*** (.029)
Alliance	.0008^ (.0004)	.0008^ (.0004)
Rivalry	.004* (.001)	.004* (.001)
GDP Per Cap	.009* (.004)	.009* (.003)
MIDs	.0003 (.0002)	.0003 (.0002)
Major Power	.01 (.007)	.008 (.007)
Constant	-.03* (.013)	-.02 (.014)
N	4505	4505
Adjusted R ²	.03	.03
Rho	.784	.788

Figure 4.1: Scatter Plot of Democratic Strength and Defense Burden With Fitted Values 1960-2000

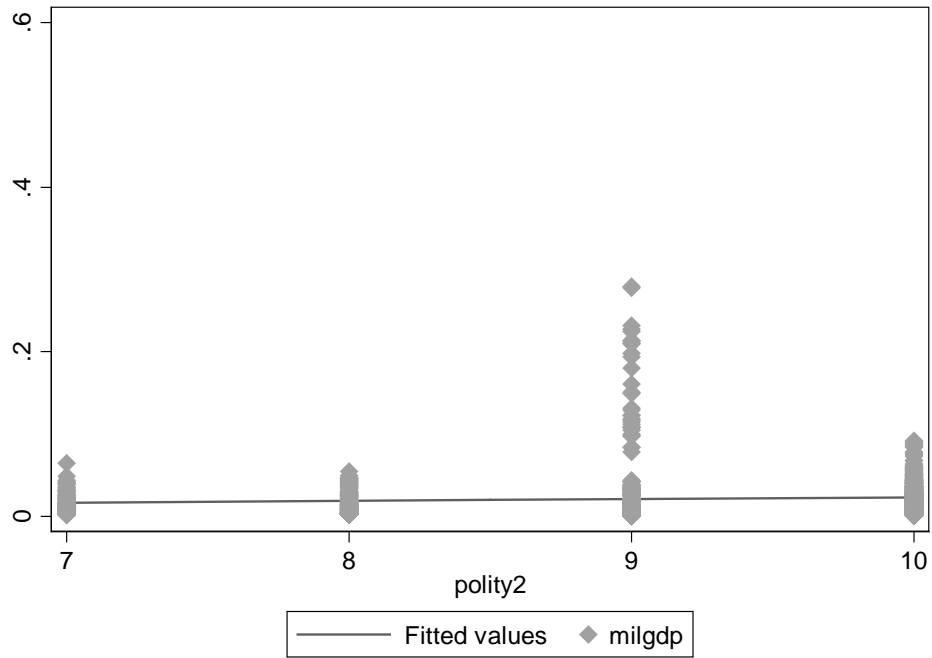


Figure 4.2: Scatter Plot of Democratic Duration and Defense Burden 1960-2000

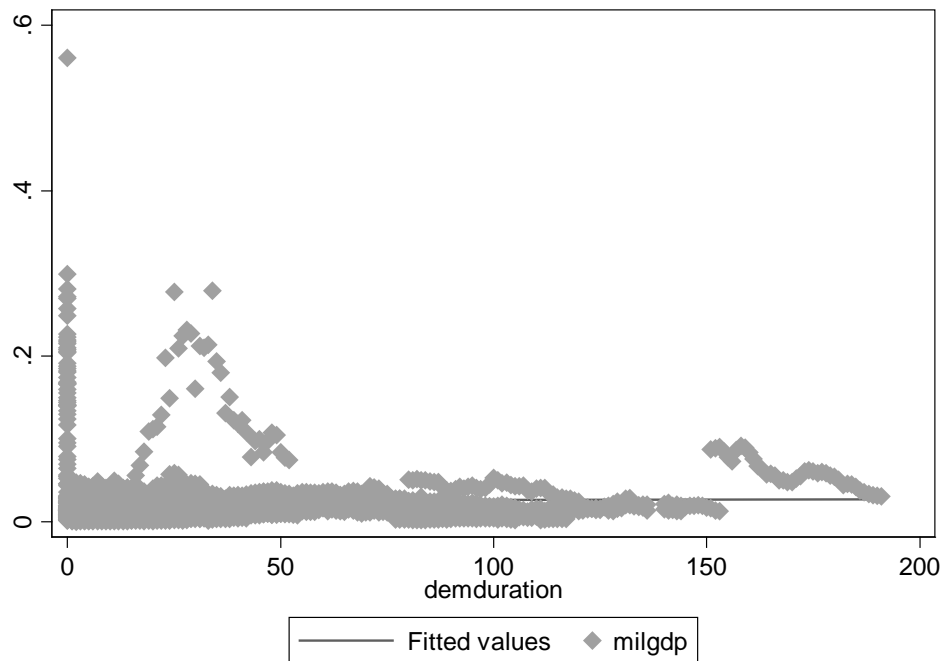


Figure 4.3: First Differences of Democratic Duration and Defense Burden 1960-2000

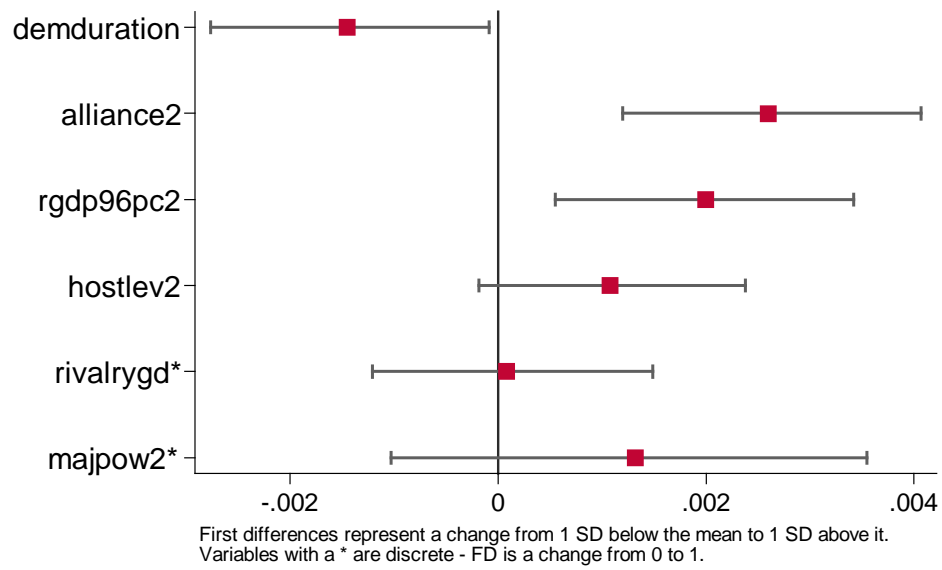


Figure 4.4: Bar Graph of Legislative System and Defense Burden 1975-2000

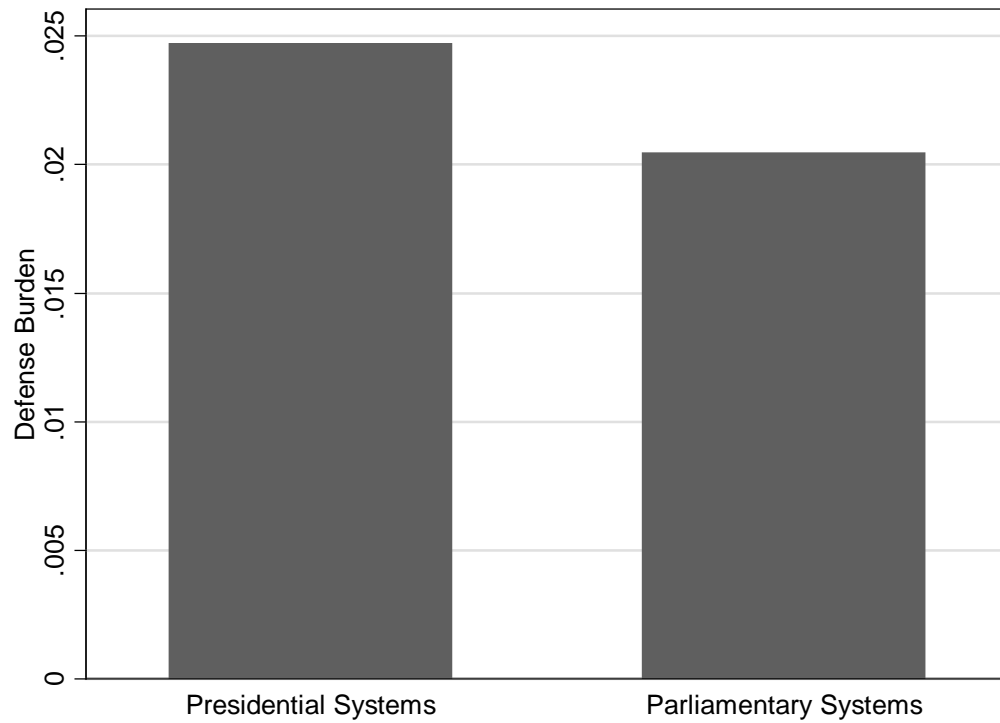


Figure 4.5: Bar Graph of Electoral System and Defense Burden 1975-2000

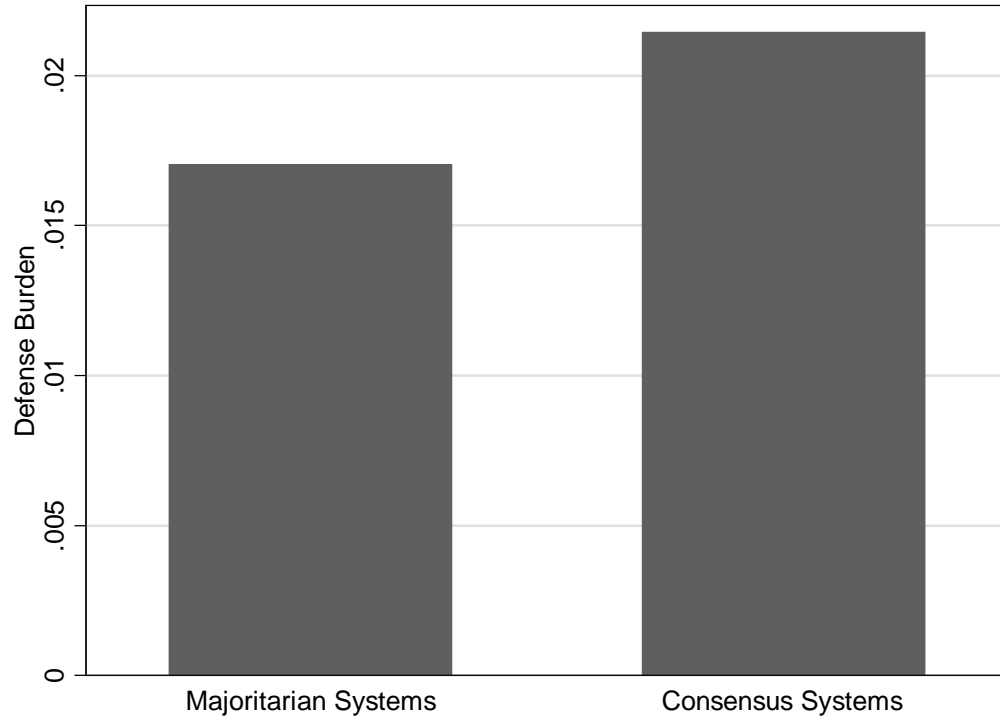


Figure 4.6: First Differences for Electoral System and Defense Burden 1975-2000

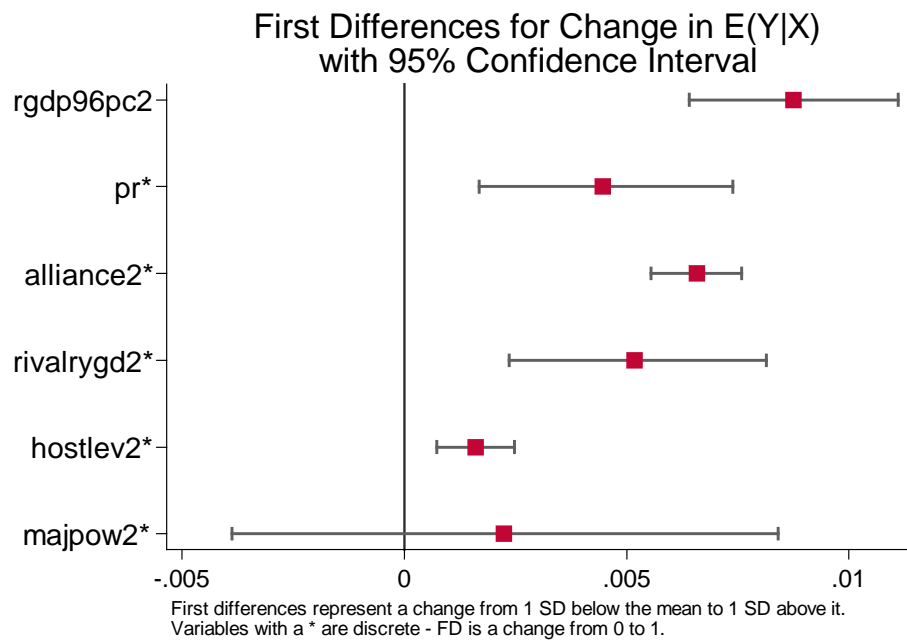


Figure 4.7: Scatter Plot of Total IGO Membership and Defense Burden Spending 1965-2000

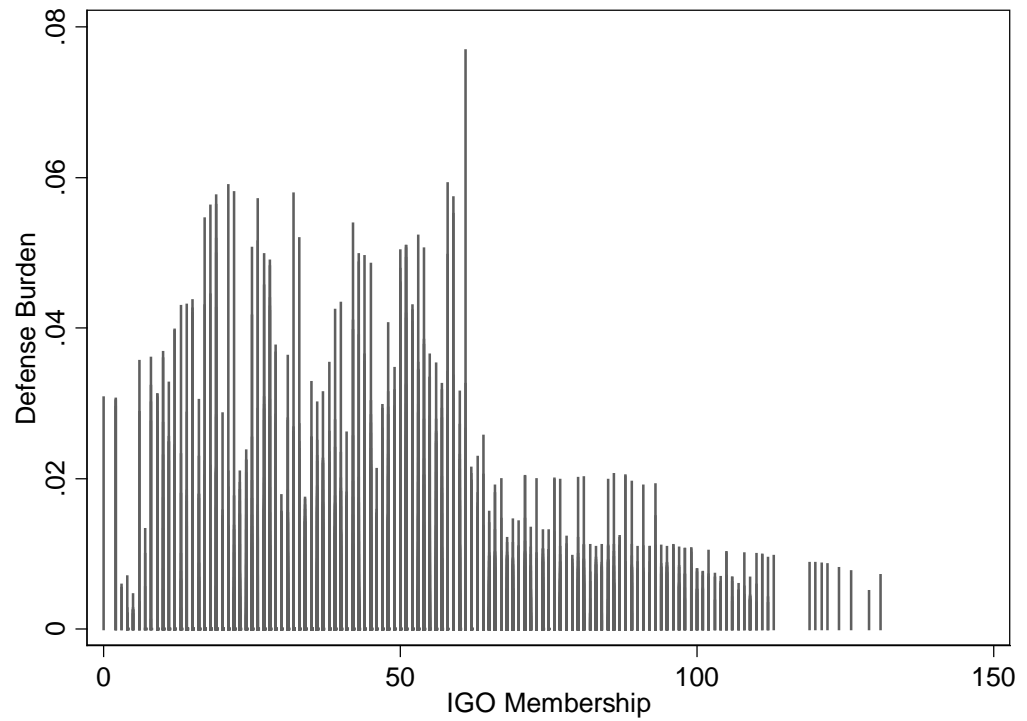


Figure 4.8: First Differences Total IGO Membership and Military Spending 1965-2000

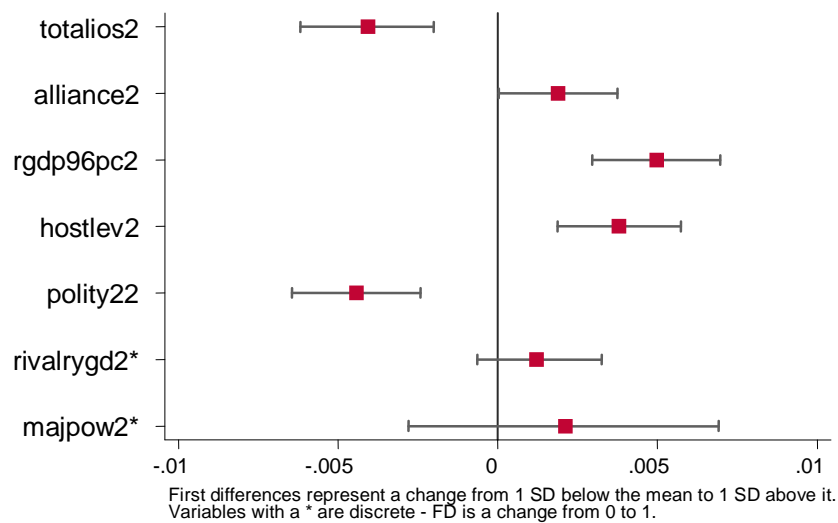


Figure 4.9: Scatter Plot of IGO Duration and Defense Burden With Fitted Values 1965-2000

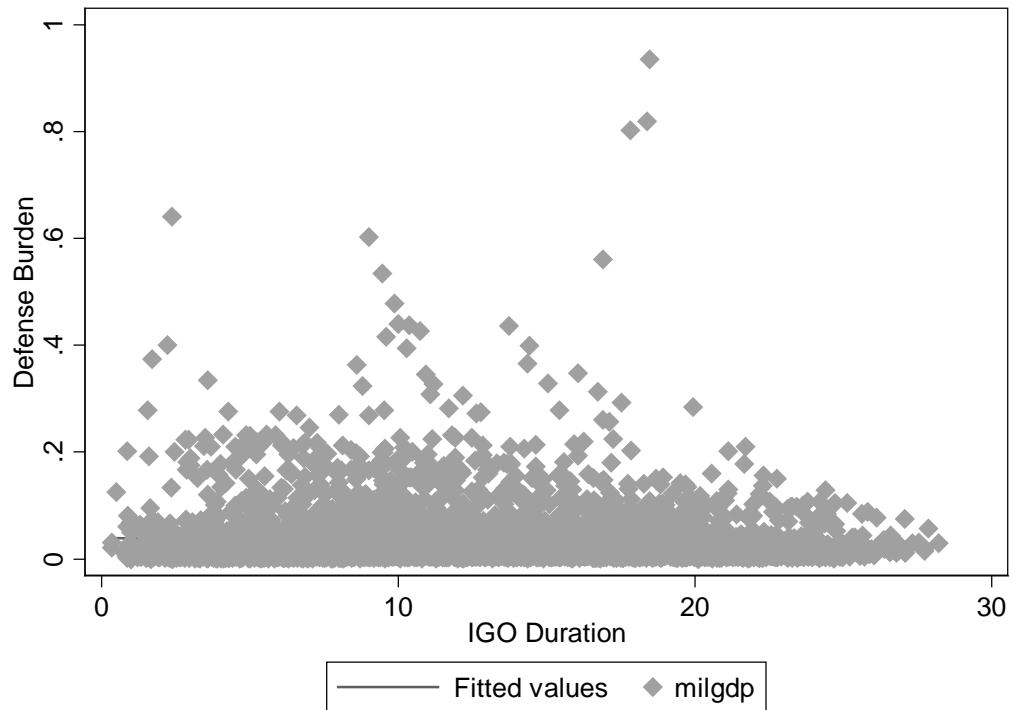


Figure 4.10: First Differences IGO Duration and Defense Burden 1965-2000

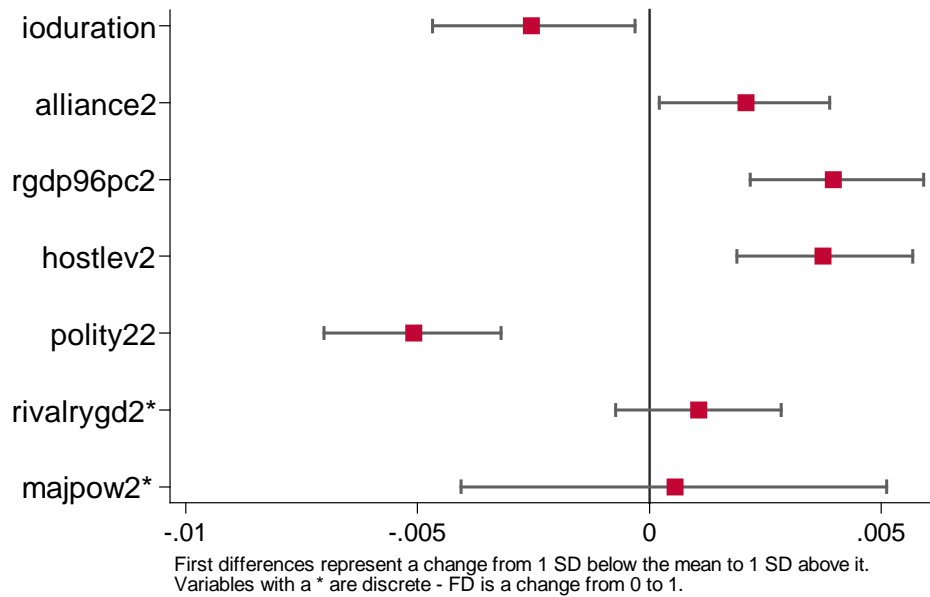


Figure 4.11: Scatter Plot of Institutionalized IGOs and Defense Burden 1965-2000

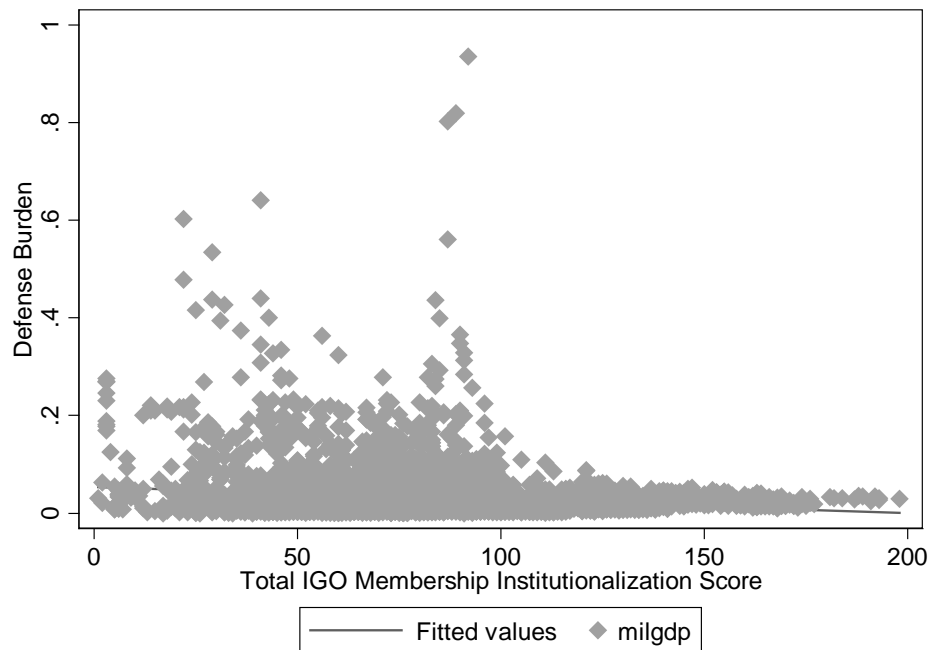


Figure 4.12: First Differences Institutionalized IGOs and Defense Burden 1965-2000

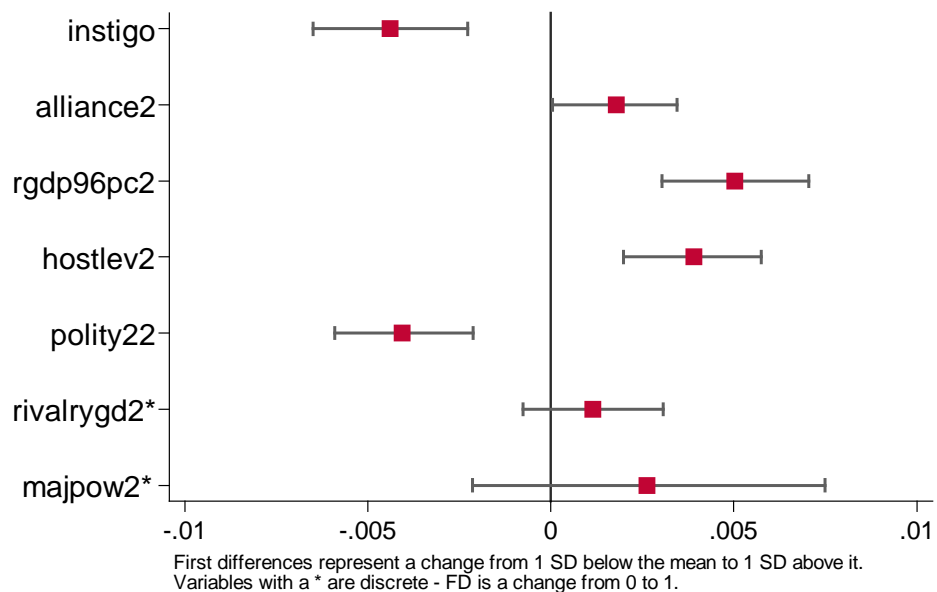


Figure 4.13: Scatter Plot with Fitted Values, Security IGOs Only and Defense Burden 1965-2000

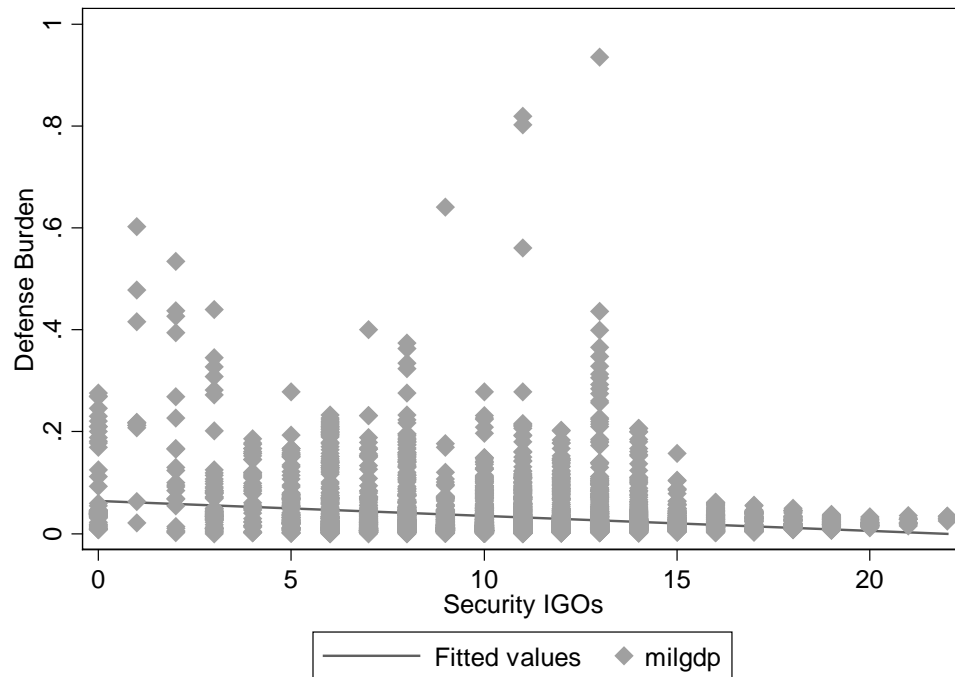


Figure 4.14: First Differences Security IGOs Only and Defense Burden 1965-2000

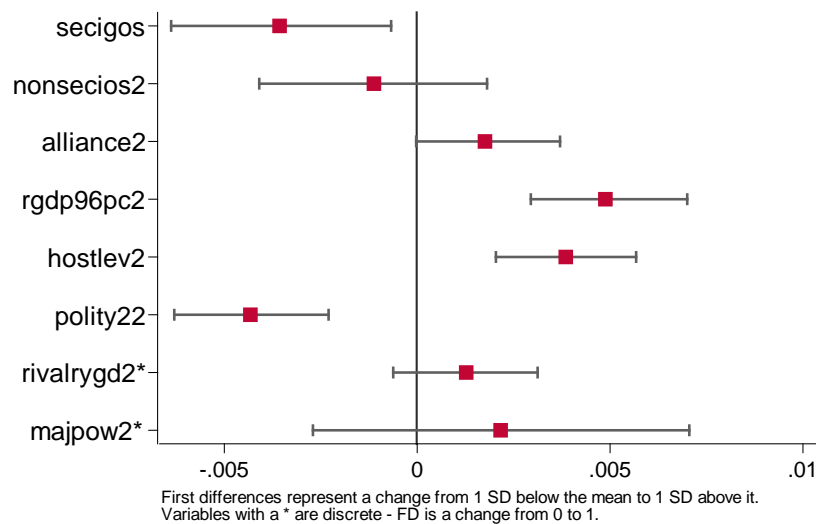


Figure 4.15: Scatter Plot of Peace Brokering Organizations and Defense Burden 1965-2000

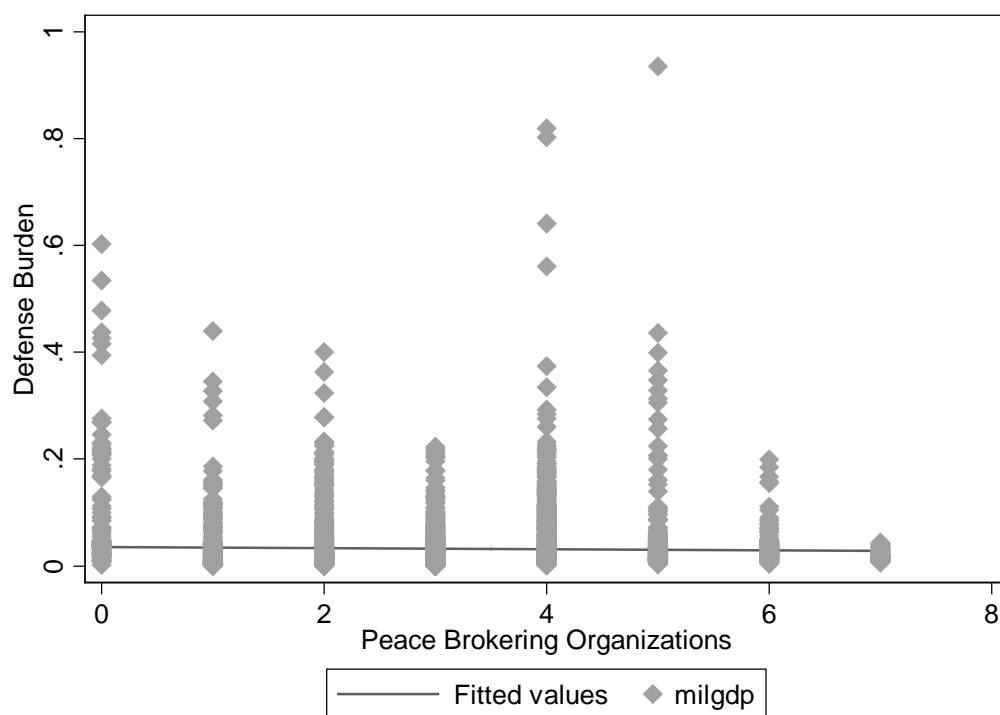


Figure 4.16: Scatter Plot of *Total IGO Power* and Defense Burden 1965-2000

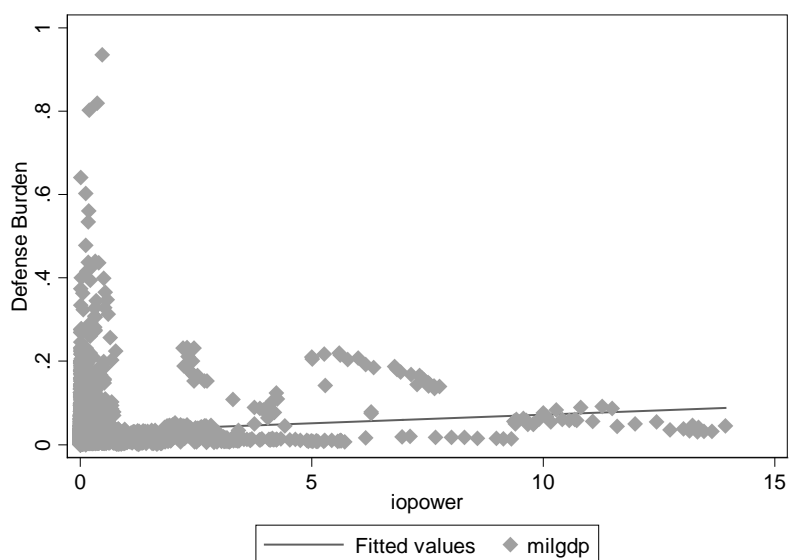


Figure 4.17: Scatter Plot of Total Trade and Defense Burden With Fitted Values 1960-2000

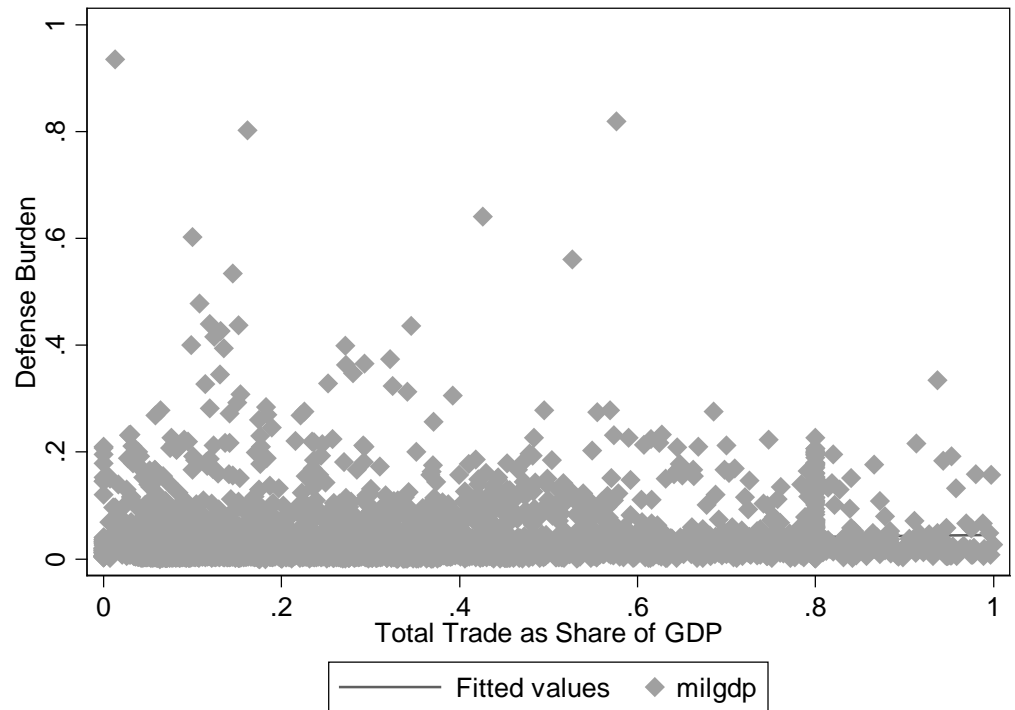


Figure 4.18: First Differences of Total Trade and Defense Burden 1960-2000

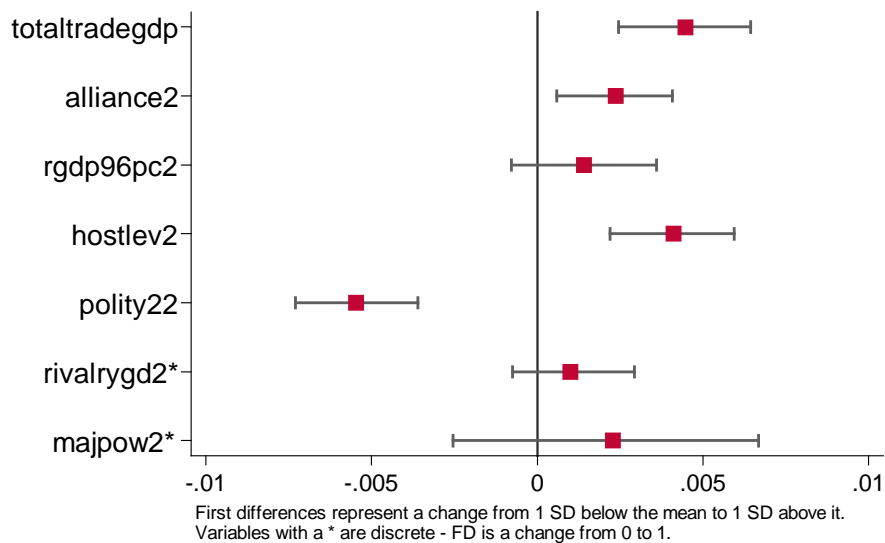


Figure 4.19: First Differences of Regional Trade and Defense Burden 1960-2000

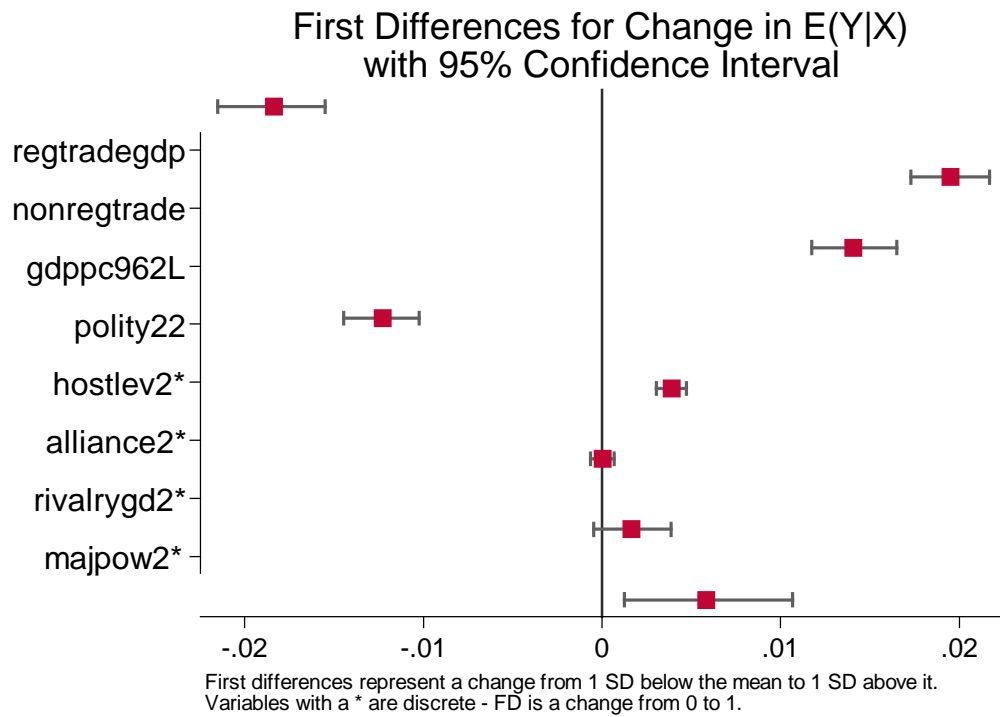


Figure 4.20: Scatter Plot of Regional Trade and Defense Burden 1960-2000

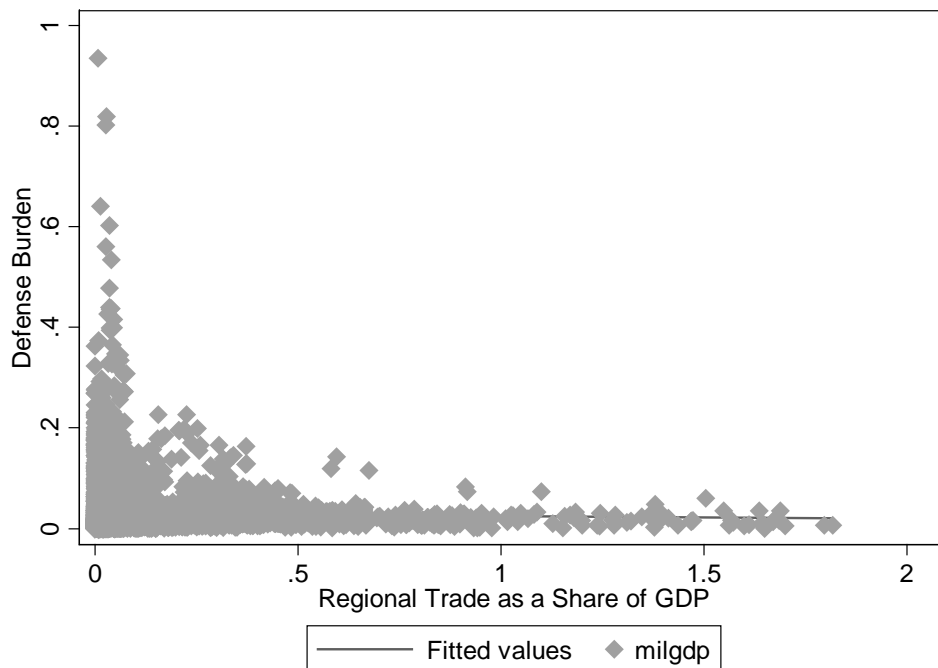


Figure 4.21: Scatterplot of Economic Globalization and Defense Burden 1972-2000

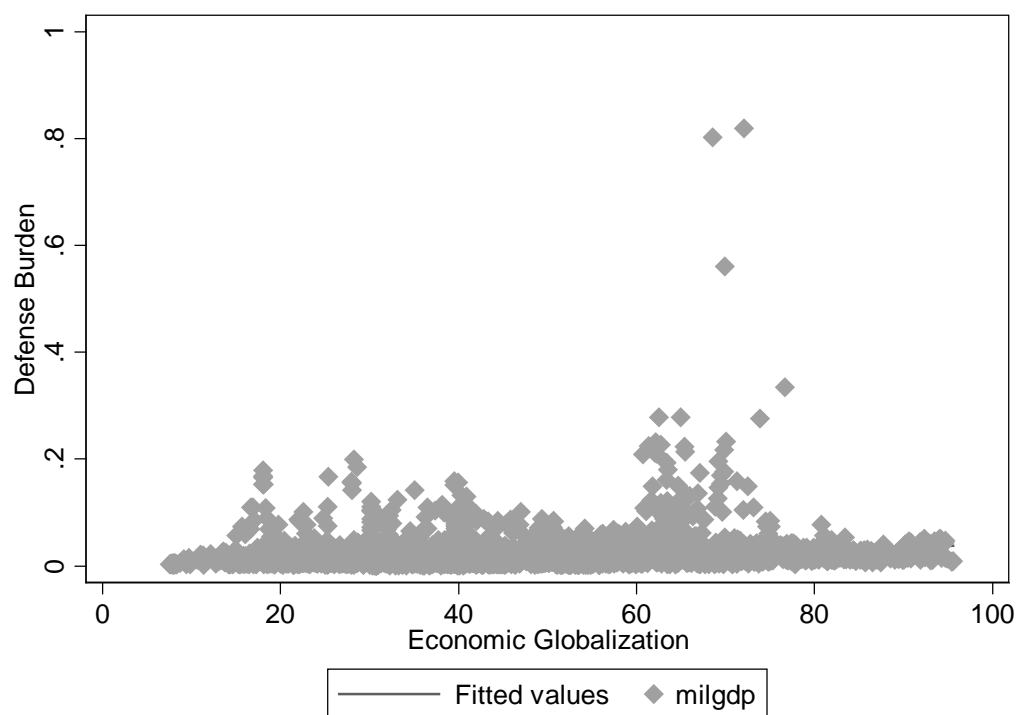


Figure 4.22: Scatterplot of Total Globalization and Defense Burden 1972-2000

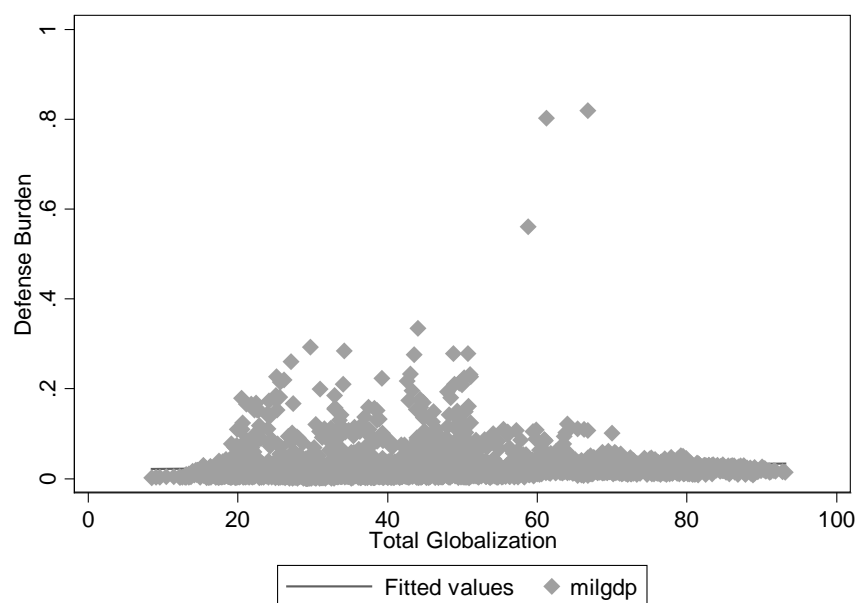
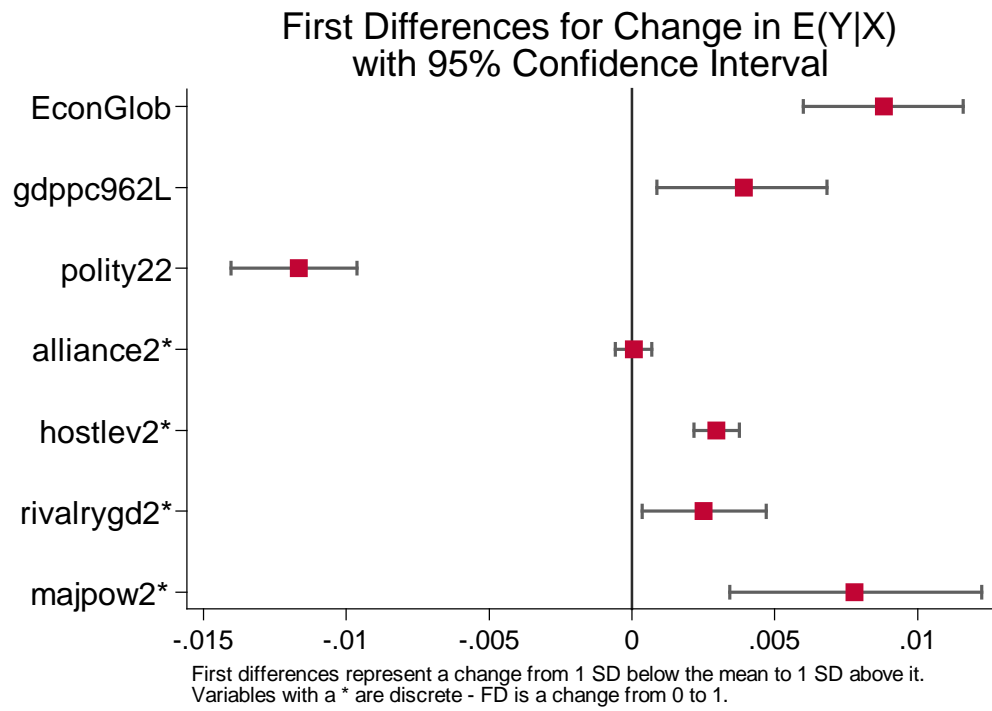


Figure 4.23: First Differences Figure of Economic Globalization Measure and Defense Burden 1972-2000



Chapter 5: Democracy and Defense Burden

Introduction

This chapter provides a more in-depth examination of the hypotheses that democratic strength, duration, and variation in legislative and electoral institutions result in a reduction in military spending. There are five issues that require further investigation beyond the basic model presented in Chapter 4. First, I examine the relationship between the democratic variables of interest and the alternative dependent variable of military population. This variable provides a robustness check to ensure no directional change in militarization policies, and in order to adequately capture whether a state has made changes to their security policy. Second, I build models utilizing various sets of control variables not included in the Chapter 4 models. Third, I examine the influence that spatial and temporal dependence may have on the results. I want to ensure that a particular region or set of unique characteristics of nations are not biasing the results, nor that the relationship found between democracy and *Defense Burden* is dependent on some time period. Lastly, I examine the role endogeneity plays in the relationship between democracy and *Defense Burden*. In all of these sections, I find that alterations to the modeling do not refute the conclusions drawn in Chapter 4.

Section 1: Alternative Dependent Variables

The reader will recall that Chapter 3 discusses the coding and theoretical viability of the alternative dependent variable, *Human Defense Effort*. In sum, *Human Defense Effort* is the ratio of citizens who are in the military (military personnel/ total population). Likewise, the reader can recall that the first hypothesis examined in Chapter 4 is the relationship between democratic strength and militarization as measured by *Defense*

Burden. Table 5.1 includes Model 5.1, which examines the relationship between democratic strength and *Human Defense Effort*, where it is clear that the coefficient for democracy is negative but not significant ($P < .12$), indicating marginal support for the notion that consolidated democracies have more citizens in uniform. This suggests, as was determined in Chapter 4, that among democracies, those states that are moving toward consolidation or are consolidated, experience little additional reduction in militarization. In this case, consolidated democracies do not reduce the number of per capita citizens that are part of the armed forces. This finding contradicts the argument presented in Chapter 2, that as states strengthen their democratic institutions they adopt more pacific policies.

{Table 5.1 about Here}

Table 5.1 includes Model 5.2 which examines the relationship between *Human Defense Effort* and democratic duration using a sample of only democracies, and serves as a robustness check on Model 4.3 in Chapter 4. In Model 5.2, the coefficient is negative and significant ($P < .000$), indicating support for the notion that as democratic norms are diffused within society fewer citizens join the military. This indicates that as democratic states maintain their democratic structures they do adjust the number of citizens that are in uniform. This finding offers additional support for the findings offer in Chapter 4, which included models that examined *Defense Burden*. Other models in this chapter test the robustness and find that the relationship between democratic duration and *Defense Burden* are not sensitive to a number of modifications, indicating that the findings in Chapter 4 are robust, yet the influence of democratic duration extends to the *Human Defense Effort*.

Table 5.2 displays the expected personnel changes by population size. As the reader can see, the largest of democratic states, those in the 90th percentile of population, can expect a 2,500 person reduction in their active duty personnel for each additional year they are a democracy, while in the smallest of democracies, a 5 person decrease.⁵⁹ For example, the U.S., whose population among democracies is the 90th percentile, and had been a democracy for 181 years, had a 450,000 personnel reduction in 1990. While this calculation is based on the averages for the whole sample, the indication is that democratic duration works to dramatically reduce military population levels. These numbers represent modest increases for small and large counties alike, and indicate that states undergo a transformation in their defense strategy and planning as they shed autocratic institutions and develop stronger democratic ones. Figure 5.1 captures the first differences, and indicates that, as states move from one standard deviation below the mean (0) to one above (75), they experience a -.004 reduction in the percentage of citizens associated with the military, or a 40% reduction in military spending for the average state. This sizeable sum indicates that authoritarian regimes maintain much higher rates of military populations than democracies, and that democracies work to decrease the number of citizens in uniform.

(Table 5.2 and Figure 5.1 about Here)

Further, while democratic duration had no influence, models examining the influence of legislative systems found strong support for the hypothesis that parliamentary systems would be more pacific in their security planning than presidential systems. Model 5.3 captures the influence of electoral system type on *Human Defense*

⁵⁹ The figures found in Table 5.2 are based on democracies only. Figures on *Human Defense Burden* and IGO membership and economic interdependence are based on all states populations, while population figures in Chapter 5 are only democracies.

Effort, utilizing a sample of only democracies. It is clear from the modeling that parliamentary systems are more likely to reduce their *Human Defense Effort* than presidential systems, which supports the findings drawn from Model 4.4. Likewise, four models not reported here examined the relationship between democracy type and *Human Defense Effort*, utilizing a sample that included both democracies and non-democracies. One set of models included a dummy variable for democracy⁶⁰ and the other did not, with the aim of capturing whether or not a larger sample would draw out the influence of parliamentary vs. presidential systems. The results from the models that included the dummy variable were not surprising, as no relationship between democracy type and the two dependent variables was evident; however, no relationship was present in the models that did not include the democracy dummy variable. This leads to the conclusion that democracy type does not have an influence on security planning in one direction or the other. Substantially there may be more to say about how parliamentary versus presidential systems transmit their ideas about security into policy, however, these findings indicate no difference between them in how many citizens they recruit. However, as with democratic duration, removal of the lagged dependent variable did produce a coefficient that was negative and significant, indicating some support for the notion that parliamentary systems recruit fewer troops.

Figure 5.2 captures the first differences of legislative system and *Human Defense Effort*, and indicates that as states move from a presidential system to a parliamentary one, they experience a 20% decline in the percentage of citizens who are in uniform. This finding counters that in Chapter 4 that saw legislative systems having no significant

⁶⁰ A dummy variable is more appropriate in this context over the Polity2 variable, given how we would want to see regime type account for most of the variance, as opposed to the Polity2 variable. Models including polity2 and removing the dummy variable did not yield different results.

impact on military spending, and provides support for the notion that parliamentary systems are more pacific than presidential systems. Further, Table 5.2 captures the estimated reductions states have moving from presidential to parliamentary systems, with the average state having a nearly 3,500 person reduction from the armed forces.

{Figure 5.2 about Here}

Model 5.4 captures the role of electoral system on *Human Defense Effort*, with similar results as that in Model 5.5 in Chapter 4. The coefficient is positive and significant ($p < .000$), indicating that proportional representation system have higher rates of citizens in uniform than presidential systems. Readers will recall that majoritarian systems are coded as zero, and consensus systems as 1, so that positive coefficients indicate that a consensus system increases *Human Defense Burden* levels. Table 5.2 captures the number of personnel proportional systems can expect to increase, with the average state having a 4,900 increase. Figure 5.3 captures the first differences, and indicates that as states move from majoritarian to consensus systems they can experience a 20% increase in *Human Defense Burden*. Collectively, these findings support the analysis of Chapter 4, indicating that those results are robust. Utilizing an alternative dependent variable does not change the outcomes of the relationship between the four democratic variables and militarization, with the exception that legislative system moves into significance, indicating that there is some support for the notion that parliamentary systems are more pacific than presidential ones.

Section 2: Control Variables

From the literature review in Chapter 2, it is clear that there are a number of influences on military spending. The Smith (1989) model that guided the decision making in model building in Chapter 4, clearly has merit as utilizing all theoretically relevant variables would violate the Achen (2005) approach to modeling and produce a ‘garbage can’ model. To ensure, however, that the modeling conducted in Chapter 4 does not violate the OLS assumption of omitted variable bias this section examines a set of models that alters the collection of control variables from Chapter 4.

As the reader will recall, the main control variables are alliances, rivalry, GDP per capita, regime type, militarized conflict, and major power. Models examining democracy remove regime type as a control variable from the analysis. One possible issue is that there is reason to believe that there is a possible spurious relationship within the models used, given that several variables are potential causes of war, such as alliances, major power, and rivalry (Goldsmith 2007). However, testing of this proposition in several models⁶¹ found it to be false, a finding supported by Goldsmith (2007).

The second major alteration to the modeling process is including additional control variables that have a strong relationship with military spending, which have been previously examined and proved to be relevant and important contributors in the literature, and were not included in the Smith (1989) modeling. The three main variables that have been chosen are Major Power Ally, regional military spending, and Cold War, and as the reader will recall, the importance and utilization of these variables was

⁶¹ In an early draft, I considered the role of these spurious variables, and testing the proposition for all three portions of the Kantian Triangle, finding that such modifications did nothing to alter the results. This issue is included in this draft more as a side note, given the presence of the issue in earlier contributions to the literature. However, given the lack of spurious outcomes in the modeling found in either Goldsmith (2007) and earlier drafts of this project, the issue is removed.

discussed in Chapter 3.⁶² Table 5.3 contains Model 5.5-5.9, and examines the four democratic variables of democratic strength, democratic duration, institutional design, and electoral design on *Defense Burden* with the inclusion of these additional variables. The results indicate that including these variables does not alter the results from the model presented in Chapter 4. The three new variables performed as expected with one exception. While major power alliance is negative and significant, and regional military spending is positive and significant in the four models presented in Table 5. 3, the Cold War is positive and significant in only one model (5.6). The Cold War variable being inconsistent raises the important issue of what role the time period had on military spending levels. While it is less important for the analysis here, given the connection between democratic structures and the international system, the Cold War as a theoretically intervening variable will play more of a role in analysis examining IGO membership and economic interdependence to be examined in Chapters 6 and 7.

Regional military spending is positive in all models and significant in two, indicating that how neighboring states are preparing for the possibility of conflict or the demonstrations of strength is an important factor for military spending decisions, supporting the work of Flores (2011) and the consensus among scholars that contiguity is an important predictor of conflict and plays a major role in how states allocate funds for their security institutions.

Major power alliance follows a similar pattern, as it is negative in all four models but significant in two, indicating support for the notion that weaker powers save money by partnering with larger, more powerful countries. Nations such as Japan, who live under the American nuclear umbrella, ultimately reduce military spending. Moreover,

⁶² One important item to note is that the alliances variable now includes only non major power alliances.

the other control variables from the Smith (1989) modeling do not vary significantly, indicating that inclusion of the additional controls does not radically alter the modeling results. As discussed in Chapter 3, additional control variables, including domestic arms industry, civil war, regional instability, ethnic conflict, and foreign aid, have been theorized to play a role in shaping military spending levels. Numerous models not reported here utilizing varying sets of these variables with the four independent variables of interest did not significantly alter the results found in Chapter 4. This indicates further that the control variables outlined in Smith (1989) is the proper specification for estimating the influences on military spending.

{Table 5.3 about Here}

Section 3: Spatial and Temporal Dependence

Spatial and temporal issues may be influencing the results presented in Chapter 4. This is a concern, as there may be a spurious set of influences, such as western states or the post Cold War period, driving the results. To correct for possible spatial influence, I first utilized fixed effects modeling to capture any possible individual effect states may have on the results. I then break down the states by region, to ensure that Europe or North America is not overly influencing the results. I then move on to examine temporal dependence, and examine the role the Cold War had on the results.

I first utilize fixed effects models that capture the individual influences states may have on the results. This is important as there are a number of scholars who argue that there is considerable evidence to suggest that utilizing a general model of defense spending for all states is problematic, given that individual states have such varied

influences shaping their defense burden (Sandler and Hartley, 1995; Looney and Frederiksen, 2000; Goldsmith, 2003). For example, a given state might have ethnic or cultural dimensions that shape military spending levels that are not part of a universal pattern. Including an ethnic fractionalization variable might help explain military decisions in a few states, but is not appropriate for larger samples such as the one utilized in this study. This project has generally disagreed with this premise, arguing that the directionality of the influences of military spending will speak for themselves, and that the correction for autocorrelation in the form of the Prais-Winsten modeling will capture much of the individual influences state have on their military budgets. Given that the fixed effects model can not be run utilizing the Prais-Winsten approach, the lagged dependent variable is included in these models. The variables of interests have remained consistent thus far in the robustness checks, leading to the conclusion that the argument that a universal model cannot be created carries little weight. Regardless, to ensure that this project undertakes all possible robustness checks, fixed effects models are utilized to this limit this possible source of bias.

{Table 5.5 about Here}

Table 5.5 contains Models 5.13-5.16, where fixed effects models were utilized, and where each of the variables of interest remain consistent with previous modeling in this chapter as well as Chapter 4. These findings do not offer much in terms of additional analysis, but rather eliminate the possibility that individual level factors are contributing to the outcome of the modeling. One issue to mention, however, which offers some support for the Sandler and Hartley (1995) and Looney and Frederiksen (2000) position is the size of the z scores for the lagged dependent variable. Typically,

these scores are quite high in relation to the other variables, reaching into the 20's, however, in the fixed effects models they range as high as 102, indicating that more unknown factors are possibly being captured by the lagged dependent variable. This finding is in line with what Smith (1989) and others who have modeled military spending. It is possible that there are individual effects not captured in the basic model that leaves out the lagged dependent variable. One way to test this is to run a fixed effects model that eliminates the dependent variable. Modeling conducted that did just that but not reported here produced similar results to those found in Section 2 of this chapter, but such models only raised the adjusted R-squared values by a few points, indicating that while the lagged dependent variable does contain elements specific to individual countries, they are not so influential that they shift the results in a significant way. Moreover, the independent variables of interest remain consistent after the utilization of the alternative modeling options.

While individual states do not have a major influence on defense spending, perhaps there are regional factors that the control variables utilized in this study do not capture, such as the role of European states on the modeling. For that reason, Models 5.13-5.16 examine the four variables of interests while including regional indicators. Regional indicators are broken down by North America, South America, Asia, the Middle East, Sub-Saharan Africa, and Oceania, with Europe as the reference category. Table 5.5 captures these four models, and in each the democratic variables remain consistent, indicating that there is no one regional influence that shapes military spending patterns or alters the directionality of significance of the independent variables of interest. While some regions have higher rates of military spending such as the Middle East and

Europe, there is reason to believe that this influence shapes the relationship between the democratic variables and *Defense Burden*.⁶³

{Table 5.5 about Here}

While regions play no discernible impact, temporal considerations are another important element to consider. There are numerous ways to break down the period of study, but the most sensible one is to divide the sample by Cold War and post Cold War periods, given that the Cold War variable was positive and significant in the modeling presented in Section 2 of this chapter. Tables 5.6 and 5.7 contain Models 5.17-5.24, which examine the four variables of interest in the Cold War and Post Cold War period. They indicate general support for the findings in Chapter 4, with democratic strength and democratic duration maintaining directionality and significance levels. Legislative system falls into significance ($P. <.072$) with some support that during the Cold War period parliamentary systems reduced their spending at higher rates, while the coefficient for proportional representation maintains its positive coefficient but loses significance. This indicates that the cold war period did not have a significance effect on the interaction between democratic structures and norms and military spending, while legislative and electoral systems switched positions in terms of influence. Such a finding suggests that international systemic changes played a role in the ongoing activities in established democracies, in terms of how they adjust their military spending levels, while holding all other factors constant. In the post Cold War period, the only variable to have a significant relationship is democratic strength, whose coefficient is negative and

⁶³ It should be noted that of the observations during the period of study, the vast majority of country years were from Europe and North America, so while including regional indicators does not radically shape the results, individual modeling on regions does. However, the results are mostly consistent with the ones presented here, indicating that while regions are a factor, the results can be applied universally to democracies.

significant ($P. < .07$). This indicates that the Cold War period had a significant effect on the relationship between democracy and military spending. In the post Cold War period, duration and electoral system lose their influence, while democratic strength plays a major role among democracies. The possible explanation for this outcome is that the Cold War period drove up military spending among more consolidated democracies thus reducing the influence of states in the sample that scored a 10 on the Oolity2 index, such as the U.S. and England.

{Tables 5.7 & 5.8 about Here}

Section 4: Endogeneity

Endogeneity is often an overlooked issue in statistical analysis. Endogeneity occurs when the dependant variable causes one or more of the independent variables. More specifically, I want to ensure that military spending levels are not influencing the development of democracy in profound ways, such that the results that have been obtained thus far are biased. The assumption in regression is that the error term is uncorrelated with each independent variable. When endogeneity is an issue, the dependant variable is related to the error term, thus producing biased estimates. Moreover, there is some reason to suspect that military spending influences democracy, given that strong militaries do not always have an interest in the development of democracy.

There are two main tests that are employed in this project to capture the role of endogeneity. The first is the Hausman specification test, which captures if the error term from one OLS regression equation is related to the Y of the second equation. Hausman

tests on all three of the main models of this chapter returned findings indicating that the dependant variable, *Defense Burden*, had no relationship to the error terms of the independent variables thus indicating that endogeneity was not biasing the results.

To ensure that the Hausman test results were not the product of some other influence, I ran a two stage least squares (2SLS) model for each of the four independent variables of interest in this chapter. 2SLS results indicated that there were no endogenous regressors in each of the four models, suggesting that endogeneity is not an issue in the relationship between military spending and democracy.

Conclusion

It is clear from the modeling conducted in this chapter that the results in Chapter 4 reflect accurate representations of the relationship between democracy and military spending. The field has established that democracies spend less on the military than non-democracies, however, once democratic institutions are established, the strengthening of those institutions does not lead to further reductions in military spending. It has been established by this project, however, that the longer states are democratic the more they can expect to reduce their spending, a finding that is consistent across a number of variations to the modeling process. This finding confirms those established in Chapter 4, that the normative hypothesis has more weight than the structural one, in that the diffusion of democratic norms plays a larger role than strengthening democratic institutions. In fact, if anything these results indicate that those states with stronger institutions actually tend to spend more while holding everything else constant, indicating that the structural component of democracies works to increase military spending once

states have established those institutions. These findings hold up under analyses examining alternative measures of the dependant variable, variation in control variables, spatial influences, as well as tests of endogeneity. The only outlier in this position is the role of the Cold War, which clearly played a role in diminishing the power of democratic strength during the bipolar period, and decreased the role of democratic norms in the post Cold War period. As discussed above, one possible outcome of this may be major powers, but controls for that undermine that position. Further examination of temporal considerations is warranted; however, until more data is available for the post Cold War period, examinations are limited.

The other major finding of this chapter, and of the examination of democratic structures, is that variation in legislative systems does not radically alter how many funds states allocate toward the military, while proportional, representative electoral systems work to increase military spending levels among democracies. This finding is in direct opposition to the position argued in this project, that both parliamentary and proportional representation systems should work to reduce military spending. The analysis here indicates that neither hypothesis is accurate.

Chapter 5 Tables and Figures

Table 5.1 Alternative Measures of *Defense Burden* and Democracy

Variable	Model 5.1 Democratic Strength and Military Population	Model 5.2 Democratic Duration and Military Population	Model 5.3 Legislative System and Military Population	Model 5.4 Electoral System and Military Population
Democratic Strength	-.0001 (.0002)			
Democracy Duration		-.00004*** (3.56e-06)		
Legislative System			-.0007*** (.0002)	
Electoral System				.001*** (.0003)
Alliance	.0003*** (.00008)	.0006*** (.0001)	.0004*** (.0001)	.0004*** (.0001)
Rivalry	.0007*** (.0001)	.001*** (.0002)	.0009*** (.0002)	.0009*** (.0002)
GDP Per Cap (Logged)	.001*** (.0002)	.002*** (.0002)	.001*** (.0001)	.001*** (.0001)
MIDs	.00002 (.00002)	.00005^ (.00003)	.00002 (.00003)	.00003 (.00003)
Major Power	-.0007 (.0005)	.001* (.0007)	-.00001 (.0008)	.0004 (.0007)
Constant	-.012*** (.001)	-.014** (.002)	-.009*** (.001)	-.008** (.001)
N	1542	1542	1487	1450
Adjusted R ²	.18	.19	.20	.20
Rho	.880	.820	.852	.820

***p ≤ .001 **p ≤ .001 *p ≤ .005 ^p ≤ .10
Coefficient (Standard Error)

Table 5.2 Calculated Personnel Reductions by Population Percentile Given Democratic Institutions

Variable	10%	25%	50%	75%	90%
Democratic Duration	-5.4	-16.7	-196	-804	-2,484
Legislative System	-94	-292	-3,445	-14,070	-43,470
Electoral System	135	417	4,923	20,100	62,100

Table 5.3: Additional Control Variables, Democracy's, and Defense Burden 1960-2000

Variable	Model 5.5	Model 5.6	Model 5.7	Model 5.8
Democratic Strength	-.0003 (.0006)			
Democracy Duration		-.00008*** (.00002)		
Legislative System			-.001^ (.001)	
Electoral System				.0001* (4.13e-06)
Alliance	.002*** (.0005)	.002*** (.0007)	.001*** (.0006)	.001** (.0006)
Rivalry	.003*** (.0008)	.004*** (.001)	.004*** (.0009)	.003*** (.001)
GDP Per Cap (Logged)	.005*** (.001)	.003^ (.002)	.004*** (.001)	.003*** (.001)
MIDs	.00003 (.0001)	.0001 (.0001)	-.00004 (.0001)	-.00002 (.0001)
Major Power	.015*** (.002)	.04*** (.006)	.027*** (.005)	.028 (.005)
Major Power Ally	-.005*** (.001)	-.009*** (.001)	-.008*** (.001)	-.008*** (.001)
Regional Military Spending	.180*** (.057)	.227*** (.053)	.243*** (.052)	.233*** (.051)
Cold War	.001 (.001)	.003* (.001)	.001 (.001)	.001 (.001)
Constant	-.033 (.006)	-.017 (.017)	-.019 (.008)	-.019* (.008)
N	1409	1462	11336	1328
Adjusted R ²	.19	.18	.23	.22
Rho	.820	.818	.828	.839

***p ≤ .001 **p ≤ .001 *p ≤ .005 ^p ≤ .10
Coefficient (Standard Error)

Table 5.4: Democracy and Defense Burden 1960-2000 (Fixed Effects)

Variable	Model 5.9 Fixed Effects	Model 5.10 Fixed Effects	Model 5.11 Fixed Effects	Model 5.12 Fixed Effects
Democratic Strength	.0002 (.0002)			
Democracy Duration		-.00001** (9.03e-06)		
Legislative System			-.0003 (.0002)	
Electoral System				.004* (.001)
Alliance	.0007*** (.0001)	.0009*** (.0002)	.0004* (.0001)	.003* (.0001)
Rivalry	.0005 (.0005)	.0002 (.0006)	.0008^ (.0005)	.0008 (.0005)
GDP Per Cap	5.54e-08 (4.11e-08)	1.47e-07* (5.66e-08)	3.16e-08 (3.41e-08)	6.00e-08^ (3.24e-08)
MIDs	.0001 (.0001)	.0003 (.0001)	.00002 (.0001)	-.00003 (.0001)
Major Power	-.001 (.0009)	.001 (.001)	.001^ (.0009)	.001 (.0009)
DV Lagged	.923*** (.009)	.895*** (.009)	.909*** (.008)	.908*** (.008)
Constant	-.002 (.002)	-.00002 (.0005)	-.0001 (.0005)	.0001 (.0004)
N	1444	1444	1302	1302
Adjusted R ²	.91	.90	.92	.91

***p ≤ .001 **p ≤ .001 *p ≤ .005 ^p ≤ .10
Coefficient (Standard Error)

Table 5.5: Regional Influences, Democracy and Defense Burden 1960-2000

Variable	Model 5.13	Model 5.14	Model 5.15	Model 5.16
Democratic Strength	.0003 (.0002)			
Democracy Duration		-.00001** (5.78e-06)		
Legislative System			.0001 (.0004)	
Electoral System				.004** (.001)
Alliance	.0007*** (.0002)	.0008*** (.0002)	.0004* (.0002)	.0004* (.0002)
Rivalry	.0007^ (.0004)	.0007 (.0004)	.001* (.0005)	.001* (.0005)
GDP Per Cap	6.84e-08 (4.49e-08)	1.00e-07* (4.65e-08)	4.11e-08 (4.10e-08)	5.87e-08 (3.89e-08)
MIDs	.00007 (.0001)	.00007 (.0001)	-.0001 (.0001)	-.0001 (.0001)
Major Power	.0002 (.0009)	2.10e-06 (.0009)	.002 (.001)	.002 (.001)
Oceania	-.0001 (.0003)	.0001 (.0003)	-.00007 (.0003)	-.00001 (.0003)
Asia	-.002* (.00099)	-.001* (.0009)	-.001 (.0011)	-.002^ (.001)
Middle East	.007** (.002)	.007* (.002)	.004^ (.002)	.004^ (.002)
Africa	.0003 (.0006)	.0005 (.0006)	.0002 (.0007)	.0001 (.0007)
South America	-.0007 (.0005)	-.0005 (.0005)	-.0006 (.001)	-.0009 (.0006)
North America	-.0004 (.0003)	-.0001 (.0003)	-.0008^ (.0004)	-.0009^ (.0004)
Europe	Ref. Cat.	Ref. Cat.	Ref. Cat.	Ref. Cat.
Constant	-.002 (.002)	-.003 (.002)	.0005 (.001)	.0007 (.0007)
N	1444	1444	1303	1303
Adjusted R ²	.04	.03	.03	.04
Rho	.849	.877	.843	.864

***p ≤ .001 **p ≤ .001 *p ≤ .005 ^p ≤ .10
Coefficient (Standard Error)

Table 5.6 Democracy, Defense Burden, and The Cold War 1960-1989

Variable	Model 5.17 Cold War	Model 5.18 Cold War	Model 5.19 Cold War	Model 5.20 Cold War
Democratic Strength	.0001 (.0002)			
Democracy Duration		-.00001* (8.39e-06)		
Legislative System			-.002^ .001	
Electoral System				.0006 (.002)
Alliance	.0005* (.0002)	.0008** (.0003)	.0005* (.0002)	.0005* (.0002)
Rivalry	.0003 (.0005)	.0001 (.0005)	.0006 (.0005)	.0005 (.0005)
GDP Per Cap	5.83e-08 (6.06e-08)	1.70e-07^ (9.35e-08)	3.32e-08 (4.03e-08)	8.90e-08^ (4.81e-08)
MIDs	.0003 (.0002)	.0004 (.0003)	.0001 (.0002)	.00009 (.0002)
Major Power	-.001 (.001)	-.0002 (.003)	-.0002 (.002)	-.0008 (.002)
Constant	-.001 (.002)	-.0001 (.0007)	-.0004 (.001)	-.0002 (.0005)
N	838	838	652	652
Adjusted R ²	.04	.03	.04	.02
Rho	.837	.843	.853	.832

***p ≤ .001 **p ≤ .001 *p ≤ .005 ^p ≤ .10
Coefficient (Standard Error)

Table 5.7 Democracy, Defense Burden, and The Post Cold War 1990-2000

Variable	Model 5.21 Post-Cold War	Model 5.22 Post-Cold War	Model 5.23 Post-Cold War	Model 5.24 Post-Cold War
Democratic Strength	-.00006 (.0003)			
Democracy Duration		-.00003** (.00001)		
Legislative System			-.002^ .001	
Electoral System				.0006 (.002)
Alliance	.001*** (.0002)	.001** (.0005)	.0004 (.0004)	.0004 (.0003)
Rivalry	.001* (.0004)	.001 (.0007)	.001* (.0007)	.001* (.0007)
GDP Per Cap	1.72e-07** (6.38e-08)	3.00e-07*** (7.50e-08)	8.96e-08 (5.91e-08)	8.12e-08 (5.14e-08)
MIDs	.0001 (.0001)	.0001 (.0002)	-.00006 (.0002)	-.0001 (.0002)
Major Power	.001^ (.001)	.003 (.003)	.002 (.003)	.002 (.003)
Constant	.0007 (.002)	.001 (.00072)	.0009 (.0007)	.001 (.0006)
N	552	552	445	445
Adjusted R ²	.03	.04	.03	.04
Rho	.839	.842	.854	.47

***p ≤ .001 **p ≤ .001 *p ≤ .005 ^p ≤ .10
Coefficient (Standard Error)

Figure 5.1: First Differences Human Defense Burden and Democratic Duration 1960-2000

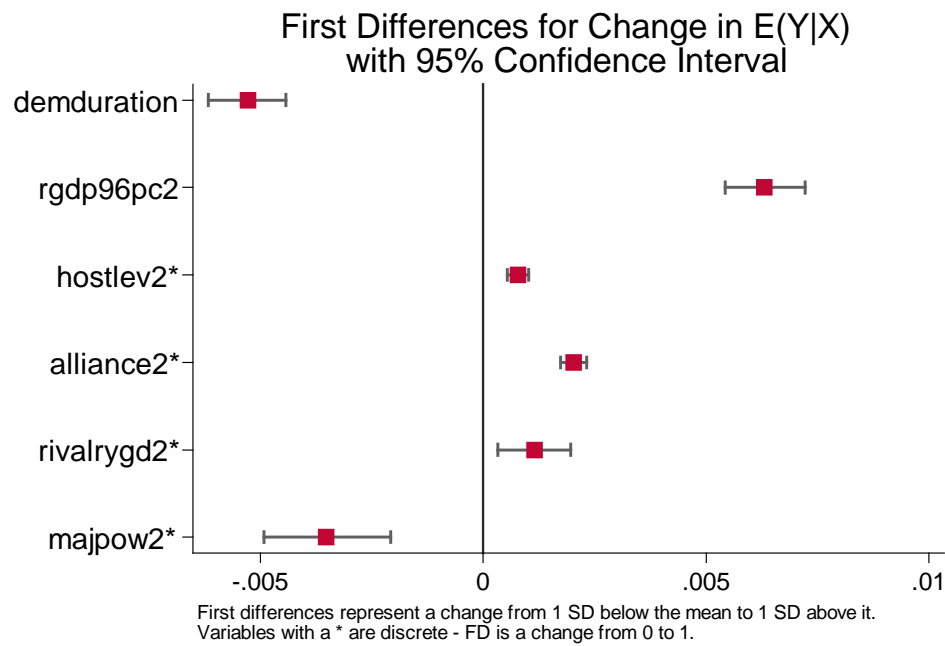
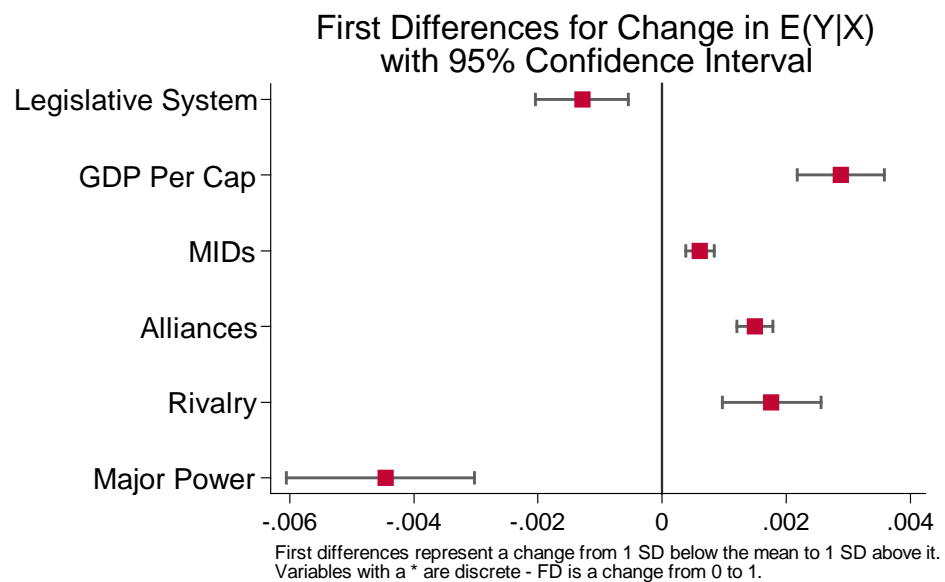


Figure 5.2: First Differences of Human Defense Burden and Legislative System 1976-2000



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Chapter 6: IGOs and Defense Burden

Introduction

This chapter provides robust modeling on the hypothesis concerning the relationship between IGOs and military spending. There are five issues that require further investigation beyond the basic modeling presented in Chapter 4. First, I build models utilizing the alternative dependent variable of *Human Defense Effort*. Second, I examine how variation in control variables shapes the results. Third, I examine the issues surrounding the relationship between security IGOs and PBOs, given the mixed findings on security IGOs in Chapter 4. Fourth, I examine temporal and spatial influence on the relationship between military spending and IGO memberships. Fifth, I examine the role of an alternative measure to Total IGO Membership-Duration, and lastly, I examine the influence of endogeneity on the results. As the reader will recall from Chapter 4, there are six IGO membership independent variables of interest, Total IGO Membership, IGO duration, Security IGOs score, Security IGOs, Peace Brokering Organizations, and IGO Power. As Chapter 4 determined, four of the six IGO variables had a significant negative relationship with *Defense Burden*.⁶⁴

Section 1: Alternative Measures of Dependant Variable

In this section, I examine the relationship between the six IGO independent variables of interest, and the alternative dependent variable. As the reader will recall, a discussion of the alternative dependent variable, *Human Defense Effort*, can be found in Chapter 3. Table 6.1 holds Models 6.1-6.6, with results that are consistent with those found in Chapter 4. All of the IGO variables of interest are negative, and statistically

⁶⁴ The coefficients for Peace Brokering Organizations and IGO Power were not significant in the base model presented in Chapter 4.

significant, with two exceptions. First, in Model 6.4, which examines security IGOs while controlling for non-security IGOs, the security IGO coefficient is not significant, while the non-security IGO coefficient is. This is a major reversal from the results found in Chapter 4, which indicates that non-security IGOs can have a pacifying effect on the militarization policies of states. Second, Model 6.5 captures the role of Peace Brokering Organizations (PBOs), where the PBO coefficient is positive and not significant, which is consistent with the modeling in Chapter 4. However, the coefficient for non-PBOs is negative and significant, indicating that non-security IGOs can reduce militarization efforts in terms of the number of citizens in uniform. In sum, the results offer support for the hypothesis presented in Chapter 2, and in part reduce the conclusions drawn in Chapter 4, that non-security IGOs do not have an influence on levels of militarization. Based on these results, it is clear that there is another sub-set of the security IGOs that is driving the results, given that the coefficient for non-PBOs works to reduce military spending, but when you add those groups into the overall security IGO variable, that coefficient is negative but does not reach significance. Lastly, the IGO Power variable reached significance ($p < .07$), indicating support for the notion that more powerful IGOs can reduce military spending rates.

{Table 6.1 about Here}

The estimated reduction in military personnel that each IGO variable causes can be viewed in Table 6.2. The table breaks down the sample by population size, given that the coefficients reflect the change in percentage of citizens who are in military uniform, not actual military personnel numbers. As with *Defense Burden*, larger nations have larger reductions than smaller ones. For example, the average country experienced a 447

person reduction with each additional IGO, and given that the average state has 47 memberships, that is over 21,000 citizens who are not in uniform. The largest of nations experience an over 3,800 personnel reduction with each IGO, and the average state then has a reduction of over 178,600 people, which amounts to a sizeable reduction in military personnel. Likewise, the coefficients for *Total IGO Membership-Duration* produced similar amounts in personnel reduction. Total IGO Membership Institutionalization also had sizeable reductions, resulting in similar results to that of *Total IGO Membership*. Since PBOs and Security IGOs both failed to reach significance, the military personnel reductions for non-PBO security IGOs was calculated with results indicating that the average state had a 383 person reduction for each additional non-PBO security IGO they were members to. For the average state by population, this resulted in an 18,000 person reduction.

The first differences calculations resulted in substantial differences. As states moved from one standard deviation below the mean to one above it they had for *Total IGO Membership* a 50% reduction, for *Total IGO Membership-Duration* a 20% reduction, for *Total IGO Membership-Institutionalization* a 20% reduction, for non-PBO security IGOs a 16% reduction, and for IGO Power a 16% reduction. Figures 6.1-6.5 capture the first differences graphically, with the results indicating that the various types of IGO memberships work in significant ways to reduce military personnel levels among member states. Reducing troop personnel levels, by proxy, can also reduce military spending levels, as labor costs make up a large portion of defense spending, in addition to later costs such as pension and health care programs for veterans. Moreover, these results provide support for the conclusions drawn in Chapter 4. These findings further offer

evidence that IGO memberships have a negative influence on militarization policies.

What is most interesting from this section is that IGO Power was negative and significant, suggesting that there is some evidence to support the notion that powerful IGOs have an influence. This may mean that there are some non-security IGOs that can make a difference in security policy, but that these may have influence based on the characteristics of their membership base.

Section 2: Control Variable Variation

This section follows the structure of section 2 from Chapter 5. As discussed in Chapter 5, there is concern over a possible spurious relationship within the models used, given that several variables are potential causes of war, such as alliances, major power, and rivalry (Goldsmith 2007). However, testing of this proposition in several models⁶⁵ found it to be false, a finding supported by Goldsmith (2007). The second alteration to the modeling process is including additional control variables that have a strong relationship with military spending, have been previously examined and have been proven to be relevant and important contributors in the literature, and were not included in the Smith (1989) modeling. The three variables that have the most salient relationship with defense spending are Major Power Ally, regional military spending, and the Cold War. Table 6.3 contains Model 6.7-6.12, and examines the six IGO variables on *Defense Burden* with the inclusion of these additional control variables. The results indicate that including these variables do not alter the results from models presented in Chapter 4, with

⁶⁵ In an early draft I considered the role of these spurious variables, and testing the proposition for all three portions of the Kantian Triangle, finding that such modifications did nothing to alter the results. This issue is included in this draft more as a side note, given the presence of the issue in earlier contributions to the literature. However, given the lack of spurious outcome in the modeling found in either Goldsmith (2007) and earlier drafts of this project, the issue is removed.

one key exception. The coefficient for non-security IGOs becomes significant when the additional control variables are added. This finding suggests that either the cold war, major power alliance, or regional military spending variables conflate the influence of non-security IGOs, offering some support for the notion that all types of IGOs work to decrease military spending. However, given that this finding is sensitive to such small modifications to the model, it is difficult to accept. The coefficient for Major Power Ally was negative, but not significant, indicating that having a military alliance with one of the major powers did little to systematically shape military spending rates. This finding is a reversal of the models in Chapter 5 that include the additional control variables, and where the coefficient for Major Power Ally was negative and significant. This indicates that democracies have a systemic relationship with major power ally in terms of shaping military spending decisions, but authoritarian states do not. One possible suggestion for this relationship is the strong commitments democracies make in their agreements (Martin 2000).

Regional military spending was positive and significant. This is an important finding, as it conforms the work of Flores (2011) and Wendt & Barnett (2003), who argue that states work to replicate the military spending rates of their neighboring states who often have comparable levels of development, culture, and other similarities. Moreover, this finding confirms the contiguity hypothesis, in that deterring neighboring states from aggression are often the center of state security policy. While regional military spending leads to an increase in spending, the Cold War variable had a negative influence on military spending rates when including an IGO variable in the model, which is a surprising result given the evidence that military spending rates were higher during

the Cold War period. In addition, a variety of other models utilizing control variables such as civil war, domestic arms industry, and regional instability found no major departure from the results reported in Chapter 4. As stated in Chapter 5, these results indicate support for the estimation strategy outlined in Smith (1989) and utilized in this project.

{Table 6.3 about Here}

Section 3: Security IGOs

A key question that emerges from the analysis conducted thus far is which of the security IGOs are increasing military spending and which ones reduce it. The results indicate that there is a subset of security organizations that reduce military spending, while another subset captured by the PBO have no consistent relationship. An examination of Appendix A finds that there are only a few organizations that are not on the PBOs list that are on the security IGO list. As the reader will recall, PBOs are security organizations that have been recognized to have additional powers to resolve salient territorial conflicts between members (Shannon 2010). Non-PBO security organizations include organizations such as the International Atomic Energy Agency (IAEA), International Monetary Fund (IMF), and the World Trade Organization (WTO). To sort out the influence and confirm it, I run Model 6.13, which has security IGOs that are not PBOs, and then the PBO variable. The results indicate that the subset of non-PBO security organizations reduces military spending, while PBOs have no relationship. I run Model 6.14 to include non-security IGOs, with the results indicating that PBOs and non-

security IGOs have no significant relationship with military spending, although the non-security IGO variable nears significance ($P < .17$), while security IGOs have a negative and significant relationship.

This indicates that the security IGO list in Appendix A are the organizations that account for the vast majority of the reduction in military spending that is seen in the Total IGO Membership variable which has remained consistently negative and statistically significant in the models in Chapter 4 and 6. This finding asks more questions than it answers, given that there are no systematic mechanisms within security IGOs that work to reduce military spending. Some security IGOs do and others do not, meaning that there is some characteristic present in some and not in others. The position of this project is that the mechanisms theorized in Chapter 2 account for the influence that IGOs have on state decision making, but it is clear that such mechanisms are either not present in the PBOs or provide only part of the story in terms of how these organizations shape decision making.

{Table 6.4 about Here}

Section 4: Temporal and Spatial Influences

As explained in Chapter 5, spatial and temporal issues may be influencing the results presented in Chapter 4 in the modeling that examines IGO variables and defense spending. To correct for possible spatial influence, I first utilize fixed effects modeling which captures both spatial and temporal dependence, I then break down the sample by region, to ensure that Europe or North America are driving the results. The results demonstrate that temporal and spatial influences are not overly influencing the results.

The decision to utilize fixed effects models are identical to those outlined in Chapter 5. Fixed effects modeling captures both temporal and spatial influence in the modeling, which may be an issue given the individual characteristics of defense budget creation. Table 6.5 contains Models 6.15-6.20 which utilize fixed effects modeling and examine the relationship between the six independent variables of interest in this chapter and *Defense Burden*. As the reader can see, in all of the models, with the exception of Models 6.19 which examines PBOs, the coefficients for the IGO variables are negative and statistically significant, and have roughly the same values as they did in Chapter 4 where the basic modeling is presented, aside from Models 6.19 and 6.20, where the PBO coefficient is significant, and the IGO Power variable is significant. This indicates that the concern articulated by Sandler and Hartley (1995) and Looney and Frederiksen (2000), that individual characteristics of states shape the results of models utilizing pooled military spending data, is not accurate. Sandler and Hartley (1995) and Looney and Frederiksen's (2000) position, as the reader will recall, is that no one equation exists to capture military spending. If they were right, the results in Table 6.5 should be substantially different from those presented earlier; however, that is not the case. Model 6.19 examining PBOs does present an issue for this logic, given that the coefficient has dropped out of significance, indicating that as the individual elements of states are considered, this select group of IGOs does not play a major role in security policy. However, they are when making an alternative modeling choice, which is demonstrated in Chapter 4.

{Table 6.5 about Here}

While individual temporal and spatial influences are controlled for in the fixed effects modeling, we still do not know if there are general regional influences. Table 6.6 captures Models 6.21-6.26 which include the regional variables.⁶⁶ The results indicate that when the regional variables are included in the models the coefficients for the independent variables of interest remain similar to those presented in Chapter 4 with several interesting findings. First, the *Total IGO Membership-Duration* variable loses its significance, indicating that when accounting for regional influence, there is no universal relationship with the duration of IGO membership. However, this finding is contradicted in the next section, which examines alternative measures of the IGO Duration variable.

Second, in Model 6.25 the PBO variable is negative and significant, and the non-PBO security variable is as well, indicating that PBOs do have a negative influence over the security decision making of states when considering regional factors. Second, the coefficient for PBO in Model 6.31 is negative and significant, indicating that when accounting for regional effects, PBOs have a negative influence on military spending, a complete reversal from other modeling presented thus far. Further, non PBOs retain their negative and significant coefficient, indicating that it is only PBOs themselves that are sensitive to the inclusion of regions. To ensure that these results remain robust, I keep the regional indicators, while also adding non-PBO security organizations, as was done in Section 3. The results, while not reported, confirm these findings, as both security IGO variables remain negative and statistically significant.

Third, the level of significance for the security IGOs variable strengthens in Model 6.30 from previous models and Model 4.10, indicating that the role of security

⁶⁶ As the reader will recall the regional variables include North American, South America, Asia, Middle East, Sub-Saharan Africa, Oceania, with Europe serving as the base category.

IGOs is stronger when taking into account regional influences. This finding suggests that in some regions, the role of security IGOs is dampened by some additional factor. However, in general, these models indicate that when considering regional influence, the IGO variables do not waiver in their influence, and that the results are not being driven by one region. Lastly, there is change in some of the control variables. Most notably, GDP Per Capita and rivalries in all six of the models falls from significance, indicating that there is no universal response in security policy to shifts in those two variables. Further, militarized conflict and democracy stay consistent, indicating that those influences remain constant across a range of alterations to the models. These findings shed light on the nature of military spending decision making, as not all variables have a universal effect. Further research should address the lack of understanding of this regional influence.

{Table 6.6 about Here}

Section 5: Alternative Measure of Total IGO Membership-Duration

The inconsistency of the Total IGO Membership-Duration, and the availability of an alternative measure, prompts this section. As discussed in Chapter 3, the alternative measure to the Total IGO Membership-Duration, which as the reader will recall is an average of the duration of all IGO memberships for member states, is simply lagged Total IGO Membership by five and ten year intervals. Given that the models examining Total IGO Membership-Duration utilizing regional indicators saw the coefficients fall out of significance, Table 6.7 captures the Total IGO Membership at t-5 and t-10 twice, one with the regional indicators, and one without them. The findings indicate support for the

notion that years after the presence of IGO memberships the benefits remain. The coefficients produce similar results as that found in Models 4.7 and 4.8, which examine *Total IGO Membership* and *Total IGO Membership-Duration*. Further, these results counter the lackluster performance of *Total IGO Membership-Duration* when including regional indicators. In sum, the results in Table 6.7 strengthen the position that the effect of IGO memberships are felt years after the memberships are established. Furthermore, results not reported here which lag the Security IGO variable at t-5 and t-10, produce strong negative coefficients, furthering the position that security IGOs also shape military decisions years into the future.

{Table 6.7 about Here}

Section 6: Endogeneity

As discussed in Chapter 5, endogeneity is an often overlooked occurrence in statistical analysis when the dependant variable influences one or more of the independent variables. More specifically, I want to ensure that military spending rates are not influencing the number of memberships IGOs state have, such that the results that have been obtained thus far are biased. The assumption in regression is that the error term is uncorrelated with each independent variable. As discussed in Chapter 5, there are two main tests that are employed in this project to capture the role of endogeneity. The first is the Hausman specification test, which captures if the error term from one OLS regression equation is related to the Y of the second equation.

Hausman tests on all six of the main models of this chapter returned findings indicating that the dependant variable, *Defense Burden*, had no relationship to the error

terms of the independent variables thus indicating that endogeneity was not an issue. To ensure that the Hausman test results were not the product of some other influence, I ran a two stage least squares (2SLS) model for each of the six independent variables of interest in this chapter. 2SLS results indicate that there were no endogenous regressors in each of the six models, indicating that endogeneity is not an issue for the modeling examining IGO membership and military spending.

Chapter 6 Tables and Figures

Table 6.1 Human Defense Burden and IGO Membership 1965-2000

Variable	Model 6.1 Total IGO Membersh ip	Model 6.2 IGO Duration	Model 6.3 Institution alization Score	Model 6.4! Security IGOs (Level 3 Only)	Model 6.5! PBOs	Model 6.6 IGO Power
Total IGO Membersh ip	- .00007*** (.00001)			- .00006*** (.00001)		
IGO Duration		-.00007* (.0002)				
Institution alization Score			- .00004*** (8.54e-06)			
Security IGOs				-.00009 (.00006)	-.002*** (.0006)	
PBOs					.0004 (.0009)	
IGO Power						-.00005^ (.00001)
Alliance	.00009 (.00009)	.00008 (.00008)	.00008 (.00008)	.00009 (.00009)	.003*** (.001)	.00008*** (.00009)
Rivalry	.001*** (.0002)	.001*** (.0002)	.001*** (.0002)	.001*** (.0002)	.005*** (.001)	.001*** (.0002)
GDP Per Capita	.002*** (.0002)	.002*** (.0002)	.002*** (.0002)	.002*** (.0002)	.009** (.002)	.002*** (.0002)
MIDS	.00001 (.00002)	.00001 (.00002)	.00002 (.00002)	.00002 (.00002)	.0005^ (.0002)	.00001 (.00002)
MAJ Power	.0007 (.0004)	.001*** (.0004)	.0004 (.0004)	.0007 (.0004)	.020** (.007)	-.001** (.0004)
Regime Type	-.0001*** (.00001)	-.0001*** (.00001)	-.0001 (.00001)	-.0001 (.00001)	-.0009** (.0002)	-.0001*** (.00001)
Constant	-.012*** (.002)	-.01*** (.002)	-.01*** (.001)	-.012*** (.002)	-.034 (.021)	-.011*** (.002)
Adjusted R ²	.12	.11	.12	.12	.04	.12
N	4509	4509	4509	4509	4509	4509
Rho	.849	.863	.851	.846	.791	.857

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

!Total IGO Membership in model 6.4 is all non-security related IGOs

!Security IGOs in model 6.5 are non-PBO security IGOs.

Table 6.2 Calculated Military Personnel Reductions by Population Percentile and IGO Memberships 1965-2000

Variable	10%	25%	50%	75%	90%
Total IGO Membership & IGO Duration	-25	-144	-447	-1281	-3,808
IGO Institutionalization Score	-14	-82	-255	-732	-2,176
Non-PBO Security IGOs	-18	-103	-319	-915	-2,720
IGO Power	-21	-123	-383	-1,098	-3,264

Table 6.3 IGO Memberships and Additional Control Variables 1965-2000

Variable	Model 6.7 Total IGO Membership	Model 6.8 IGO Duration	Model 6.9 Institutional ization Score	Model 6.10 Security IGOs (Level 3 Only)!	Model 6.11 Peace Brokering Organizations!	Model 6.12 IGO Power
Total IGO Membership	-.0004*** (.00009)			-.0002* (.0001)		
IGO Duration		-.0007** (.0002)				
Institutional ization Score			-.0003*** (.00006)			
Security IGOs				-.001** (.0005)	-.003*** (.0005)	
PBOs					-.0006 (.0009)	
IGO Power						-.0007 (.001)
Rivalry	.007*** (.001)	.007*** (.001)	.007** (.001)	.007*** (.001)	.007*** (.001)	.007*** (.001)
GDP Per Cap	.007*** (.001)	.006* (.002)	.009* (.003)	.009* (.003)	.007** (.002)	.006* (.003)
MIDS	.0004^ (.0002)	.0005^ (.0002)	.0004^ (.0002)	.0004^ (.0002)	.0005^ (.0002)	.0004* (.0002)
MAJ Power	.026** (.007)	.01** (.006)	.029*** (.007)	-.0009*** (.0001)	.02** (.007)	.022** (.007)
Regime Type	-.0009*** (.0001)	-.001*** (.0002)	-.0009*** (.0001)	.026** (.007)	-.0009*** (.0001)	-.001*** (.0002)
Major Power Ally	-.00006 (.003)	-.001 (.003)	.0002 (.003)	-.0003 (.003)	-.0006 (.003)	-.002 (.003)
Regional Military Spending	.19*** (.068)	.199* (.066)	.190* (.068)	.190** (.069)	.191** (.067)	.184** (.068)
Cold War	-.004** (.002)	-.003* (.002)	-.004* (.001)	-.004* (.001)	-.004* (.001)	-.001 (.001)
Constant	-.027** (.022)	-.020** (.021)	-.023** (.022)	-.022* (.024)	-.012** (.022)	-.03 (.022)
Adjusted R ²	.04	.04	.04	.04	.04	.03
N	4579	4579	4579	4579	4579	4579
Rho	.783	.763	.788	.783	.781	.876

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

! The Total IGO Membership coefficient in model 6.10 are all the non-security related IGOs, while in 6.11 it is all of the non-PBO IGOs.

!The Security IGO coefficient in model 6.11 is non-PBO security IGOs.

Table 6.4: Security Organizations, Sorting out the Difference 1965-2000

Variable	Model 6.13	Model 6.14
PBOs	.0004 (.0009)	.001 (.001)
Non PBO Security IGOs	-.002*** (.0006)	-.002*** (.0006)
Non Security IGOs		-.0001 (.0001)
Alliance	.003** (.001)	.003** (.001)
Rivalry	.005** (.001)	.005** (.001)
GDP Per Capita	.009*** (.002)	.01** (.003)
MIDS	.0005** (.0002)	.0004^ (.0002)
MAJ Power	.02** (.007)	.021** (.007)
Regime Type	-.0009*** (.0002)	-.0009*** (.0002)
Constant	-.034* (.021)	-.04^ (.023)
Adjusted R ²	.04	.04
N	4579	4579
Rho	.791	.786

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10
Coefficient (Standard Error)

Table 6.5: IGO Membership and *Defense Burden* with Fixed Effects Modeling 1965-2000

Variable	Model 6.15 Total IGO Membershi p	Model 6.16 IGO Duration	Model 6.17 Institutional ization Score	Model 6.18 Security IGOs (Level 3 Only)!	Model 6.19 Peace Brokering Organizatio ns!	Model 6.20 IGO Power
Total IGO Membershi p	-.00009** (.00003)			-.00003 (.00005)	-.0001*** (.00003)	
IGO Duration		-.0001* (.00007)				
Institutional ization Score			-.00006*** (.0001)			
Security IGOs				-.0004* (.0002)		
PBOs					.0004^ (.0003)	
IGO Power						-.0006* (.0002)
Alliance	.0004 (.0006)	.0006** (.0002)	.0005^ (.0002)	.0002 (.0006)	.0005 (.0006)	.0007** (.0002)
Rivalry	.001 (.002)	.001 (.0008)	.001 (.0008)	.001 (.002)	.0007 (.002)	.001 (.0008)
GDP	3.73e-07* (1.96e-07)	2.94e-07^ (1.74e-07)	3.56e-07* (1.79e-07)	3.68e-07* (1.99e-07)	3.53e-07* (1.94e-07)	2.99e-07* (1.78e-07)
MIDS	.001*** (.0002)	.001*** (.0002)	.001*** (.0003)	.001*** (.0002)	.001*** (.0002)	.001*** (.0003)
MAJ Power	.002 (.001)	.0005 (.001)	.001 (.001)	.002 (.001)	.002 (.001)	.003* (.001)
Regime Type	-.0002*** (.00008)	-.0003** (.00009)	-.0002** (.00009)	-.0002** (.00008)	-.0002** (.00008)	-.0003*** (.0001)
DVt-1	.800*** (.031)	.807*** (.030)	.799*** (.031)	.798*** (.031)	.802*** (.030)	.805*** (.030)
Constant	.006*** (.001)	.003 (.001)	.007*** (.002)	.007 (.002)	.005 (.001)	.001*** (.001)
Adjusted R ²	.73	.73	.73	.73	.73	.73
N	4579	4579	4579	4579	4579	4579

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

! The Total IGO Membership coefficient in model 6.23 are all the non-security related IGOs, while in 6.24 it is all of the non-PBO IGOs.

Table 6.6: Regional Influences on IGO Membership on Defense Spending 1965-2000

Variable	Model 6.21 Total IGO Membersh ip	Model 6.22 IGO Duration	Model 6.23 Institution alization Score	Model 6.24 Security IGOs (Level 3 Only)	Model 6.25 Peace Brokering Organizati ons!	Model 6.26 IGO Power
Total IGO Membersh ip	-.0002** (.0001)			.00002 (.00005)		
IGO Duration		-.0002 (.0002)				
Institution alization Score			-.0002** (.00007)			
Security IGOs!				-.0008*** (.0002)	-.001** (.0005)	
PBOs					-.001** (.0005)	
IGO Power						.0001 (.001)
Alliance	.0006* (.0002)	.0007* (.0002)	.0006* (.0002)	.0005* (.0002)	.0005* (.0002)	.0008** (.0002)
Rivalry	.003* (.0008)	.003* (.0008)	.004* (.0008)	.004* (.0008)	.005* (.0008)	.004* (.0008)
GDP	.004 (.003)	.003 (.001)	.004 (.003)	.005 (.004)	.005 (.003)	.004 (.003)
MIDS	.0009*** (.0002)	.0008** (.0002)	.0009** (.0002)	.0009** (.0002)	.0009** (.0002)	.0008** (.0002)
MAJ Power	.003* (.001)	.001 (.001)	.004* (.001)	.004* (.001)	.004* (.001)	.003* (.001)
Regime Type	-.0002** (.00006)	-.0002*** (.00007)	-.0002** (.00006)	-.0001** (.00006)	-.0002*** (.00006)	-.0003*** (.00007)
Oceania	-.003*** (.0009)	-.001* (.0006)	-.004*** (.001)	-.004*** (.0009)	-.004*** (.001)	-.001* (.0006)
Asia	-.002* (.001)	-.001 (.001)	-.003* (.001)	-.003** (.001)	-.003* (.001)	-.001 (.001)
Middle East	.004^ (.002)	.004* (.002)	.003^ (.002)	.005* (.002)	.004* (.002)	.004* (.002)
Africa	-.005*** (.001)	-.005** (.001)	-.006*** (.001)	-.005*** (.001)	-.006*** (.001)	-.005** (.001)
South America	-.004*** (.001)	-.004*** (.001)	-.005*** (.001)	-.004** (.001)	-.005*** (.001)	-.004** (.001)
North America	-.004*** (.0009)	-.003*** (.0008)	-.004*** (.0009)	-.003** (.0008)	-.004*** (.0009)	-.003** (.001)
Europe	Ref .Cat.	Ref .Cat.	Ref .Cat.	Ref .Cat.	Ref .Cat.	Ref .Cat.
Constant	.011*** (.002)	.007 (.001)	.012*** (.002)	.015*** (.002)	.012*** (.002)	.005** (.002)
Adjusted R ²	.05	.04	.05	.05	.05	.04
N	4579	4579	4579	4579	4579	4579
Rho	.802	.799	.804	.801	.802	.801

Table 6.7: Alternative IGO Membership Duration Measures and Defense Spending 1965-2000

Variable	Model 6.27	Model 6.28	Model 6.29	Model 6.30
Total IGO Membership t-5	-.0002** (.0001)		-.0003** (.0001)	
Total IGO Membership t-10		-.0005*** (.0001)		-.0005*** (.0001)
Alliance	.003* (.001)	.004** (.001)	.003** (.001)	.004** (.001)
Rivalry	.002^ (.001)	.003^ (.002)	.005** (.002)	.006** (.002)
GDP	.003 (.002)	.004 (.003)	.01*** (.002)	.01*** (.002)
MIDS	.0005^ (.0002)	.0004 (.0003)	.0006* (.0002)	.0006^ (.0003)
MAJ Power	.023*** (.006)	.016** (.006)	.017** (.007)	.01^ (.006)
Regime Type	-.0006*** (.0001)	-.0005*** (.0001)	-.001*** (.0002)	-.001*** (.0002)
Oceania	-.01*** (.003)	-.02*** (.003)		
Asia	-.001 (.004)	-.01* (.004)		
Middle East	.035*** (.009)	.03** (.010)		
Africa	-.015* (.006)	-.024* (.006)		
South America	-.019** (.003)	-.024*** (.003)		
North America	-.017*** (.003)	-.025*** (.003)		
Europe	Ref. Cat.	Ref. Cat.	Ref. Cat.	Ref. Cat.
Constant	.009 (.023)	.024 (.026)	-.048** (.017)	-.05* (.018)
Adjusted R ²	.05	.08	.04	.06
N	3859	3117	3859	3117
Rho	.788	.776	.770	.755

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10
Coefficient (Standard Error)

Figure 6.1: First Differences of Total IGO Membership and Human Defense Burden 1960-2000

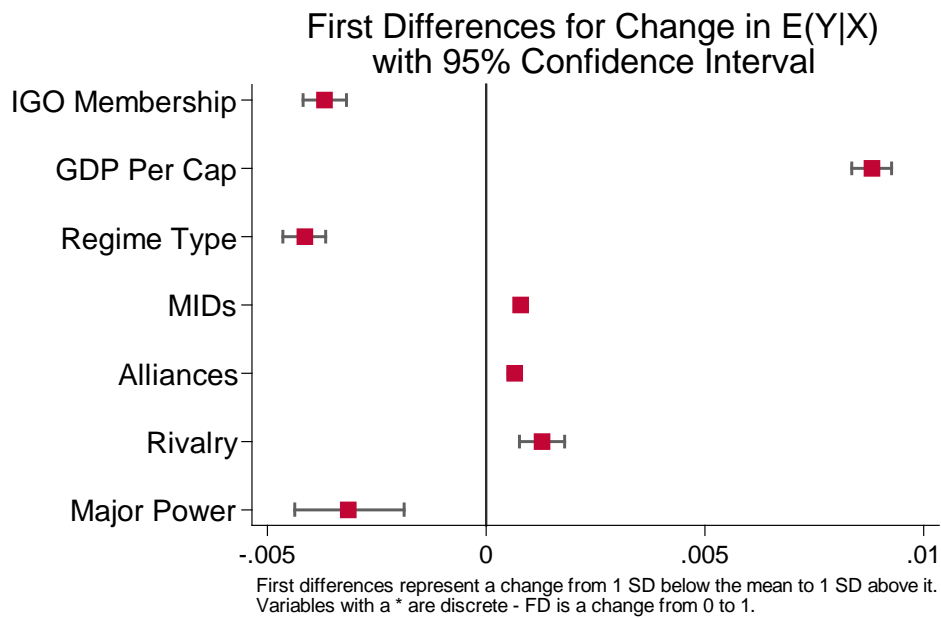


Figure 6.2: First Differences of Total IGO Membership-Duration and Human Defense Burden 1960-2000

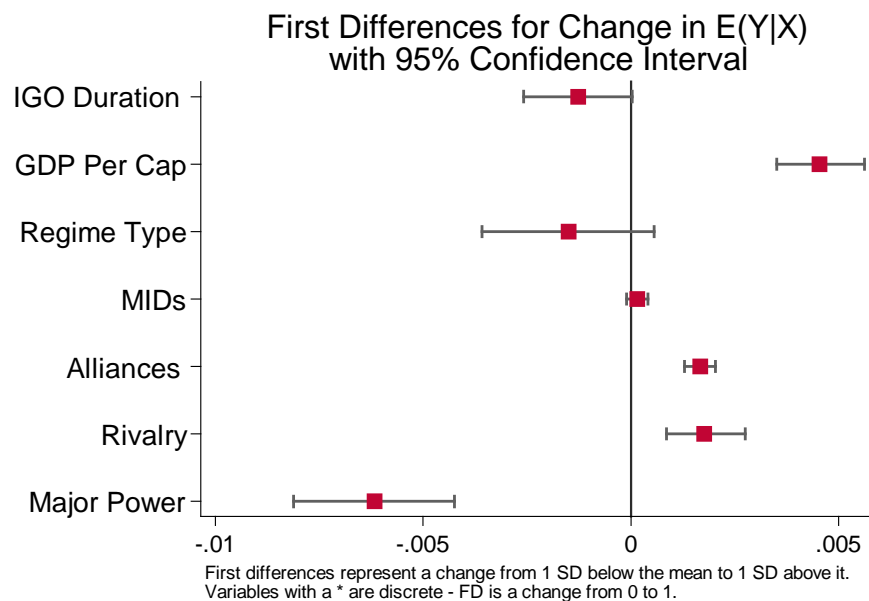


Figure 6.3: First Differences of Total IGO Membership-Institutionalization and Human Defense Burden 1960-2000

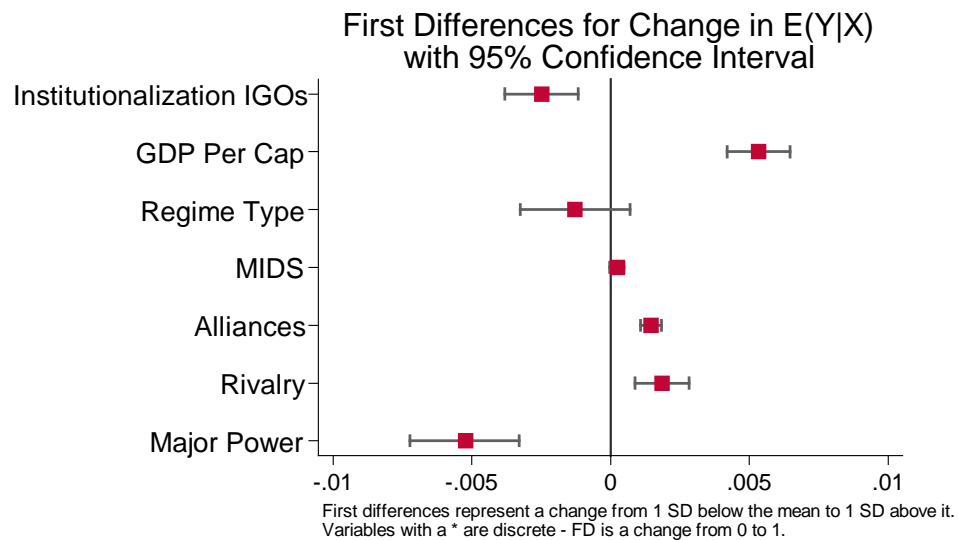


Figure 6.4: First Differences of Non-PBO Security Organizations and Human Defense Burden 1960-2000

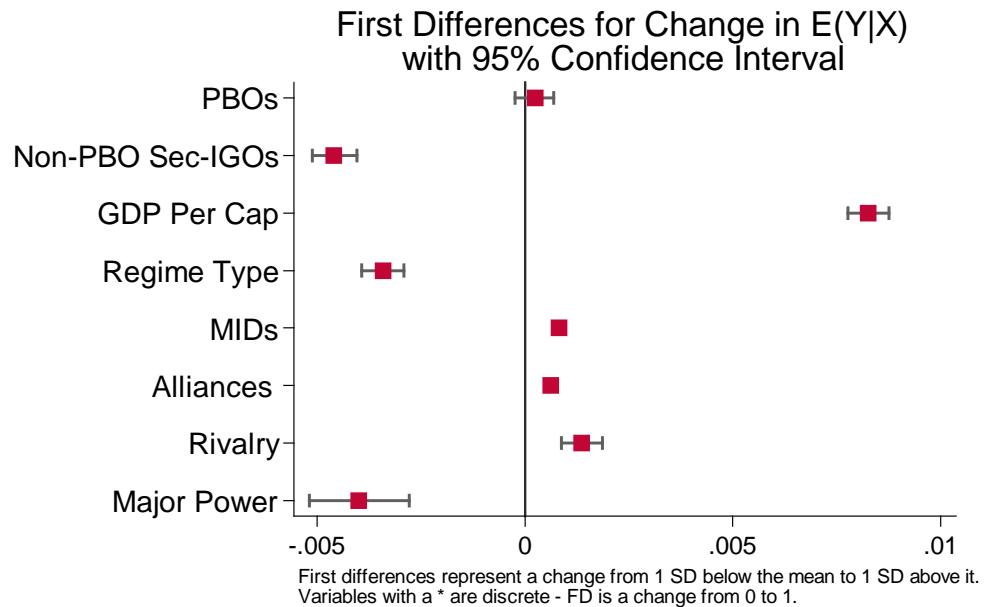
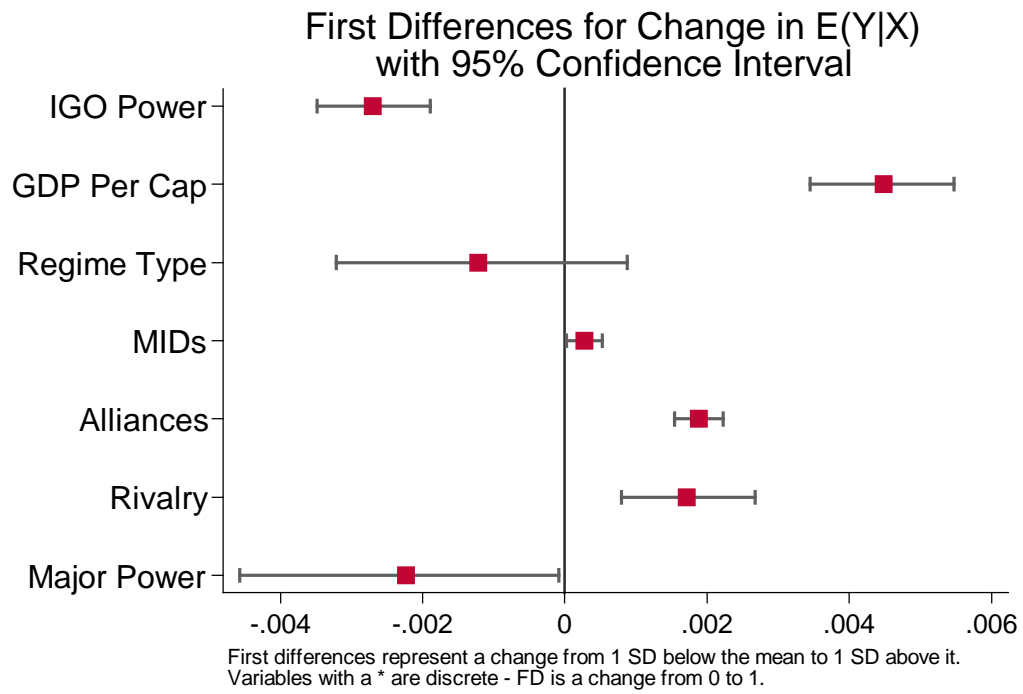


Figure 6.5: First Differences of Total IGO Membership-Power and Human Defense Burden 1960-2000



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Chapter 7: Economic Interdependence and Defense Burden

Introduction

This chapter examines in more depth the relationship between economic interdependence and military spending. Following the pattern set in Chapters 5 and 6, this chapter examines five modeling issues that require further investigation beyond the basic modeling found in Chapter 4. First, I examine the relationship between the four independent variables of interest and the alternative dependant variable. Second, I move on to discuss variation in trade measurements and data, as there is a schism within the field as to the best approach to compiling trade statistics. Third, I examine modeling that includes the alternate control variables. Fourth, I examine the temporal and spatial influences that may exist. Lastly, I examine the role of endogeneity. The results of this chapter demonstrate that the modeling presented in Chapter 4 is robust, and that the economic interdependence variables remain mostly consistent throughout alterations to the modeling found in this chapter. In sum, economic interdependence works to increase military spending, not decrease it as theorized in Chapter 2.

Section 1: Alternative Measure of the Dependent Variable

As in Chapters 5 and 6, this section examines the relationship between the four independent variables of interest and the alternative dependent variable of *Human Defense Effort* which captures the percentage of citizens in uniform. Table 7.1 contains Model 7.1, which captures the relationship between total trade and *Human Defense Effort*, which indicates that the number of citizens in uniform increase as trade increases as a share of the GDP. Table 7.2 captures the projected increase for the average state. As with tables found in Chapters 5 and 6, the sample is broken into percentiles of population

size. The figures in Table 7.2 are based on if states have 100% of their GDP made up of total trade. Since that is nearly impossible, I further calculate the increases in military spending rates based on the average value of total trade. The average state by both population size and trade volume as a share of GDP can expect a 792 troop increase; the largest states see a six thousand increase. For a country like the U.S., that has maintained an active duty force of over a million troops, 6,000 troops while a small sum is still a substantial one. Figure 7.1 captures the first differences, which indicate that as states move from one standard deviation below the mean to one above it, they experience a 14% increase in troop levels. The results indicate that the modeling conducted in Chapter 4 is robust, as total trade works to increase militarization policies, not decrease them.

{Table 7.1 & 7.2 about Here}

Regional trade, however, does not increase levels of military population. The coefficient is negative, but is not significant. The non-regional trade variable included in the model retains its significance, indicating that of trade, it is the trade outside of the region that is driving the increase in the number of citizens who are active duty members of the military. This finding indicates that regional trade does not have the same universal effect on military population levels that it does on military spending. This finding also indicates that there is not the same robust relationship with regional trade and militarization, as there is to total trade. Further, the results demonstrate that some states may find that regional trade increases their levels of *Human Defense Burden*, while other states decrease such levels.

Likewise, Model 7.3 indicates that economic globalization also does not have a significant relationship with *Human Defense Effort*, which is inconsistent with the

findings in Chapter 4, and indicates that as with regional trade, Economic Globalization does not have a universal relationship with militarization. However, total globalization, as captured by the KOF measure, had a negative influence on *Human Defense Burden*, indicating that when taken as a whole, globalization does shift military population levels. Model 7.4 captures this relationship, and indicates that for each additional value increase in the Globalization measure, which as the reader recalls varies from an average low of 18 for Afghanistan, to an average high of 73 for Canada. The average country by population has a 192 person reduction in military personnel, moreover, the average country scores 2, which results in 8,064 person reduction in active duty military. As states move from one standard deviation below the mean to one above it, they experience a 28% reduction in *Human Defense Burden*. This finding suggests that the influence of political and social globalization may counter balance the role economic globalization has on troop levels. Moreover, these results contradict the findings in Chapter 4, which suggests that globalization has no universal impact on military spending.

The control variables in these models perform in a similar pattern as those utilizing *Defense Burden*, with the exception of Major Power, which was negative and significant. This indicates that major powers actually decrease the number of citizens in uniform than non major powers, suggesting that major powers need less citizens in their militaries vis-à-vis their total population.

The collective findings in this section support the findings in Chapter 4, and similarly they do not support the argument advanced by this project that economic interdependence leads to a reduction in militarization. In all, there is clear evidence that an increase in international trade and globalization results in an increase in *Human*

Defense Effort. As suggested in Chapter 4, the finding that economic interdependence positively influences militarization policies may be the result of a combination of increased economic power that both allows states to spend more and encourages them to do so in order to match the image of a country with a competent economy. In other words, states are motivated to demonstrate not only their ability to project power which communicates competency, but their willingness to advance their interests through violence if necessary. The next section dives into the measurement and possible alternative changes that can be made to the independent variables of interest.

Section 2: Alternative Measures of Trade

The modeling conducted examining the connection between trade and military spending utilized the Correlates of War Trade data set compiled by Barbieri, et al. (2009). Some have raised concerns about how missing and zero value data points are handled, primarily because the missing data points account for a substantial portion of the period of study (Gartzke and Li 2003). The reader will recall that the data used in Chapter 4 replace missing values to zero, as suggested by Gleditsch (2002). To resolve this issue, however, Gleditsch (2002) offers a dataset, also drawn from the IMF Direction of Trade Data set, that employs a more hands on and direct approach to deal with missing values. Gleditsch (2002) uses interpolation, reports from trading partners, and reassigning the remaining missing values to zero. His choices are in stark contrast to Barbieri, et al. (2009), and have created some interesting exchanges and debates on the nature of the data and the decisions behind them. Overall, Gleditsch (2002) offers an alternative to analysis that simply omits missing values or replaces them to zero. Moreover, as

Gleditsch (2002) and others (Gartzke & Li, 2003) have recognized, the major findings in the field on the relationship between trade and conflict in the dyadic context are dependent not on the actual data used, but how trade in general is conceived and operationalized. To ensure that the Barbieri, et al. (2009) data is not conflating the results in some way, I utilize Gleditsch's data to check the robustness of the results presented in Chapter 4. It should be noted that the total trade data correlates at .86, while the regional trade correlates at .70.

Table 7.3 presents Model 7.5 and 7.6 which capture the relationship between total trade as a share of GDP and regional trade as a share of GDP and *Defense Burden*, utilizing the Gleditsch data. The coefficient for total trade is clearly positive and statistically significant, indicating strong support for the notion that trade actually increases military spending. This finding supports the modeling completed with the COW trade dataset, offsetting at least in this study any debates as to how trade data generation processes influence results. Moreover, the coefficient in Model 7.5 for total trade is of similar size as the coefficient found in Model 4.13. The findings in Model 7.6 suggest that regional trade does not influence military spending, but non regional trade does, also lending support for the modeling conducted in Chapter 4. This is a reversal of the modeling presented in Chapter 4 that indicated that regional trade had a pacific effect on military spending. When the Gleditsch regional trading data is regressed again utilizing region specific indicators, the coefficient does not shift, indicating that the difference is in the data utilized, and reduces the robustness of the results presented in Chapter 4.

{Table 7.3 about Here}

One concern emerging from this modeling is how the use of an independent variable and dependent variable that are functions of GDP work to shape the results. Both trade variables are ratios of total trade and regional trade, respectively, divided by the country's overall GDP. *Defense Burden*, the dependant variable, is also a function of the GDP, resulting in some bias given that they are both functions of the same process. Models 7.7 and 7.8 in Table 7.4 examine raw figures of defense and trade data, while include measure for population and GDP size, as opposed to GDP per capita. The coefficients in both models are positive and significant, indicating that military spending increases as trade increases, both in a global and regional context. Models 7.7 demonstrate the robustness of the modeling presented in Chapter 4, however Model 7.8, which examines regional trade, raises questions about the validity of those results. There is mixed evidence regarding the idea that regional trading partnerships work to reduce military spending, as changing data sources and formats alter the results, and in the case of raw military spending figures, regional trade increases spending.

Another additional concern is the notion that the results are being driven by some type of trade. Models 7.9 and 7.10 divide trade into imports and exports, which are separate variables, to gauge if having a larger share of the economy dependent on one or the other shapes defense spending. The results demonstrate that both exports and imports work to increase military spending, however, the coefficient in Model 7.9 capturing the role of imports had a much strong statistical relationship than that in Model 7.10, indicating that imports have a stronger connection to increases in defense than exports. Additionally, one model not reported here, that includes both measures in the same model, finds that collectively they both lead to an increase in military spending.

However, they both lead to a reduction in military population, the preferred alternative measure of defense spending. However, given that this project is mainly concerned with defense spending, the results found in Chapter 4 are supported by the modeling conducted here. These findings collaborate much of the realist logic concerning the security decision making of states. If states are dependent on outside sources for needed supplies and resources, they maintain stronger military institutions to ensure that they have the capabilities to acquire a needed resource. Although it is unclear from these models if that is the exact logic that is underwriting the results, in all it is clear that it does not matter how one splits up trade, the import and export dynamics both work to increase military spending.

Section 3: Control Variable Substitution

Section two demonstrated that utilizing alternative datasets and examining imports versus exports led to several changes in the conclusions drawn in Chapter 4. This section extends the robustness inquiry into those results, by utilizing an alternative set of control variables. Following the modeling choices in Chapters 5 and 6, I examine if an alternative set of control variables leads to any major changes in the coefficients for the trade variables. Table 7.5 captures Models 7.11-7.14, which examine the relationship between the four trade variables and *Defense Burden* utilizing a set of controls that adds the three additional variables of major power ally, regional military spending, and the Cold War. The coefficients for the main variables of interest retain their directionality and level of significance. The three control variables perform as they have in previous

chapters with a few exceptions. Major power ally is positive and significant in the models examining the trade variables, but loses its significant and becomes negative in the models examining the KOF variables. The KOF measures are examined in samples that drop a dozen years from the sample as they only cover 1972-2000, which may be the cause. An alternative explanation is that the measures themselves shift the balance of the model, however, no other variable shifted significantly, indicating that the sample period is driving this result.

Regional military spending, on the other hand, remained consistent with previous modeling, and suggests that what neighboring states do in terms of military spending levels is a major factor in the decision making of states. Lastly, Cold War, while positive, did not near significance, indicating that the time period did not play a major role in shaping defense spending levels. However, as discussed in earlier chapters, in modeling that examines raw military spending figures, the coefficient for Cold War is positive. In addition, I ran a series of models not reported here, that utilized additional control variables as was done in Chapters 5 and 6. These models produced no significant variation in the four independent variables of interest, and further speak to the robustness of the results presented in Chapter 4.

{Table 7.5 about Here}

Section 4: Temporal and Spatial Variation

Following the outline and decision in Chapters 5 and 6, this section examines the role temporal and spatial variation has on the results. I first examine if the results change

if the standard PCSE model is replaced with a fixed effects model. As the reader will recall, some argue that there is no universal model for military spending, given that some states may have unique influences specific only to those states that shape military spending (Sandler and Hartley 1995; Looney and Frederiksen 2000). Fixed effects models check for this possible influence, by capturing the individual effects of individual countries, so that if any one country has a non-random influence contained in its defense budget generation process, the variance it is responsible for is removed from the other variables. Table 7.6 contains Models 7.15-7.18. As the reader can see there is no major change from the finding presented in Chapter 4, indicating the notion that the individual effects of nations are shaping the results are not a concern. The interesting finding of these models is that regional trade maintains its negative directionality and significance in Model 7.16, which counters the findings in Models 7.6 and 7.8, which suggests that regional trade does not have a significant effect on military spending. This result and the others in this chapter examining regional trade offer further evidence that regional trade works to decrease militarization.

{Table 7.7 about Here}

The findings here, combined with those discussed in Chapters 5 and 6, suggest a significant conclusion, in that there does exist the possibility of a universal model of defense spending. This notion is further supported by the findings in Chapters 5 and 6, where similar models are run with identical results. In other words, states do share very similar conditions and decision making structures in terms of how they choose to pursue security. While the lagged dependent variable does contain individual effects, the inclusion of that variable captures these individual effects, indicating that the modeling

procedures are effective and produced unbiased estimators. The idea that the field can make generalizations about the way states react to both domestic and international stimuli offers more concrete proof that the findings from this research project and others can be applied to a wide portion of the world's states. Moreover, it clears the way to make general conclusions regarding the various influences of military spending. In sum, the position of Sandler and Hartley (1995) and Looney and Frederiksen (2000) is rejected.

The concern of individual effects has been banished by these results and results examined in previous chapters. However, there still does remain some spatial influence. Table 7.7 captures Models 7.19-7.22 which include the regional indicators utilized in Chapters 5 and 6.⁶⁷ The coefficients for models examining Total Trade, regional trade and the KOF Economic Globalization indicators remain consistent with previous modeling, and offer support for the modeling presented in Chapter 4. Taken together, these models indicate that the relationship between economic interdependence and military spending is not sensitive to the spatial influences that are captured by the regional indicators. Building on the findings from the fixed effects models discussed above, these models offer further support that military spending decisions are made in a similar fashion around the globe. By taking into consideration regional influences, the possibility that one region is driving the results is removed from consideration. While it is clear from Chapter 4 is that while the more liberalized states experience the bulk of the influence trade openness has on military spending decisions, less economically liberalized states are still shaped by their level of openness. As with Chapter 6, the control variables varied more than the independent variables of interest, with GDP Per

⁶⁷ As with previous chapters, the regional indicators are North America, South America, Sub-Saharan Africa, Asia, Middle East, Oceania, and Europe serving as the reference category.

Capita, rivalry, and alliance all losing their significance. This indicates that states do shift their behavior based on region, and that alliances in one part of the world may have a different effect than alliances in another. This warrants further investigation into the role culture and geography play in military spending decision making.

{Table 7.7 about Here}

Temporal influence like spatial influence has a minimal impact on the results. Tables 7.8 and 7.9 split the sample into the Cold War and Post-Cold War periods. Table 7.9 captures Models 7.23-7.26, and Table 7.10 captures Models 7.27-7.30, which indicate that total trade and economic globalization work to increase military spending levels in both time periods, while regional trade causes states to spend less. While the regional trade coefficient in both tables is negative and significant, it is weaker during the Post Cold War period. Clearly, additional analysis and study is warranted, as is a more accurate theoretical perspective on this case. Chapter 8 examines the case study of Brazil, with a concluding suggestion that Brazil's economic rise led to a drive for a strong functioning military as an international symbol of success and competency. In sum, the conclusion of this chapter is that there is a positive relationship between trade and military, but it is conditional, and subject to specification.

{Table 7.8 and 7.9 about Here}

Section 5: Endogeneity

As outlined in previous chapters, endogeneity may be an issue, especially given the possible power economic trade has on the ability of a state to grow its economy and

afford a military. As mentioned in Chapter 5 and 6, the assumption in regression is that the error term is uncorrelated with each independent variable. As discussed earlier there are two main tests that are employed in this project to capture the role of endogeneity. The first is the Hausman specification test, which captures if the error term from one OLS regression equation is related to the Y of the second equation.

Hausman tests on all five of the main models of this chapter returned findings indicating that the dependant variable, *Defense Burden*, had no relationship to the error terms of the independent variables thus indicating that endogeneity was not an issue. To ensure that the Hausman test results were not the product of some other influence, I ran two stage least squares (2SLS) models for each of the four independent variables of interest in this chapter. 2SLS results indicating that there were no endogenous regressors in each of the five models, indicating that endogeneity is not an issue for the modeling presented in this paper.

Chapter 7 Tables and Figures

Table 7.1: Trade and Human Defense Effort 1960-2000

Variable	Model 7.1 Total Trade	Model 7.2 Regional Trade	Model 7.3 Economic Globalization	Model 7.4 Total Globalization
Total Trade!	.002*** (.0006)	.002*** (.0007)		
Regional Trade		-.0005 (.0006)		
Economic Globalization			.00001 (9.80e-06)	
Total Globalization				-.00003* (.00001)
Alliance	.00007 (.00008)	.0001* (.00007)	.0001* (.00006)	.0001 (.00007)
Rivalry	.0009*** (.0002)	.0009*** (.0002)	.0004** (.0001)	.0005** (.0001)
GDP Per Capita	.001*** (.0002)	.003*** (.0002)	.001*** (.0002)	.002*** (.0003)
MIDS	.00001 (.00002)	.00003 (.00002)	.00001 (.00002)	.00002 (.00002)
MAJ Power	-.001* (.0004)	-.002* (.0005)	-.0009* (.0004)	-.001* (.0004)
Regime Type	-.0001** (.00001)	-.0001*** (.00001)	-.00007*** (.00001)	-.0001*** (.00001)
Constant	-.009*** (.002)	-.018*** (.002)	-.01*** (.002)	-.01*** (.002)
Adjusted R ²	.10	.16	.13	.13
N	4628	4628	2748	2919
Rho	.856	..840	.894	.865

*The KOF Dataset extends from 1972-2000.

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

!Model 7.2 includes non regional trade as opposed to total trade.

Table 7.2; Calculated Change in Human Defense Effort 1960-2000

Variable	10%	25%	50%	75%	90%
Total Trade (if GDP was 100% trade related)	730	4,132	12,792	36,600	108,800
Total Trade (Average Value)	45	256	792	2,269	6,745
Economic Globalization	11	62	192	549	1,632

Table 7.3: Alternative Trade Data and Defense Burden 1960-2000

Variable	Model 7.5 Gleditsch Total Trade & Defense Burden	Model 7.6 Gleditsch Regional Trade & Defense Burden
Total Trade!	.003*** (.001)	.015*** (.005)
Regional Trade		-.008 (.014)
Alliance	.0007** (.0002)	.0006* (.0002)
Rivalry	.0008 (.0008)	.001 (.0008)
GDP Per Capita	.005* (.002)	.005* (.002)
MIDS	.001* (.0003)	.001*** (.0003)
MAJ Power	.001 (.001)	.002 (.002)
Regime Type	-.0003*** (.0001)	-.0003*** (.00009)
Constant	.001 (.001)	.0002 (.001)
Adjusted R ²	.05	.04
N	4428	4428
Rho	.833	.828

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

!Model 7.6 includes non-regional trade as opposed to total trade.

Table 7.4: Trade and Defense Burden, Alternative Measures 1960-2000

Variable	Model 7.7 Raw Total Trade and Defense Data	Model 7.8 Raw Regional Trade and Defense Data	Model 7.9 Imports and Defense Burden	Model 7.10 Exports and Defense Burden
Trade Variable	.644*** (.040)	.329*** (.019)	.028*** (.002)	.021*** (.001)
Regional Trade	n/a	1.71 (2.54)	n/a	n/a
Alliance	.09*** (.01)	.075*** (.01)	.08** (.001)	.07* (.002)
Rivalry	.005* (.002)	.005* (.001)	.001 (.002)	.001 (.002)
GDP Variable*	.034** (.009)	.056*** (.009)	.01** (.002)	-.06*** (.002)
MIDs	.008* (.003)	.008* (.003)	.001*** (.0002)	.001*** (.0002)
Regime Type	-.004*** (.0008)	-.002** (.0008)	-.0004*** (.0001)	-.0003** (.0001)
Major Power	.032 (.023)	.029 (.023)	.002^ (.001)	.002* (.001)
Constant	-.458*** (.121)	-.197 (.128)	.0008 (.001)	.001 (.001)
N	4488	4488	4488	4488
Adjusted R ²	.03	.04	.03	.03
Rho	.873	.867	.872	.883

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

!Model 7.8 includes non regional trade as opposed to total trade.

Table 7.5 Trade, *Defense Burden*, and Alternate Control Variables 1960-2000

Variable	Model 7.11 Total Trade	Model 7.12 Regional Trade	Model 7.13 Economic Globalization	Model 7.14 Total Globalization
Total Trade!	.096*** (.02)	.047*** (.012)		
Regional Trade		-.03** (.009)		
Economic Globalization			.00009* (.00003)	
Total Globalization				.00001 (.00005)
Alliance	.001* (.0008)	.0005 (.0004)	.0001 (.0003)	.0005 (.0005)
Rivalry	.003* (.001)	.003* (.001)	.003* (.001)	.003* (.001)
GDP Per Capita	.003^ (.001)	.005** (.002)	.004 (.003)	.004 (.003)
MIDS	.0002 (.0002)	.0002 (.0002)	-.00009 (.0002)	.00008 (.0002)
MAJ Power	.007 (.007)	.005 (.006)	.009 (.008)	.007 (.007)
Regime Type	-.0004** (.0001)	-.0004*** (.0001)	-.0004* (.0001)	-.0004** (.0001)
Major Power Ally	-.009*** (.002)	-.009*** (.002)	-.01** (.003)	-.009*** (.0025)
Regional Military Spending	.098*** (.028)	.098*** (.025)	.070*** (.031)	.098*** (.028)
Cold War	-.009*** (.002)	-.01*** (.002)	-.004* (.001)	-.00*** (.001)
Constant	-.017*** (.014)	-.024*** (.015)	-.01** (.021)	-.018** (.020)
Adjusted R ²	.06	.06	.02	..03
N	4488	4488	2647	2778
Rho	.799	.783	.802	.789

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

!Model 7.12 includes non regional trade as opposed to total trade.

Table 7.6 Trade and *Defense Burden* (Fixed Effects) 1960-2000

Variable	Model 7.15 Total Trade	Model 7.16 Regional Trade	Model 7.17 Economic Globalization	Model 7.18 Total Globalizati on
Total Trade!	.009*** (.002)	.009*** (.002)		
Regional Trade		-.005* (.002)		
Economic Globalization			.00007** (.00002)	
Total Globalization				-7.86e-06 (.00003)
Alliance	.0007* (.0002)	.0006* (.0002)	.0005* (.0002)	.0004* (.0002)
Rivalry	.001 (.0009)	.001 (.0009)	.002* (.0008)	.001* (.0008)
GDP Per Capita	1.04e-07 (7.95e-08)	1.24e-07 (8.23e-08)	1.62e-07* (8.20e-08)	3.02e- 07*** (8.56e-08)
MIDS	.001*** (.0002)	.001*** (.0002)	.0002 (.0002)	.0003757 (.0002)
MAJ Power	.002 (.002)	.002 (.002)	.002 (.001)	.0008 (.001)
Regime Type	-.0003*** (.00006)	-.0003*** (.00006)	-.0003 (.00005)	-.0002*** (.00005)
DVt-1	.801*** (.008)	.801*** (.008)	.782*** (.010)	.793*** (.009)
Constant	-.0002 (.0008)	-.0001 (.0008)	-.001 (.001)	.001 (.001)
Adjusted R ²	.73	.72	.74	.74
N	4488	4488	2647	2778

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

!Model 7.16 includes non regional trade as opposed to total trade.

Table 7.7 Trade and *Defense* Burden With Regional Indicators 1960-2000

Variable	Model 7.19 Total Trade	Model 7.20 Regional Trade	Model 7.21 Economic Globalization	Model 7.22 Total Globalization
Total Trade!	.118*** (.024)	.062*** (.015)		
Regional Trade		-.05*** (.01)		
Economic Globalization			.0001^ (.00008)	
Total Globalization				.0001 (.0001)
Alliance	.0006 (.0004)	.0004 (.0004)	-.00004 (.0003)	.0005 (.0005)
Rivalry	.002 (.001)	.001 (.001)	.001 (.001)	.001 (.001)
GDP Per Capita	-.002 (.003)	-.0006 (.003)	-.0001 (.003)	-.001 (.003)
MIDS	.0003 (.0002)	.0002 (.0002)	-.00005 (.0002)	.0001 (.0002)
MAJ Power	.008 (.006)	.009 (.007)	.015^ (.009)	.013 (.009)
Regime Type	-.0003*** (.00009)	-.0002* (.00009)	-.0001* (.00001)	-.0001* (.00001)
Oceania	-.016** (.005)	-.026** (.008)	-.007*** (.002)	-.005* (.002)
Asia	-.01 (.009)	-.018^ (.01)	-.0006 (.004)	-.001 (.004)
Middle East	.013* (.0081)	.006 (.009)	.03* (.012)	.031** (.009)
Africa	-.016^ (.009)	-.02^ (.012)	-.0009 (.006)	-.001 (.005)
South America	-.016** (.007)	-.024** (.009)	-.003 (.004)	-.003 (.004)
North America	-.01** (.006)	-.025** (.008)	-.009* (.003)	-.008* (.003)
Europe	Ref. Cat.	Ref. Cat.	Ref. Cat.	Ref. Cat.
Constant	.028 (.03)	.03 (.03)	.01 (.028)	.015 (.026)
Adjusted R ²	.06	.06	.02	.02
N	4488	4488	2647	2778
Rho	.799	.813	.830	.834

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

!Model 7.20 includes non regional trade as opposed to total trade.

Table 7.8 Trade and *Defense Burden* Cold War 1960-1989

Variable	Model 7.23 Total Trade	Model 7.24 Regional Trade	Model 7.25 Economic Globalization	Model 7.26 Total Globalization
Total Trade!	.07* (.002)	.04* (.001)		
Regional Trade		-.03** (.012)		
Economic Globalization			.003* (.00001)	
Total Globalization				-.00001 (.00002)
Alliance	.0004* (.0001)	.0004* (.0001)	.0003* (.0001)	.0004* (.0002)
Rivalry	.0002 (.0005)	.0003 (.0006)	.001* (.0005)	.0009^ (.0005)
GDP Per Capita	2.40e-08 (2.55e-07)	2.43e-08 (2.71e-07)	1.13e-07* (5.19e-08)	2.06e-07*** (5.68e-08)
MIDS	.0008** (.0002)	.0008** (.0002)	.0007* (.00002)	.00007* (.0002)
MAJ Power	-.004 (.002)	-.003 (.002)	-.001 (.001)	-.002 (.001)
Regime Type	-.0001* (.0001)	-.0001* (.00008)	-.0001* (.00005)	-.00009^ (.00005)
Constant	-.0006 (.001)	-.0006 (.001)	-.001^ (.0007)	-.00005 (.0006)
Adjusted R ²	.02	.02	.02	.02
N	3130	3130	1761	1761
Rho	.02	.02	.02	.02

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

!Model 7.24 includes non regional trade as opposed to total trade.

Table 7.9 Trade and *Defense* Burden Post Cold War 1990-2000

Variable	Model 7.27 Total Trade	Model 7.28 Regional Trade	Model 7.29 Economic Globalization	Model 7.30 Total Globalization
Total Trade!	.025** (.007)	.003* (.001)		
Regional Trade		-.001^ (.0005)		
Economic Globalization			.0007* (.00004)	
Total Globalization				-.00007 (.00007)
Alliance	.0009 (.0008)	.0007 (.0009)	.0006 (.0005)	.0005 (.0004)
Rivalry	.003* (.001)	.003* (.001)	.002* (.001)	.002* (.001)
GDP Per Capita	.004^ (.002)	.006* (.002)	.007* (.002)	.006* (.002)
MIDS	.002* (.0007)	.002* (.0007)	.0008^ (.0004)	.001** (.0005)
MAJ Power	.001 (.004)	.001* (.004)	.0001171 .0004	.0004 (.0005)
Regime Type	-.0007* (.0002)	-.0007* (.004)	-.0006* (.0002)	-.0006* (.0002)
Constant	.002^ (.001)	.002 (.001)	-.0006* (.0003)	.007* (.003)
Adjusted R ²	.52	.52	.53	.53
N	1358	1358	1007	1007

***p ≤ .001 **p ≤ .01 *p ≤ .05 ^ p ≤ .10

Coefficient (Standard Error)

!Model 7.28 includes non regional trade as opposed to total trade.

Figure 7.1: First Differences of Total Trade and Human Defense Burden 1960-2000

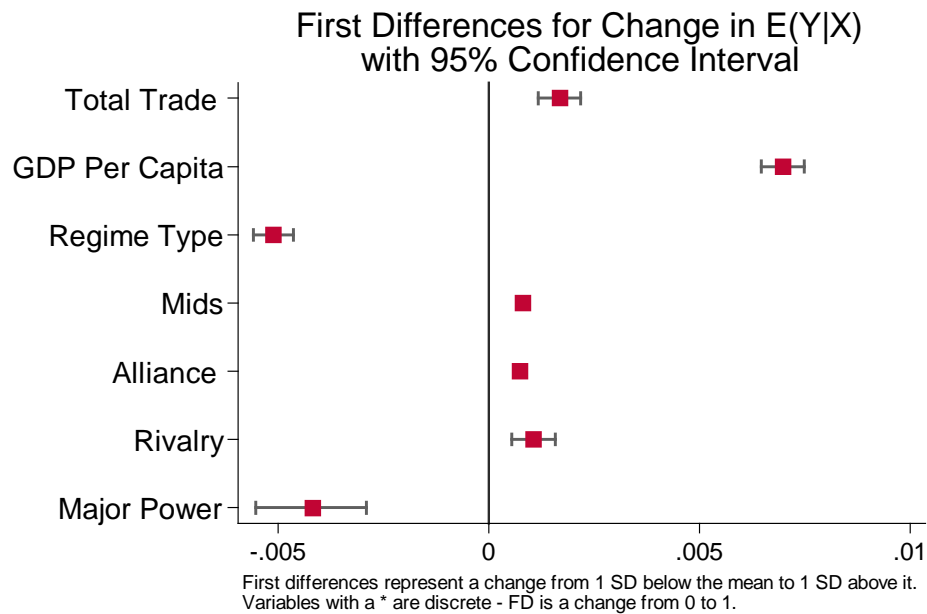
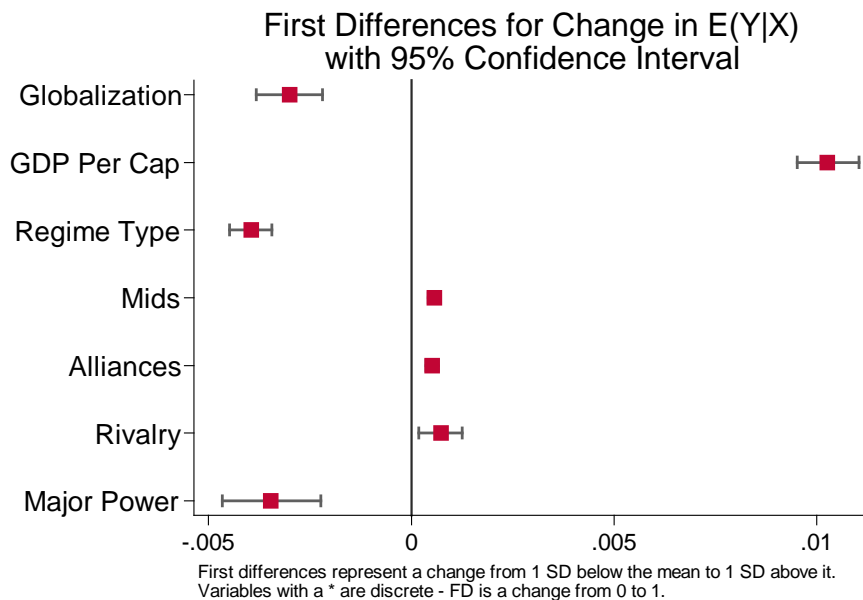


Figure 7.2: First Differences of Total Globalization and Human Defense Burden 1960-2000



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Chapter 8: The Brazilian Experience

Section 1: Case Selection

The previous four chapters have established that IGO networks and democratic norms are suppressors of high military spending rates, while international and regional trade relationships generally work to increase military spending. This chapter extends analysis of the ways in which liberal influences shape military spending levels by examining the case of Brazil between 1960 and 2000. This case serves as an illustrative example of how liberal forces shape military spending patterns, and comes with several advantages. First, there is clear operationalization of variables. Concepts like democracy get thick description and detail, where differences between pre and post election reform are apparent. Second, this case study utilizes process tracing methods that allow an examination of the causal mechanisms and are reinforced with strong deductive logic. It should be noted, however, that process tracing and statistical methodology differ in their core methods. Process tracing can be altered with one unexpected piece of evidence, whereas one change in a large n study based on correlations across cases is not going to alter the major findings (George and Bennett 2006, pg 9). Single case studies are able to pull out the exact causal mechanisms, by analyzing contextual and intervening variables.

The disadvantage of single case studies is external validity, or the ability of the researcher to make general claims about the findings, as individual cases have unique circumstances. Generalizability is a prized quality of a good social science theory. However, case studies can overcome this particular affliction by focusing on the structural elements that have similarities with other cases. Case studies also have difficulty determining the level of a particular causal variable that is needed to induce a

change. While large n studies have statistical measurements to capture the exact influence of a particular variable, case studies lack the ability to capture such exactness (George and Bennett 2006). The inclusion of this case study into the larger project allows for a more detailed examination of how liberal influences shape military spending decisions.

Lijphart's (1975) well known argument is that case study methods are an acceptable method of hypothesis testing, which uses the same logic as statistical methods, and allows for systematic evaluation of theories, so long as cases are not chosen on the dependant variable. In that sense, Brazil makes a suitable choice for this study as the independent variables of interests vary widely during the period of study, while the control variables remain mostly consistent, allowing for a clear examination of the relationship between liberal forces and military spending outcomes (Lijphart 1975). For half of the period of the study, Brazil was run by a military dictator who ruthlessly repressed democratic movements and had limited economic interaction globally. This period of rule gave way to a robust democratic consolidation coupled with a dramatic rise in economic growth and increased participation in IGOs. This variation in the independent variables offers considerable insights into how liberal factors shape military spending decisions

While the selection of the Brazil case adheres to the guidelines of case study research in the field, it also is an appropriate country to test the power of liberal influences on military spending for two additional reasons. First, Brazil is a large regional power, with the potential to have a strong and outwardly focused military. If the notion that liberal influences reduces military spending is correct, then the theory should

apply to those states most likely to have interests that require high rates of military spending. Second, Brazil is not a western state, nor has it traditionally been well integrated in the international network of IGOs, nor is it a low-income, developing country. This balance allows for examination of a politically relevant country who is not entrenched in the western tradition, nor one that lacks the capacity for substantial investments in military spending.

This case study relies on a twofold empirical approach, including first a detailed examination of the quantitative data collected for this project, and secondly a review of primarily secondary sources examining Brazilian national policy from 1960 through 2000. I disaggregate the independent variables of interest and evaluate the subsequent change in military spending. Knowing more about the progress of democratic institutions, which IGOs Brazil joined, and their trading patterns over time will give a more robust picture of how liberal influences shaped the political landscape and security strategy in Brazil.

The rest of this chapter is organized by three distinct time periods: (1) the early democratic period (1960-1964), (2) the Junta (1964-1985), and (3) the second democratic period (1985-2000). In each of these sections, I examine the state of liberalization, the non-liberal influences of the Brazilian defense budget, and I close each with an examination of the relationship liberalization and defense spending patterns share. I use both historical and quantitative sources, and draw conclusions about how the theory presented in this project has played out in the case of Brazil. Lastly, I evaluate how the findings of the case study compare to the statistical analysis presented in Chapters 4

through 7, and integrate the Brazilian case into the overall story of the relationship of liberal forces and military spending.

Section 2: 1960-1964: Early Democracy and Liberalism

The focus of this case study is the changes to security policy that liberal forces have caused in Brazil during the 1960-2000 period. Part of a wave of independence movements throughout Latin America, Brazil stood out as a nation with great potential given its size, long coastline, and fertile soil. When the Portuguese colonized Brazil in the early 1500's, they used terms such as 'paradise', 'a great kingdom', and 'empire' to describe the large, bountiful land they had conquered and claimed (Burns 1993, pg 2). Brazil has emerged in the 21st century as just that, an emerging power and a player in global affairs. Brazil was the 7th largest economy in 2011, a prospective permanent seat holder on the United Nations Security Council, and a symbol of democratic consolidation in Latin America. Brazil's emergence as a powerful nation has in part fulfilled the first impressions of the Portuguese colonizers as a land which possessed power, intrigue and possibility. Central to its capitalization of this potential and emergence as a regional power has been its embrace of liberalism. Brazil has passed through periods of slavery, authoritarian rule, shaky democratic transitions, and reversals of progress, yet has come forward as a country embracing democratic institutions, IGOs, and a free market economy. The liberalism process has had a substantial impact on the security policy of Brazil throughout its tenure as a nation by establishing democratic institutions that have brought citizen preferences closer to the policy process, reducing external threat with

IGO networks, and creating regional ties of commerce that have further eroded distrust with a rival state.

The period of study starts in 1960, which was a radical time for Brazil. It emerged from several decades of authoritarian rule and transitioned into an anocracy, which included basic democratic institutions as well as tight control by elites over the political system. Weak as the democratic structures were during this time, it was one of the first real experiences the Brazilian people had with democracy. Dominated by a monarchy for most of the 19th century, Brazil established the First Republic in 1889 via a coup d'état. A democratic vision was evoked by elites, but the mechanisms were weak, with rigged elections and rule characteristic of previous authoritarian regimes. The democratic experiment was overturned by a dictatorship in 1930, which lasted until the end of World War II. Figure 8.1 captures the trajectory of democracy through the late 19th century until 1965, and indicates the steady maintenance of an authoritarian regime throughout the first part of the 20th century.

{ Figure 8.1 about Here }

The post war period witnessed the establishment of the Second Republic, a strong yet flawed attempt at establishing a democracy, made all the more difficult as the mid 20th century was a period rife with crisis, threats and rumors of coups, and suicides and abrupt resignations of presidents. The 1960 election of reform candidate Janio Quadros was the first time that power was peacefully transferred to an opposition party, and marked a dramatic increase in voter participation as expansion of voter rights produced a 600% increase in voter turnout between 1930 and 1960, the last election of the Old Republic (Eakin 1997). Quadros' rule, however, illustrated Brazil's limited democratic

structures, as his attempts to broaden his power in order to deal with stubborn economic conditions were prevented, leading him to resign and leave the country a little over a year after the election. The leftist Vice-President, Joao Goulart, subsequently took power, and it was not until 1963 that the full powers of the president were restored, and that the semi-presidential system that had characterized the post war period was retired (Eakin 1997). These reforms only highlighted the fact that the political sphere was split between multiple parties without one having the ability to maintain a majority (Smith 2002). Three major parties emerged during the post war period, the Social Democratic Party (PSD), The Brazilian Labor Party (PTB), and the National Democratic Union (UDN), with each carving out their own constituencies and holding about 80% of the seats in Congress, with an additional dozen minor parties making up the remaining 20% (Eakin 1997). The PSD maintained a base of old party bosses and rural support while the PTB appealed mostly to the urban working classes, with both parties holding a statist orientation they dominated the political scene, often creating a coalition with a majority of Congressional seats. The UDN held a more right wing position and often courted dissatisfied military officers, who sat on the sidelines during several crises, including President Vargas' suicide and Quadros' abrupt resignation.

Conservative Brazilians found it difficult to absorb the rise of Joao Goulart given his leftist positions, which included land redistribution and oil refinery nationalization. His rule brought the left to power, backed by peasants and workers against the landed elite, the military, and the conservative Catholic Church. The clash of interests in a weak democratic system had brought to bear the pressures of a changing society. The conflict was decades in the making, and the actions of Vargas and Quadros highlighted the

tension Brazilian Presidents were left to mediate. Goulart's dedication and lack of compromise brought the conservatives to action. Fearful of a potential subjugation of the constitution by communist forces, a bloodless coup led by General Castelo Branco, Chief of Staff of the Army, removed Goulart from office in 1964 (Smith 2002). Goulart, afraid of a protracted armed conflict, left for Uruguay while Congress elevated the President of the Chamber of Deputies to acting President, and the democratic era that had lasted 19 years came to an end (Smith 2002).

Initially the generals allowed the party system to continue, however, they did remove the political rights of hundreds of leftists. By the end of 1965 following successful efforts of PSD and PTB candidates in gubernatorial elections, they abandoned any promotion of democratic structure, and the authoritarian rule of the Junta began in earnest. Institutional Act 2 abolished the old political parties and created new ones controlled by the generals. While elections took place, they were tightly controlled and limited the possibility of electoral surprise. Moreover, Congress was outright ignored, and later the Junta removed the direct elections of Governors. The transition from the first democratic period to the Junta radically altered the political environment of Brazil, and limited the influence citizens had on policy outcomes.

The chaos in the political realm was fueled by radical shifts in economic conditions during the first democratic period. From the end of WWII to the start of the period of study in 1960, Brazil engaged in rapid and aggressive industrialization policy that was aimed at achieving the ambitions of the political elite, and was in part a response to the shrinking market share of agricultural outputs that Brazil had dominated in pre-war years (Baer 2008). Figures 8.2 and 8.3 captures the breakdown of GDP and GDP per

capita for the period of study, and as the reader can see the first democratic period witnessed a slow rise in both indicators. What is not evident is the large debt, high rates of poverty, and labor issues present at the time. Amid these negative elements was the enormous growth in the industrial portion of the economy leading up to 1960. Between 1955 and 1961, revenue from industrial production, such as steel, production of machinery, electricity and communications, and transportation increased 80% (Fausto 1999). This growth in Brazilian industrial production was a product of the adoption of a unique brand of Import Substitution Industrialization (ISI) that rested on currency devaluation to prop up exports in addition to foreign investment (Baer 2002). By 1963 ISI policies, however, helped contribute to inflation which, coupled with the implementation of land reform, enraged conservative land owners who were already concerned with President Goulart's leftist leanings. The left, on the other hand, was burdened by poverty rates and labor unrest and saw Goulart as not doing enough to address their needs. ISI worked to increase long term investment with various manufacturers such as Volkswagon, Ford, and others, indicating strong trade ties with major overseas economies. Overall, the exposure to the global economy in this period worked to generate wealth in Brazil and created strong relationships with major industrial states.

{Figures 8.2 & 8.3 about Here}

While ISI worked to mediate some trade ties, Brazil has maintained relationships with a number of counties throughout the first democratic period and the period of this study. The U.S., Europe, and Latin America have been their traditional trading partners, with secondary markets in Africa, Middle East, and Asia. While the export market share

has shifted over time, by 2000 Brazil traded nearly equally with the U.S., Central America, and the EU, with the rest of the world making up the remaining portion. In more recent years Asian markets have become a more common destination for Brazilian products, especially China. Total trade as a share of GDP was only 7% in 1960, while the global average that year was 15%. Likewise, regional trading relationships were 1% of all GDP associated with regional trading partnerships, while the global average was 4% that year. Figure 8.4 demonstrates that throughout the first democratic period there was a steady rise in regional trade rates, however, that declined after 1964 and the Junta takeover. In all, the regional trading rates were low considering the potential ties Brazil could have had with their neighbors, but is understandable given its relationship with Argentina, the neighbor with the largest economy. In all, international and regional trade played a smaller role during the first democratic period of study.

{Figures 8.4 & 8.5 about Here}

Over time, Brazil's international and regional economic ties grew, as industrialization turned the country into a major exporting nation. These economic ties, in conjunction with their interests in contributing to global solutions on an array of issues, contributed to a rise in Brazil's IGO memberships. At the start of the period of study in 1960, Brazil was a member of 49 IGOs. Figure 8.6 captures the upward trajectory of IGO memberships, with memberships in GATT, OAS, the UN, and other major organizations, in addition to the several dozen organizations with singular commodity focuses such as sugar, coffee, cocoa, and cotton. Of the 49 organizations Brazil was member to, ten were security IGOs and three were Peace Brokering Organizations. The most significant interaction with an IGO the Brazilian state had during the first

democratic period was with the IMF during the inflation crisis. In order to gain continued IMF financing for an economy in a desperate position, Brazil was asked to adhere to strict anti-inflationary steps in the form of unpopular austerity measures, such as cuts to transportation subsidies (Skidmore 1999). The lack of major external threat aside from Argentina, and the limited presence of economic trading partners, reduced the role and influence IGOs had on Brazilian security policy in the first democratic period

{ Figure 8.6 about Here }

Brazil's liberal project in the first phase of democracy was layered, as democratic structures were weak, economic policy was inward and protectionist, and IGO memberships and contributions to IGO activities were minimal. At this time, the liberal influences had a minimal role in Brazil's security institutions and defense policy, specifically the decision to allocate resources. Brazil's military had long been inwardly focused, aside from the rivalry with Argentina and 19th century territorial conflicts. The colonial era was in part defined by efforts to repress civil rebellions and resistance from indigenous peoples, coupled with defending the large land mass from Dutch and other colonial rivals. Post independence, the military was involved in several major conflicts with Argentina, Paraguay, Uruguay, and Spain, but none of these resulted in lasting militarization nor did any dominate foreign policy decision making for an extended period of time. Aside from participation in WWII, the years leading up to the first democratic period and the period of study witnessed the Brazilian military having an inward focus on providing domestic stability from the diverse and mostly poor society, a position they would hold for the later half of the 20th century and especially during the early years of the Junta.

The lack of major external threats and conflicts resulted in military spending remaining relatively low comparatively. Between 1960-1964, military spending remained at a constant 1% of the total GDP. The military's role in politics and control over the budget would radically change in 1964 when the Junta took power, but the first democratic period witnessed a restrained budget with some civilian control. In 1960, however, the successful communist revolution in Cuba had inspired many Brazilian leftists to replicate the social revolution of Fidel Castro and Che Guevara, in a country where conservative power held control of vast portions of the economy and the military. Small attempts at reform were branded as potential communist threats and helped lay the ground work for the Junta takeover (Meade 2010). Attempts by leftist leaders such as President Joao Goulart to assume office were strongly opposed by the more conservative military leadership, and consolidated the fears of a communist takeover. Such fears justified the continued military spending increases that dominated the first democratic period, rising from \$1.4 billion in 1960 to \$2.09 billion in 1963, the year before the Junta takeover.

Aside from the internal communist threat, Brazilian, non-liberal influences of military spending in the first democratic phase were curtailed due to external threat and economic size. A discussion of external influences on Brazilian military spending is best started by examining their contentious relationship with Argentina. The military allocated their funds to a number of projects that closely tracked with the overall security needs of the country, in addition to emulating any possible advances by Argentina. The rivalry started over a territorial dispute involving the River Plate early in the colonial period, and continued through independence with open hostility, only receding after the

fall of the Junta in 1985 (Thompson 2001; Oelsner 2005). During the years leading up to the first phase of democracy, the relationship with Argentina was a concern for the military as the possibility of a conflict existed. One of the four MIDS that transpired during the period of study was during this first democratic phase, and was a territorial violation and a subsequent ship seizure with Argentina. However, throughout the entire period of study, Brazil did not engage in a serious militarized conflict, aside from contributions to peacekeeping operations during the 1990's. The last major conflict Brazil was party to was WWII (Hunter 1994).

In addition to avoiding major conflict, the only regional or international threats came from Argentina. Helping provide stability and security in Brazil was the close relationship they shared with the U.S., especially during the Cold War, which reduced the potential threat from the north as well as facilitated ties that were of substantial help during the period. The U.S. provided substantial financial support during the various economic crises, especially the issues with inflation the country faced during the early 1960s (Skidmore 1999). U.S. military support throughout the first democratic period was minimal, but was on display during the Junta's coup as Washington dispatched an aircraft carrier and six destroyers to ensure stability in the regime turnover (Burns 1993). Moreover, long standing ties between Brazilian military leaders and the U.S. dating back to WWII further facilitated the relationship. This was a clear positive for Brazil in terms of overall regional security, and the ability of Brazilian elites to focus on domestic issues and economic problems. Brands (2010), for example, argues that Brazil benefited from Pax Americana in terms of the economic structure of the global economy, and the relative safety the Brazilians enjoyed given their ties with the U.S.. Moreover, the American

influence on the Junta during the Cold War, and the shared concern of a communist threat, no doubt may have led to greater military interaction and arms trade. The U.S. exported millions of dollars in armaments to Brazil during the Cold War, including aircraft, helicopters, destroyers, surface to air missiles, among many other weapon systems (SIPRI). In general, possible threats were neutralized in a number of ways, and the mere presence of U.S. military power was an ongoing factor in political dynamics in many Latin American countries. The outright formal defense alliance between the U.S. and Brazil clearly played a positive role. In addition, Brazil had defense alliances with nearly every country in Latin America, indicating the strong peaceful relationships the nation enjoyed for the duration of the period of study.

External threat was not the only variable minimized as a major contributing factor to defense budgets in Brazil, other factors such as economic size took on a more substantial role in dictating budgets. Brazil's economic size rose steadily during the first democratic period, with GDP per capita rates going from \$2,371 to \$2,720 between 1960 and 1963, indicating that economic forces help drive the rising spending during the first democratic period. However, little evidence suggests that the growing economy drove defense spending. The international average for the period of study is 2.9%, indicating that Brazil was far below the average. Moreover, Brazil's economy has consistently been in the top 20 of all economies for the period of study, indicating further that it was not for lack of economic activity that kept military spending rates low, but other factors such as lack of major external threat, and as will be demonstrated later in the chapter, liberal factors, which played a substantial role in shaping military spending rates.

There are several additional internal influences that did not play a major role in Brazilian defense spending patterns during the first democratic period. Brazil, while being a regional power, was not a major power and did not have similar spending rates as England or France. Further, there was no outright civil war during either the first democratic period or during the period of study. However, fear of internal strife did play a major role and shaped military spending in terms of the Junta's influence during the middle phase of the period of study, which is discussed in more detail in the next section.

In sum, liberal factors during the first democratic period played a minor role in defense budget decision making in Brazil. Brazil's democratic structures were weak, and liberal president Oulerat, branded as a leftist, was limited in his ability to reduce or minimize the power of the mostly conservative military institutions. While democratic control reduced military spending in the first period compared to that of the Junta's rule, it was not a substantial factor, which was due to the weak democratic structures in place at the time. Likewise, Brazil's IGO network worked to reduce external threats, however, during the first democratic period it was the strong ties to the U.S. that did the most work in reducing the need to maintain higher rates of military spending. This influence weakened over time as Brazil's IGO network grew and solidified the U.S. relationship. The ISI policies of the first democratic period limited the influence international trade had on reducing tension and strengthening ties, especially with neighboring states. However, trade worked to maintain high rates of overall economic output and helped fuel the slow rise in defense spending during the time period. Overall, the first democratic period's military budgets were shaped by economic and internal factors, with liberal factors having little influence.

Section 3: Junta, Power, and Liberalism 1964-1985

The first democratic period came to an end on March 31, 1964, when military officers angered by Goulart's leftist turn forcibly took Rio, Sao Paulo and later Brasilia. Military intervention was not a new phenomenon in Brazilian politics; the armed forces have a long history of leadership and displacement of civilian authorities (Farcau 1996). The 1964 coup, however, was predicated on the threat of a possible turn toward the left by Goulart, something that was intolerable for the military's senior leadership (Roett 1999). From its inception, the military Junta was organized around multiple leaders to ensure that no other coups took place, and fostered an atmosphere of general cooperation among the different branches of the military (Smith 2002). The problem they faced, however, was a political culture sympathetic to leftist ideas and reforms. Goulart had not acted on his own; his social reform agenda was backed by an organized portion of the electorate represented by political parties, in rural and urban areas, as well as the communist party feared by many in the military establishment (Skidmore 1999). Purging these elements from social and political life soon became the focus of the Junta, and as observers of Brazilian politics knew, was a deeply contested choice. Actions such as 'Operation Clean-up,' launched shortly after the takeover, rounded up left wing politicians, trade unions, and student leaders who were imprisoned and punished them for their organizing and views (Farcau 1996). The Junta's program was a total reconstruction of Brazil as a country dedicated to conservative values, capitalism, and continued elite control.

The Junta's aim was political stability, something that was clearly lacking in the Second Republic. Economic development was a key goal, and the Junta unleashed their

organized efforts in what came to be known as *Estado Novo* (Smith 2002). *Estado Novo* removed members of the opposition party from Congress, and prohibited various individuals who were deemed threats to the political order, such as leftists, from political participation for ten years (Farcau 1996). This included two former presidents and the well known leftist leader Luis Carlos Prestes (Faisto 1999). A McCarthy-like-hunt removed hundreds of sympathetic leftists from government positions via forced retirement or outright dismissal (Smith 2002). A new security agency was established, with the sole duty of collecting information on internal security and pursuing potential political threats (Farcau 1996).

To ensure no leftist candidates made a successful run for the presidency, the Junta passed Institutional Acts 2 & 3, which removed direct democracy, delegated Congress the authority to elect the President, and limited legislative seats to certain parties (Farcau 1996). Presidential campaigns took on the look of modified and controlled debates, which was not lost on the general population (Smith 2002). Moreover, concern immediately grew that the military had overstepped the bounds of the constitution, especially around the detainment of political opposition figures. Student protests and left wing militants staged protests and robbed banks to further the cause, while opposition members of Congress complained and spoke out. Then President Costa e Silva enacted Institutional Act 5, which put Congress on an indefinite sabbatical in 1969 (Farcau 1996). Shortly thereafter, Costa e Silva suffered a stroke and became incapacitated, causing a succession crisis. Given that Vice President Pedro Aleixo was an undesirable replacement because of his opposition to Institutional Act 5, he was bypassed by the Junta, who nominated one of their own, General Medici, who very quickly consolidated

power by passing a new constitution which vindicated the actions taken by the Junta, and legalized authoritarian rule (Faisto 1999). Violent actions taken by leftist guerrillas, including the abduction of the American ambassador, failed to rouse the general public, even though some 30% of voters left their ballots blank in the 1969 presidential election in protest of the Junta's policies (Smith 2002). Ten percent growth rates in the late 1960's pacified the general population, as the centralized economic decision making which had characterized the first five years of the Junta's rule resulted in establishing order to the economy that had been absent during the Second Republic (Baer 1995).

Strong opposition against the military regime did not emerge until the effects of the 1973 global oil crisis were felt. The crisis came in conjunction the following year with the near complete destruction of an active political left, and the removal any threat posed the communist forces aiming to take over the state (Farcau 1996). Up until then, the Junta had justified its rule with successful stewardship of the economy and the leftist threat. With both of those accomplishments carrying less weight, a slow process of decompression began (Farcau 1996). As the Junta took steps to restore civil liberties, it was faced with additional setbacks, including labor strikes in 1978 led by auto workers and followed by other industries, and the withdrawal of support by the Catholic Church, who had initially sided with the regime to repress the godless communist threat. The Catholic Church's opposition to torture and other misdeeds by the Junta led to their reversal. In response, the regime rolled out an amnesty package in 1979 for former leftists run out of the country and those imprisoned since 1964, which included a promise to allow for direct elections for Congress, and in general an opening of the political system (Farcau 1996). This opening was accompanied by an immunity package for

members of the Junta and the security forces for human rights abuses, even as the Junta's internal fighting complicated decision making (Farcau 1996). But the reforms moved too slowly for public opinion, and events overtook the Junta's ability to maintain control. Double digit inflation and efforts by hard-liners to use domestic terrorism as an excuse to maintain control turned the majority of Brazilians against the regime, and by the early 1980's the Junta was under considerable pressure to relinquish power. An episode that illustrates this turn against the regime came in May 1981, when a bomb exploded in a car carrying military officers (Smith 2002). After the explosion, it was revealed that the bomb was intended to be planted at a public concert in order to raise suspicions of leftist plotters and prevent open elections, something the hardliners were opposed to. In response, President Figueiredo promised to hold direct elections for state governors and mayors in 1982. 1984 saw the first direct congressional elections, and the following year President Jose Sarney became the first President elected by an open and free Congress. Thus, the New Republic was born. However, it was not until 1989 that the first free and fair direct election was held.

While the Junta had support among the wealthy, the Catholic Church, and other constituents during the first phase of their rule, they faced consistent opposition from leftists and those uncomfortable with the reversal in democratic progress. Efforts to hold an open legislature with elections resulted in voting outcomes favoring the anti-military parties, which ultimately resulted in the above mentioned suspension of Congress in 1969. The elimination of any elected representatives, and the extra-judicial imprisonment of suspected leftists, torture, suspension of civil liberties, and other affronts to democracy clearly limited the connection between citizen preferences and voter

outcomes. Over 9,000 political actors were imprisoned and tortured during the course of the regime, including the current Brazilian President Dilma Rousseff. In short, while there were some outlets for political participation and methods for citizens to voice their position on the Junta's rule, these outlets, most notably the strictly controlled Congress in the late 1960's, were extremely limited, and democratic institutions played a minor role in the majority of the Junta's rule. Figure 8.7 demonstrates the downward trajectory that occurred once the Junta took power in 1964, and the slow gradual opening that the country experienced after the 1973 oil crisis and the removal of the leftist threat. It is clear, however, that at no time during the Junta rule did Brazil come close to being considered a democracy according to the Polity data.

{ Figure 8.7 about Here }

The Junta's role in economic growth is widely debated, given the wide range of growth rates during the 21 years the generals ruled Brazil. The Junta rule started with close collaboration with civilian experts on economic issues, since top military officers had little economic management expertise (Faisto 1999). The Junta prioritized international trade, and exports grew after they abolished export taxes, simplified administrative procedures for exporters, and offered tax relief and subsidies for exporters. In addition, the Junta quickly got inflation under control, adopted a more realistic exchange policy, and took on an activist role in promoting industrial policy in the country (Baer 1995). While agricultural goods were the primary export for Brazil in the first decade of the Junta, the country was able to develop auto, aviation, chemical, shipbuilding, and defense industries that ultimately began to reduce import demand and thus the balance of payments. Moreover, that first decade saw a dramatic rise in GDP, as

well as a doubling in the value of exports between 1970 and 1973 (Smith 2002). The government either owned the industries outright, or provided the bulk of the capital required to produce the rapid growth in the first ten years of Junta rule. This, in addition to their continued growth, enabled the Junta to make the country an attractive place for foreign investors, who liked the relative stability of the Junta and the rapid growth rate they had produced (Faisto 1999). Large infrastructure projects funded in part by the World Bank, the Inter-American Development Bank, and the U.S. Agency for International Development helped create new opportunities for foreign investors, and demonstrated the regimes ability to work well with outsiders (Baer 1995). Moreover, the devaluation of the cruzeiro made borrowing from foreign firms more attractive, resulting in a flood of investment into Brazil (Baer 1995).

The first ten years of the Junta saw the slow dismantling of ISI policies, however, by 1974 and the oil crisis, the Junta reinstated several elements of ISI which dominated economic policy until the 1990s, which constitutes the third period (Baer 2008). The 1973 oil crisis caused economic issues for Brazil that eventually helped bring about the downfall of the Junta. Growing the economy turned out to be expensive, leading the Junta to turn Brazil into the largest debt holding developing nation in the world during the early 1980's, and ultimately led to IMF intervention and austerity measures that caused hyperinflation (Smith 2002). The debt crisis of the 1980s led to a reversal in fortunes, as various policies limited the attractiveness of investment in the country. After the democratic transition, tariffs were dismantled, and trade flows dramatically increased, especially with regional partners in MERCOSUR (Baer 2008).

As stated above, international trade increased from the first democratic period under the Junta rule. As Figure 8.8 demonstrates, the Junta oversaw a long rise in international trade rates as a share of the overall economy, a trend that continued until the debt crisis of the early 1980's, at which time international trade declined by over 30% from 1980 to 1985. International trade for Brazil stayed well below the global average of 55%, with an average of 9% and a high of 14% during the Junta's rule. Regional trade also stayed well below global averages during the Junta's period of rule; from 1964-1985 the global average was over 8%, whereas Brazil barely mustered 1%. Figure 8.9 captures the trajectory of regional trading rates for Brazil, and as it indicates the years immediately after the Junta's takeover, regional trade declined significantly, only to rebound in the mid 1970s. By the time the debt crisis took hold, rates plummeted once again. The lack of regional trade is accounted for by the fact that many of the agricultural exports Brazil had to offer were also being produced by neighboring countries. It was not until the introduction of MECOUSER that regional trade increased.

{Figure 8.8 & 8.9 about Here}

While trade grew steadily and slowly during the Junta's rule, Brazil entered into a range of IGOs between 1964 and 1985. As Figure 8.10 demonstrates, Brazil took on 19 new memberships during the Junta rule, including African Development Bank, Group of 24, Group of Latin American & Caribbean Sugar Exporting Countries, and the Intergovernmental Committee of the River Plate Basin. Of the group, two organizations stand out as having more influence than the others, the Agency for Prohibition of Nuclear Arms in Latin America and the Latin American Integration Association. Both of these IGOs worked to increase security and economic ties within the region. Table 8.1 shows

the major shifts in IGO memberships during the period of study. While the Junta added these important IGOs to their portfolio, they did not add any additional security organizations during their tenure, nor did they add any Peace Brokering Organizations. While non-security and economic focused IGOs are important factors that shape security policy, stronger and more important IGOs were not added to the Brazilian portfolio during the Junta. In general, however, the Junta viewed IGOs as a part of the larger Cold War battle between the superpower rivals, and not something that would contribute much to the interests of the country (Brands 2010). This may have contributed to the slowdown in new IGO memberships that were added to Brazil's portfolio during the Junta's rule.

{Table 8.1 & Figure 8.9 about Here}

In many ways, participation in global affairs and IGOs was dominated by the relationship Brazil shared with the U.S.. Viewing the U.S. as the leader of the free world against communism facilitated not only taking a backseat to U.S. views, but also a close economic relationship during the first half of the Junta's rule (Smith 2002). But this position turned lukewarm over time, as Brazil worked to separate itself from U.S. influence, pursue its own foreign policy, and undertake actions such as refusing to sign the Nuclear Non-Proliferation Treaty (Smith 2002). Exports to the U.S. slowed through the 1970's, and with the communist threat in Brazil receding, the relationship lost much of its warmth (Smith 2002).

Defense policy, like the first democratic period, was inwardly focused during the Junta's rule. After a downturn in the 1980s due to the debt crisis and then the transition to democracy, military spending skyrocketed to previous levels for the duration of the 1990s up past 1% of the total GDP. In terms of actual dollar amounts, converted to 1996

US dollars, Brazil started the period of study in 1960 spending \$1.6 billion, steadily rising throughout the Junta until peaking in 1978 at \$4.9 billion, then dropping down to \$1.8 billion at the end of the Junta's rule, and peaking again at the end of the 1990s with rates as high as \$19 billion. Figure 8.11 shows this pattern, as during the initial period of Junta rule military spending rates increased and peaked in the late 1970's, and then dramatically decreased during the slow transition to democracy and the debt crisis of the early 1980's. Aside from these considerations, there were three MIDS during the Junta's rule, all were minor including a ship seizure, one border violation, and a high alert put into place, clearly small incidents that did not result in war, a major military action, or casualties (COW). As Hunter (1993) writes, the Brazilian military did see a Russian financed communist threat as real possible hindrance to providing security, and built their security policy around such a threat. The military benefited from having an enemy to place blame on and to rationalize spending decisions. The end of the Cold War and the fall of the Junta removed these threats from the security concerns of the country, indicating that such threats were in part a product of the Cold War dynamic. Such internal threats were not limited to urban areas; the Amazon border region has long been a place of illicit activity that has rationalized the investment in military manpower and technology to properly secure it (Hunter 1994). Having witnessed the toll lawlessness can take in neighboring states such as Colombia, efforts have been made by the military to maintain a presence in the region (Brands 2010).

The Junta rule had a mixed relationship with liberalization. Democratic institutions were dismantled, and the connection between citizen preference and policy outcome was broken. International interaction with the global economy produced strong

trading ties with several nations, but trading both regionally and internationally remained substantially lower than global averages. IGO memberships increased, but the organizations that the Junta joined, 19 in all, were relatively weak. Military spending rates increased for the first portion of the Junta's rule, but then dropped off significantly. The dismantling of democratic institutions and the proximity of military officers to the policy making apparatus clearly facilitated increases in military spending. This role, however, was reduced during the economic downturn that limited state capacity to fund large military budgets. International and regional trade played a significantly small role in security matters, with the exception of the close ties the Junta had with the U.S., which ultimately helped reduce the need for large military spending rates. IGO memberships did not have a significant role in the budgeting process during the Junta rule. However, as will be discussed below, IGOs took on a very important place in the security calculation in the New Republic.

Section 4: Democracy Reborn, 1985-2000

The new democratic regime that emerged from two decades of Junta rule has been aptly referred to as the New Republic, and can be characterized as the slow transition from an authoritarian regime to a consolidated democracy, where the issues of corruption and political patronage have been slowly eradicated from the political sphere (Fausto 1999). Events such as the 1989 presidential election, where turnout exceeded 85% and the ousting of President Collor via impeachment on the grounds of corruption demonstrated Brazil's commitment to moving forward with its democratic project. In addition, the fact that the new political system did not collapse during the Collor

corruption scandal is a testament to Brazil's dedication to democracy (Fausto 1999). The new constitution prioritized individual rights and protections from government, and in general was largely seen as a reaction to the authoritarian rule of the Junta. Further, elected leaders worked to remove military influence from the political sphere, diminishing what was a continuous threat of interference for the previous two centuries (Hunter 1997). Successful peaceful transitions, a vibrant and free media, the election of President Lula da Silva, who was a former political prisoner of the Junta, and ongoing efforts to strength institutions and eliminate corruption all characterize Brazil's successful transition to democracy.

The state of democracy in the New Republic is evident in Figure 8.12, where the Polity4 measure, which captures the level of democracy, skyrockets at the end of the Junta and toward a stable score of eight, indicating that Brazil became democratic, but that there are still weak institutions. For example, Brazilian elections are widely considered to be some of the most expensive in the world, favoring wealthy business interests over that of liberals, limiting the representativeness of the overall system (Samuels 2001). Corruption has remained an issue with the impeachment of President Collor, suspicion regarding the term of former President Da Silva, and issues of corruption and inefficiency at lower levels of government, which have inhibited the full transition to democracy (Fausto 1999). These issues aside, the transition has vastly improved the ability of citizens to shape policy, as successful political candidates must adhere to popular public opinion.

{Figure 8.12 about Here}

The transition to democracy began in the mid 1970's when the leftist threat was vanquished and the ability of the Junta to maintain economic stability was questioned following the 1973 oil crisis. Growing the economy turned out to be expensive, leading the Junta to turn Brazil into the largest debt holding developing nation in the world during the early 1980's, and ultimately led to IMF intervention and austerity measures that caused hyperinflation (Smith 2002). These events created serious economic challenges for the New Republic, which inherited an economy with deep structural problems such as inflation and debt. In an effort to facilitate growth, President Collor introduced a new currency in the hopes that inflation issues could be resolved, markets were opened to international trade, a privatization effort was made, and another new currency, the *real*, was introduced in 1994 (Smith 2002; Fausto 1999). In addition, other neoliberal policies were introduced, and Collor's legacy has largely moved away from its tarnished reputation, to being celebrated as a time when hard choices were made that ultimately paved the way for the economic success and international prestige the country enjoys today.

This economic success includes increased trade flows, both within and outside the region. The KOF measure for economic globalization, which captures trade flows, tariffs, and FDI, and which can be viewed in Figure 8.13, demonstrates a gradual upward trend as time progresses, with a sharp decline during the inflationary crisis of the late 1980s and early 1990s. The trend indicates that while openness to the international economy grew in the latter phase of the Junta, it was not until the emergence of the New Republic that Brazil substantially opened up its economy to international markets. Trade figures support this notion, as Figure 8.14 and 8.15 captures international and regional

trade in the New Republic, which indicates a substantial increase over the course of the duration of the new regime, with a slight decrease during the after effects of the Asian Financial crisis in the late 1990s.

{Figure 8.13-8.15 about Here}

The vast majority of exports throughout the term of the study were agricultural products, including coffee, sugar and soybeans, only shifting to manufacturing in the late 1980s. In 1964, manufacturing made up only 5% of the total trade, and by 1996, it was 69% (Baer 2008). Brazil also has a respectable defense industry which, while failing to rival the superiority of developed nation's technology, has been a supplier of arms around the world, especially to the Middle East. Producing aircrafts, ships, and munitions, Brazilian defense firms have been second tier producers of military equipment. At the end of the period of study, Brazilian exports were dominated by manufactured goods, followed closely by agriculture, giving the nation a rich diversity of products and markets. While export led growth has been the main cause of the transformation of Brazil from a developing country to an international leader in many industries at the time of this writing (Fall 2012), it has long had to depend on several types of imports. Two are most striking considering the focus of this project on security needs. The first is the need to import many parts for the aerospace and defense industries as well as the technological know-how to produce them (Vayrynen 1992). The second is energy; while by 2006 the country was able to declare self-sufficiency in oil given the development of off shore oil reserves and their pioneering leadership in biofuels, the country was, during the bulk of the period of study, only able to provide 20% of their fossil-fuel needs (Baer 2008). In

addition, coal had to be imported from neighboring Bolivia, as well as many other minerals throughout the period of study.

Economically, Brazil's dependence on the international marketplace has been a key part of the economic story, and by proxy the political environment for the entirety of the period of study. Mainly in the form of FDI, but also through exports as well as needed imports, the international marketplace has provided much of the life blood for the major economic upswings in Brazil's recent history. In the last decade, Brazil has become a major economic player in the international market, from innovations in biofuels to a rather successful record of exporting commercial aircraft. By 2010 Brazil had the seventh largest economy in the world, a clear indicator that it was no longer a developing country, but rather that it was an emerging regional and potentially global power.

Part of the economic interdependence that Brazil has developed in recent decades is a greater exchange of goods and services with its neighbors, facilitated through IGOs, in addition to bilateral trade ties, most notably MERCOSUR. The renewed connection with Argentina was most valuable given the long-term rivalry the two countries shared. While MERCOSUR ran into difficulties early on with exchange rates and reactionary protectionist measures on both sides, the result was closer coordination on a host of economic issues between the member states (Baer 2008). Yet, as mentioned above, regional trade rates skyrocketed, increasing by 140% between 1990 and 2000. Moreover, the political importance of these trade ties, as discussed below, plays a major role in shaping the foreign relations in the region.

While MERCOSUR was by far the most influential IGO membership in shaping security and trade considerations for Brazil, the other 22 memberships joined in the

aftermath of the Junta and during the New Republic propelled Brazil into a more prominent role in global issues. New memberships in organizations such as the RIO Group and the Group of 15, as well as a greater role in UN peacekeeping operations, illustrate this trend. Brazil has sent troops to nearly half of all peacekeeping operations the United Nations has authorized since its inception, an indication of both its participation in IGOs and its overall foreign policy and security policy discussed later (Hunter 1994). Its role in the UN not just as a founding member, but as a growing regional power, has culminated in its call for a permanent seat on the Security Council. Memberships in organizations such as the Group of 15 have solidified its role as a regional leader and a global power, allowing for greater control over security concerns, diplomacy, and economic exchange. For example, Brazil played a major role in negotiations undertaken by the Group of 20 concerning food subsidies and international trade deals, working to promote not only their own interests but further the interests of the developing world at large, signifying their role in shaping global politics (Voswanathan 2006). In sum, the New Republic witnessed the expansion of IGO memberships, which facilitated security and economic ties with the international community, particularly within the region.

While Brazil's relationship with liberalism developed during the New Republic, Brazil's security policy also underwent substantial changes. Military spending rates went from \$1.8 billion in 1985 to a high of \$18.1 billion (All figures are in 1996 US dollars). Spending rates increased through the second half of the 1980's, hit a low point in 1990, and then continued to rise, hitting the 18 billion mark in 1998. As a share of the overall GDP, military spending made up less than 1% until 1995, and hit a high of 1.5% in 1998,

well below the global average of 2.1% for the 1985-2000 time period, indicating that while Brazil increased its military spending during the New Republic it did so at lower rates than the average state. Figure 8.16 captures military spending during the New Republic.

{Figure 8.16 about Here}

The causes of these shifts are not related to any militarized conflict Brazil was involved in during the time period. Brazil did, however, engage in a number of peacekeeping operations that signify the country's willingness to involve themselves not only in foreign conflicts, but in international defense cooperation activities. While these projections of military power reflect regional projections, they also indicate the willingness of Brazil to play a role in global issues (Da Costa 1998; Khana, et al. 1998). The role of IGOs has been made much easier given that the major external security threat for Brazil had long been Argentina, a relationship that has undergone a transformation in the New Republic. Aside from MERCOSUR, further tension between the two were released during the signing of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC) in 1991, which prevented either state from pursuing nuclear weapons of any kind. Clearly, Brazil, like a number of other regional leaders such as South Africa, considered the idea of developing a nuclear weapon given the status afforded states who are successful in such endeavors.

The rise in GDP during the New Republic was also a considerable influence on military spending, as the state had additional resources to allocate toward the military. Aside from GDP, other internal factors seemed to take a back seat during this time period. Internal threats from leftists were non-existent. A domestic arms industry

developed, which contributed to some increases in spending, but not a large enough percentage to explain the fluctuation.

In sum, the New Republic had an increasingly strong relationship with liberalism than any other time period in the study. Democratic institutions emerged after two decades of military rule. Economic exchange in the region and throughout the world dramatically increased, as did participation in IGOs. Security concerns were minimal both internally and externally, yet military spending rose on the back of increased economic production. I now turn my attention to making connections between liberalism and shifts in military spending rates.

Section 5: How Have Liberal Influences Shaped Brazilian Military Policy?

The evidence suggests that liberal influences have shaped Brazilian military spending patterns in both positive and negative ways. This section lays out how and where liberal influences shaped military spending in Brazil, and the outcomes of those influences. The rise and fall of the Junta illustrates the changes in military spending that are associated with democratic institutions, as the New Republic ultimately led to a reduction of military spending priorities in favor of the social agenda of the new civilian leaders. IGOs reshaped the security dynamic in Latin America, and brought Brazil closer to Europe and the U.S. in both economic and security policy, and increased their role in global politics, reducing threat and the necessity for high levels of military spending. It was trade, however, and the robust growth that it created, that ultimately drove up military spending rates in Brazil, especially during the New Republic. The Brazilian case represents the complicated nature of liberal influences, the duality of their role in security

policy, and demonstrates the core finding of this project: liberal influences do not have a universal pacific effect on state military spending patterns. I first discuss the role of democratic structures, move on to consider the role IGO memberships had, and conclude this section with an examination of trade on military spending.

Democratic Institutions and Military Spending in Brazil

As discussed in Chapter 2, the core element of democratic structures that result in shifts in defense spending rates are the demands voters place on elected officials to provide state resources to address societal needs. As Goldsmith (2007) argues, voters on average are much more interested in not having to pay large tax bills that fund military hardware and labor costs that do not result in either an increase in security or overall economic benefit. Some evidence suggests that defense spending does not increase the economic output of a country (Grobstein and Porter 1989; Kwadwo Kusi 1994), and furthermore, given the large size of the Brazilian population and the diversity in the country, it is difficult to argue that there is a sizable voting bloc that benefits from high military spending rates. Therefore, observers of Brazilian politics would expect to see an increase in military spending during years where their democratic institutions did not play a major role in decision making, such as the Junta tenure, and a decrease during years where popularly elected leaders made decisions on budgetary priorities. This trend is exactly what the data on military spending shows.

Military spending rates rose in the years following the Junta's seizure of power, as did the number of military personnel in the Brazilian defense forces. Moreover, the transition from democracy to authoritarian rule was also accompanied by relative stability

in the other major predictors of military spending. Outside military threats, the alliance portfolio and regional stability were all maintained. Economic growth was slow during the first 10 years of the Junta, and then gained steam in the mid 1970s. Actual dollar amounts of military spending rose, while the size of the GDP dedicated to military spending decreased. While states increase their military spending rates, they may be decreasing their overall military spending as a portion of the GDP. This is clearly what occurred during the 1970s in Brazil: military spending in actual dollar terms rose, while spending as a portion of the GDP fell. While the *Defense Burden* measure, by the standards outlined in this project, is the preferred measure for military spending given the cross national comparison conducted in earlier chapters, the facts in the Brazilian case indicate that the Junta increased military spending the longer they were in power. While this can be explained by Vilesky's budget incrementalism theory, it also demonstrates the lack of accountability during the Junta's tenure, as the portion of Brazilian citizens who would have liked to see increases in social spending, a population that has experienced high rates of poverty that persisted during the Junta's rule, did not have substantial political power to achieve that agenda.

In 1960, military spending was at \$1.4 billion in 1996 U.S. dollars; by the end of the decade and after nearly six years of Junta rule, it has increased to \$3.2 billion in 1996 U.S. dollars, with a high water mark for the decade at \$4.7 billion in 1967. The 1970s saw a high water mark of 4.7, and an average of 3.9. The early 1980s and the debt crisis sharply reduced military spending rates, but by 1983 it was clear that the Junta was liberalizing and preparing to remove themselves from the political arena, however that decision had been made back in 1974 given the receding communist threat and the

stabilization of the economy (Hunter 1994). Arguably, the combined influence of economic concerns and reform of fiscal spending demanded by the IMF in the early 1980's, and the preparations made to transition the country to civilian rule influenced the slowdown in military spending during the last years of the Junta's rule.

Military spending levels were down to the lowest rate in the period of study during the lead up to the democratic transition given the role the debt crisis took on government spending. Once the New Republic was established, military spending rates increased, but at vastly lower rates than most years of the Junta. As Da Costa (1998) reports, civilian leaders consistently reduced the amount of military spending throughout the late 1980s and early 1990s, withholding funds, underfunding the military's requests, and giving the military a lower priority in the budgetary process. The transition to democracy moved budgetary powers to Congress, which then required the military branches to lobby for their budgets, leading to a competition between the branches for funding, and the growth of diversity in opinions on what security threat posed the greatest danger and what to do about it (Da Costa 1998). One element of the budgets that remained in the transition to democracy was the more generous pension program for members of the military in comparison to other civil servants (Da Costa 1998). Mares (1998) adds to this assessment by claiming civilian control resulted in a reduction of military investment and related research projects, which may be what accounts for the lower rates in spending.

It is Hunter (1997) who has the most complete examination of the decline of military influence in governing decisions during the early democratic years. She writes that democratically elected leaders have institutional motivations to limit military

influence on governing decisions (Hunter 1997). However, Hunter goes on to argue that civilian leaders in Brazil can be counted on to curry favor with the military, to ensure the government survives periods of economic crisis (Hunter 1997). Her work illustrates the lasting influence the military as an institution retains years after its removal from power.

Compared to the Junta, the presidential system does allow for more direct control of the budgetary process, and further makes the political environment in Brazil rather dependent on personalities as opposed to institutional party structures to determine the outcome of electoral contests (Hunter 1997). In addition, the party structure is quite weak when compared with the electoral structure of proportional representation and open list candidates; this design allows for Brazilians to make new parties when they see fit, and prevents candidates from having a 'reservoir of support' to fall back on (Hunter 1997, Pg 18). This structure leads to a duality that conflates what role the democratic institutions have on military spending rates. On one side, the political structures encourage political leaders, especially presidents, to funnel patronage and social spending back to the many low income citizens of the country, thus pulling resources away from the military. On the other hand, political leaders do not have a long term base of support upon which to rest on in the event of a face-off with the more institutionally entrenched and organized military. This dynamic results in presidents working to please and appease military leaders (Hunter 1997). Yet this dynamic for the most part was not a major factor in most of the early years of the democratic era, resulting in budgets that ultimately reflected the demands of the people. During the early years of the democratic regime, the result was a clear slowing of military spending based on historic levels, a result of the

fact that most politicians were unwilling to provide the military resources or appear to be assisting them, given anger over the Junta's authoritarian rule (Hunter 1997).

The military did find ways to influence legislators who held power in budget decisions, and benefited from such ties. In 1989, President Sarney utilized bonds and stretched the proper legal terms for their use, allowing a sizable portion to go towards the military, an act legislators have veto control over (Hunter 1997). While Sarney's efforts and legislator's agreement clearly were an example of a democratically elected leader working to appease the military, his successor President Collor serves as a prime example of how democracy worked against the interests of the military. At one point during Collor's term, the army worked on a part time basis due to budget shortages, funding for next generation nuclear submarines and advanced aircraft was terminated, and the military's presence in the Amazon frontier was scaled back (Fitch 1998). Even the Collor corruption scandal that ultimately led to his downfall did not bring legislators around to properly finance the military, despite the fact that the democratic regime was facing its greatest challenge and the possibility of a military intervention loomed large (Hunter 1997).

Collor's successor, President Franco, who came to power in 1992, continued to oversee a decline in military spending until he was faced with his own political issues. Salary raises were the major issue at hand for the military, and Franco capitulated to the demand while facing low political support among the general population, thus making him in need of a boost (Hunter 1997). President Cardoso followed, and clearly found little reason to continue the ongoing animosity between civilian rule and the military. Under his tenure military spending rates rose under the justification of international

narcotic trafficking and the porous borders caused by the economic opening, requiring closer oversight. Nonetheless, more than anything Cardoso's increase in military support was based on a desire to become a regional and global power. Brazil as a nation has begun to see itself as arriving or about to arrive on the national stage, with global interests, and power to back those interests. Being the largest economy in Latin America has allowed it to establish itself as a regional power. As Roett (1999) points out, 200 Belgian and U.S. tanks that were ordered in 1997 had no impact on ongoing efforts to secure the vast border regions of the country or combat drug trafficking, rather they had the purpose of demonstrating the capacity of the Brazilian nation to fight a land war.

The relationship between democracy and military spending in Brazil for the period of study is clearly a complicated one. The relatively low spending rates during the Second Republic gave way to higher spending during the Junta. A transition to democracy during the mid 1980s clearly lowered military spending rates to make way for societal demands on state resources, pressure that ultimately by the mid 1990s gave way to higher spending for a multitude of reasons, primarily the growing presence of Brazil in the international community. By the mid-1990s, after nearly 10 years of democracy, Brazil clearly retained a political dynamic that entrenched the military and its agenda firmly in domestic politics. As Roett (1999) articulates, the military in Brazil is never far from the nexus of power, and as Herz (2006) documents the civilian ministry of defense toward the end of the period of study in 1999 was still unable to have 'real' control over the three branches of the military (Herz 2006, 204) . While the country came a long way by the end of the 20th century, it is clear that they had not developed strong enough democratic structures to fully immunize the democratic leadership from military

influence over the key budgetary issues, something that is indicated in its score of eight on the Polity4 measure in the last year of the period of study, 2000. It is the contention of this study that while democracy has worked to reduce the military's influence on the budgetary process, the continued threat of military intervention into politics casts a shadow over democratic leaders and shapes the decisions they make. Brazil would have lower military spending rates if they had stronger democratic structures, and a civil military relationship based on democratic principles, where the threat of military involvement in politics was absent.

IGO Membership and Military Spending in Brazil

Brazil has played an important and active role in a number of IGOs, both with regional and international mandates such as the Organization of American States and the United Nations. From this inquiry, little direct evidence was found in public discussions and scholarly analysis of the Brazilian security state to support the hypothesis presented in this project, that IGO memberships result in a reduction of military spending. The direct evidence that does exist focuses mainly on Brazil's MERSOCUR membership, which has been pointed to by not only Brazilian elites in public forums but by scholars as the cause for a major reorientation in security policy. Indirect evidence suggests that Brazil has built a network of IGO memberships that have helped it avoid international security threats from larger, more powerful states in the international system. In all, IGO memberships have been a source for change in security policy for Brazil as they have removed threats from their security concerns such as a hostile Argentina, but have also led to Brazil using those memberships to advance their position in the international arena,

evident in their participation in peacekeeping operations. In that process the influence of IGOs has led to an increase in military spending.

One element that has certainly shaped defense policy in Brazil during the period of study is the close ties to the U.S.. Those close ties clearly shaped defense policy given the historical role the U.S. has played in economic and security issues in Latin America, including Brazil. The U.S. has spent considerable resources throughout the period of study shaping the security dynamic in Latin America, resulting in Brazil having minimal regional security threats outside their alliance with Argentina (Palmer 1990). While the defense alliance the two countries have shared since the mid 1930s when they first signed a defense pact arguably can account for much of the security influence the U.S. has had, the 51 shared IGO memberships in groups as influential as the Organization for American States cannot be discounted.⁶⁸ In this case, IGO memberships have played a coordinating role with Brazil, in terms of shaping shared understandings of economic and security behavior during the period of study. This addition to Brazil's security considerations is rather important, given that for the bulk of the period of study the U.S. and Brazil had relatively close ties.⁶⁹ Having the dominate state in the region and the one most likely to pose a significant and dangerous threat to Brazil neutralized through an alliance and overlapping IGO memberships that coordinate behavior reduced the need to prepare for a military encounter with the U.S. for the bulk of the period of study.

The security ties with the U.S. extend beyond the dyadic relationship to Brazil's regional security issues. With the U.S. dominating and setting the agenda for Latin

⁶⁸ There were 51 overlapping IGO memberships at the end of the period of study in 2000 between the U.S. and Brazil (COW IGO Dataset).

⁶⁹ The U.S. was at odds with the Goulart administration and helped facilitate the military's takeover in 1964; in addition, Brazil and the U.S. have differed over numerous economic policies over the years such as various neoliberal reforms (Bandiera 2006).

American security throughout the period of study, Brazil in many ways has played a secondary role. Participation in the OAS is an illustrative example of this dynamic. The OAS was arguably created to facilitate American interests in Latin America, and has often produced outcomes in conflict with stated U.S. objectives (Shaw 2003). For the most part, however, the organization has been the mechanism by which much of the U.S.-Latin American security agenda is achieved. For example, the U.S. has used the OAS to promote their anti-communist security agenda during the Cold War and an anti-narcotics agenda in the 1990s (Nieto and Stoller 2007). Ultimately, this influence has waned as Brazil in the past decades has taken on a stronger leadership role in the region, working to shape behavior in profound ways, such as its successful efforts to prevent the military takeover of the democratically elected government of Paraguay in 1997 (Herz 2006). Brazil has also worked to strengthen ties with its neighbors, which include all South American countries except Ecuador and Chile, and establish itself as a regional leader through numerous IGO mechanisms backed by traditional diplomacy (Bandiera 2006). Such policies shaped security decisions, none more important than the creation of MERCOSUR.

MERCOSUR has made Brazil harmonize their domestic policy with the objectives of the organization, which has led to closer ties and coordination (Da Costa 1998). President Cardoso himself argued that MERCOSUR “reduced the probability that conventional external regional conflicts involving our country will manifest” (Quoted in Da Costa 1998: 230). MERCOSUR is important on a number of levels, but most notably, the long standing rivalry with Argentina which officially ended in 1985 was mitigated by the economic integration between the two countries that MERCOSUR

made possible. While MERCOSUR does not have security as a specific part of its charter, it has recently developed working groups on shared security concerns in the region (Brand 2010), and has tied Argentine success to Brazilian success. As MERCOSUR developed and extended its reach into domestic Brazilian policy in terms of trade flows, fiscal policy, and public opinion changes toward regional threats, military doctrine also shifted. As Da Costa argues, traditional military threats, typically contained to the region, gave way to concerns over the illicit activity in the Amazon, coastal patrols, and contributions to peacekeeping operations (Da Costa 1998). MERCOSUR also facilitated the creation of the Brazilian-Argentine Agency for Accounting and Control of Nuclear Materials (ABACC). The previously created Agency for the Prohibition of Nuclear Weapons in Latin America spelled out in the Treaty of Tlatelolco, which prohibited the use of nuclear weapons in Latin America, was not ratified properly in either country until 1994 (Oelsner 2005). The growing coordination of security issues between the two states, including Brazil taking over for Argentinean diplomatic relations in several countries following the Falklands War, helped build a bond of trust and communication between the two countries (Oelsner 2005). While there were many factors in the Argentina-Brazil rapprochement, MERCOSUR and other IGOs played a key role in facilitating an end to the animosity, and thus reshaped military policy in Brazil. In addition, the agreement on nuclear issues between the two states clearly shape military spending rates, given the high cost of such programs. MERCOSUR has led to this shift in priorities and a realization of the potential for cooperation. In all, Brazil's military made a shift in the early 1990s in response to the new possibilities that MERCOSUR provided.

IGO memberships have also provided Brazil with an opportunity to bolster its military global standing and offer opportunities for professional development. Participation in United Nations peacekeeping operations has had such an effect on Brazil and associated military spending levels. Peacekeeping has incurred some cost on the Brazilian state, and while Brazil reaps the benefit of the experience of an overseas deployment, such operations are not free (Brands 2010). While the reverse relationship has been argued for in this project, this type of dynamic is featured prominently in this case. Brazil has clearly wanted an international presence, and peacekeeping is one such avenue to communicate not only that Brazil has the ability to project their professional and capable military force overseas, but also as it works to secure a permanent seat on the U.N. Security Council, contributions to peacekeeping operations communicate Brazil's willingness to do their part to contribute to global political stability. Brazil, however, has only deployed roughly 11,000 troops in 23 U.N. peacekeeping operations since the mid 1950s, and a much smaller figure for OAS peacekeeping operations (Brands 2010), costing nearly half a billion dollars for the period of study. Clearly, this element of IGO Membership has been a cause for an increase in spending, and a measurable one, but not enough to outweigh or counter the pacific benefits of IGO memberships.

The motivation for participating in peacekeeping operations is layered. One primary reason is prestige. Brazil sees itself as a regional leader and uses the legitimate use of military force as a means to provide security (Fishel and Saenz 2007). Fishel and Saenz (2007) also argue that Brazil feels an international obligation, hemispheric solidarity from the confines of U.S. hegemony, and an opportunity to build defense capabilities as additional incentives. By participating in peacekeeping operations, Brazil

is able to demonstrate their capability as a military power, while at the same time achieving their foreign policy agenda (Montero 2005). The nearly eight year mission to Haiti is an example of this, as it provides an example of Latin American countries contributing to the resolution of one another's security and political issues, not to mention Brazilian leadership in the hemisphere. Moreover, Brazilian participation is part of a larger commitment the country has made to multilateralism, as they view their participation in IGOs as a "mechanism to address the imbalances in the international system, which it sees as favoring wealthier nations" (Bracey 2010, Pg 1).

The foundational portions of Brazil's foreign policy embrace the principles of the U.N. Charter including the peaceful mediation of conflicts, the self-determination of nations, non-intervention in the internal affairs of other states, and respect for international law (Bracey 2010). Brazil for the first time in 1999 participated in a mission that was conducted under Chapter VII of the U.N. Charter. Moreover, Brazil has rarely participated in missions outside the region, indicating a strong focus on regional affairs (Diniz 2007).

A combination of IGO memberships produced a visible alternative option for Brazil to pursue their security interests in global terms, as doing so is a central theme in their foreign policy. Regional organizations have aided in communication, information sharing, and norm development around issues such as the Amazon region, yet concerns among today's policy makers remain. Ultimately, the argument made here specifically about Brazil is a counterfactual one. Consider what the Brazilian security matrix would look like if MERCOSUR did not exist, or if the many overlapping IGO memberships with the U.S. were not in place; would Brazil be more concerned about those two states

posing a threat to the nation, and therefore increase military spending rates? While such an action is in the realm of possibility, the field has documented how hawkish policy positions on military and security issues have prominence over more liberal, dovish positions, given the risk of being wrong about possible aggressor states (Kahneman and Renshon 2007). Moreover, the increase in participation in peacekeeping operations further highlights the effort by Brazil to demonstrate its ability to play a role not just in regional affairs, illustrated by the prominent role Brazil had in the recent U.N. peacekeeping mission to Haiti, but its presence on the global stage as a symbol of determination and triumph of a once impoverished and underdeveloped country.

Economic Interdependence and Military Spending in Brazil

Brazil's relationship with the global economy represents the layered and complicated relationship between liberalism and militarism. It is the contention of this project that economic interdependence has had both a positive and negative influence on military spending. The positive influence can be seen in the dramatic rise of military spending that paces with the economic openness during the 1990's, and is in part linked to the prestige Brazil seeks militarily to match their economic position in the global economy. Regional trade, however, especially with Argentina, has reduced security threats from within the region, and decreased the necessity of having to maintain high military spending rates. In sum, economic interdependence has both increased the desire for a strong and potent military, while at the same time diminishing the possibility of regional instability requiring a strong national defense.

While trade has pushed Brazil onto the international stage where they had not previously had a major role, which has in turn has caused military spending to increase, it was regional trade that played a major role in shifting military priorities. As has been discussed above, MERCOSUR played a major role in shaping the relationship with Argentina and the other countries in the region, reducing the threat they posed to Brazilian interests. It was in part the IGO structure of MERCOSUR that can claim credit for the reduction in threat and therefore military spending, evident in the statements made by former presidents and other policy makers. Clearly, this pacific effect of regional trade was not entirely able to result in an overall reduction of military spending in Brazil, and so it is difficult to assess the exact role it had. What is clear however, and difficult to deny, is that regional trading relationships reduced the tension and threat level in the region.

Exposure to the international market place has increased the desire and the potential for Brazil to increase its military spending rates. Brazil's seemingly low rates of exposure during the Junta as the regime pursued ISI policies, while rather unique, restricted exposure to the greater international marketplace. This changed in the later 1980's, as free trade agreements were put in place, and monetary policy was settled after a round of currency reevaluations and introductions. MERCOSUR and its sister arrangements with the EU and others opened the flood gates of new markets, as volume radically increased, made visible in Figure 8.5 (Montero 2005). Strong economic growth during the New Republic in part explains the rise in military spending, but it was trade that made those growth rates possible. Combined with the role of prestige, these two factors drove military spending rates upward.

The role of prestige can be observed in the growth of the domestic arms industry that has its roots early on in the period of study. Brazil's effort to develop high technological products rooted in the military arena would hopefully result in the promotion of new technology that would not only benefit the military, but would also be able to export arms overseas, and utilize the cross-over technological innovations for non-military products. Moreover, having a domestic military industrial base allowed for the Brazilian military to be independent of the global arms market. While the Junta increased spending during their rule, they did not spend as much as one would expect, instead favoring development of roads, airports, and general infrastructure projects that fueled economic growth and produced an outward view of manufactured exports (Hunter 1997). This signals a great concern over internal rather than external security.

Little evidence was found to suggest that the types of trading patterns, in terms of exports and imports, had a major role in shaping military spending rates. The argument presented in Chapter 2 advocates for all trade having a pacific effect on military spending rates. While this clearly is not the case, there is cause to believe certain types of trade may influence security policy in different ways. Brazil, having developed its own defense industry, primarily developed their own core military hardware goods domestically; however, some of the high end technology had to be imported, or secured through agreements with foreign states (Franko-Jones 1992). Further, Brazil had a number of mineral resources such as iron ore that prevented some basic materials from having to be imported (Franko-Jones 1992). It can be said that Brazil's export markets had more to do with the security decisions the state made, such as the long standing coffee trade with the U.S., but it is unclear which came first, coffee exports or U.S.

alliance. Brazil's shift from foreign to domestic oil sources shaped market forces, with the country declaring itself self sufficient and free of overseas oil in 2006 (Baer 2008). The analysis here offers no evidence that any changes in military spending levels were caused by a variation in the type of trade the country was engaged in. What was more a factor was the openness of the economy, and the specific trading partners, such as with the U.S. and Argentina.

While trading type did not play a major role in security decisions, it was the neoliberal policies and the 1980s economic turmoil which led to a shift in the general ideas that held consensus among Brazilian elites. They feared further meddling by the U.S., which led them to feel inadequate, in addition to having to deal with the American established agenda in Latin America which did not always match Brazilian interests. This feeling of inadequacy was coupled with the long standing belief among Brazilians that they had not yet reached their full potential as a country. A strong defense would be seen as a signal to the world that Brazil is not a backwater nation, and that Brazilians are not incapable of mastering their region. In addition, Brazilian elites concluded that the international dynamic was changing, and that the hegemonic role the U.S. had played in South America for decades was waning (Brands 2010). While earlier rises in military spending were due to the military regime needing to ensure domestic control and to ward off possible infractions from rival Argentina, the second wave of spending has created a military that is a symbol of the growing power and possibility of Brazil. While Brazil suffers from forming a unified and consistent self image, and thus a clear idea of what they want to accomplish in their foreign relations, the vast investment in military

spending witnessed during the 1990s is evidence of a desire to be taken seriously by the outside world (Montero 2005).

This motivation clearly is not the only cause resulting from the rise in trade levels. There is no doubt that international trade has brought about a rise in GDP rates in Brazil, and has also increased the need for Brazil to demonstrate its influence on the international stage. Participation in peacekeeping operations serves as an example of how Brazil has worked to influence the international system. Moreover, efforts to become a permanent member to the United Nations Security Council, and the overall need to have an active role in the international trading system, all benefit from a well developed military. In many ways, Brazil has turned its military doctrine away from internal control throughout the transition to democracy outward toward establishing the country as an international leader.

This dynamic is arguably one of the main reasons for the rise in Brazilian defense spending throughout the 1990s. This position is supported by more recent developments where Brazil has increased its military spending from over \$9 billion in 2003 to nearly \$24 billion in 2009 (Brands 2010). Attack helicopters, combat aircraft, and submarines have all been added to the armed forces (Brands 2010). More than anything, Brand (2010) argues that this drive toward greater military technology and superiority is derived from a desire to be autonomous from the U.S., as well as to have greater influence in the region. Moreover, the continuous need to protect the interior, and now newly developed off shore oil reserves adds to the portfolio of the military. Conca (1997) argues that Brazil built a strong and robust arms industry and by proxy increased military spending in the 1990s to demonstrate the ability of the country to be a force in the global arena. What

is clear from Section 2 of this chapter is that Brazil is a country on the rise, with big ideas. As one author put it, “Brazilians are like Portuguese Speaking Texans;” their ideas are big, their country is big, and germane to this study, they have the pride to build a large and robust military sector (Klom 2003: pg 361).

Section 6: Implications for Liberal Theory

How does the Brazilian case reflect the findings from the quantitative analysis on the role liberal influences have on military spending? The short answer is that the Brazilian case, while having several unique characteristics that have been illustrated in this chapter, reflect the findings presented in Chapters 4 through 7. The democratic periods in Brazilian history have resulted in reductions in military spending and a barrier between the military and budgetary decision making at the highest levels of government. The network of IGOs that Brazil has been party to have reduced the overall tension in the region and helped facilitate key alliances, reducing the burden on the military to provide security options for a number of security scenarios including a possible confrontation with Argentina. International trade has resulted in substantial investments in the military, especially during the New Republic, while not producing clear and foreseeable security threats that warrant such an increase. The liberal forces that have been demonstrated to shape military spending on a global scale do so in very similar ways in Brazil.

The transition from military rule to democracy in Brazil offers a stark contrast in military policy and budgetary decision making. The numbers provided by my quantitative analysis in addition to the analysis highlighted by other scholars clearly draws a connection between the emergence of democratic structures and a reduction in

military spending. The open political system, as Goldsmith (2007) argues, clearly allows for citizens to demand that their needs be prioritized over military spending. The presidential system reduces the desire of the president to make military items a budgetary priority, given the populist tendency of Brazilian politics. Further complicating the analysis presented here is the rise in Brazilian military spending as democratic institutions aged. While a short fifteen year period for the period of study examined here, it is clear that the initial consolidation of the democratic regime did not result in a continued decline, rather an increase, which has been explained by the growing economic interaction with the global marketplace.

IGO memberships have clearly played a role, in several distinct instances reducing military spending. First, the ties with the U.S. that were further embedded in 51 overlapping IGO memberships allowed for Brazil to avoid the threat of an American intervention during the Cold War, and also ensured the minimization of possible regional threats given the overall American presence and coordination with the Brazilian state. Second, the creation of MERCOSUR and the rapprochement with Argentina, including the agreed upon abandonment of nuclear weapon programs, further reduced military spending levels. Third, IGOs worked to shape regional conflicts and worked to coordinate interests in South America, especially with immediate Brazilian neighbors. Lastly, U.N. and OAS peacekeeping operations resulted in nominal increases in military spending and have allowed for the expression of Brazilian foreign policy of multilateralism⁷⁰. These elements combined have worked to reduce the tension and

⁷⁰ According to Peacekeeping financial contribution reports from the UN, Brazil did not contribute funds directly, just troops. It is reasonable to believe that there are some costs that Brazil was not reimbursed for during the peacekeeping operations it took part in during the period of study. However, no exact figures were available.

security threats facing Brazil, and have resulted in reductions in military spending.

Without them, Brazil would have maintained much higher spending rates than they did.

This project has argued that economic interdependence leads to a decrease in military spending levels, a position that is clearly incorrect as the Brazilian case illustrates the role economic interdependence has on increasing military spending rates. Economic interdependence created a situation where the military was used to combat the growing concern over neoliberal policies and the requirement of Brazil to be able to project power on a similar scale of their economic endeavors. This explanation of the Brazilian experience might shed light on how other states have responded to growing levels of globalization and dependence on the international marketplace. International trade has shaped military policy, not by creating a security threat, but through the neoliberal policies that have gutted the pride and ability of the state to maintain sovereign integrity. The version of capitalism that Kant envisioned was one of cooperation and peace, where states made mutual benefits, and gains were shared by all. The neoliberal economic order does not produce such results; in fact, it creates disparity and social upheaval, robs nations of their pride, and ultimately results in states maintaining high levels of military spending which are used to combat the lack of nationalism. In the end, economic interdependence is not a pacific influence on military spending rates, it has the opposite effect.

To conclude, Brazil offers a prime example of the complex matrix of influences liberal forces have on security policy. By offering this context to accompany the statistical analyses of this project, the case study has provided a clear idea of how these policies shape the ways in which states make security decisions in the real world. Brazil,

like all countries, will no doubt experience the continued pull and push that liberal influences exert on military spending rates. The inclusion of liberal factors, when combined with the other external and internal factors that shape military planning, offers a more holistic and accurate picture of military spending decisions in the world today.

Chapter 8 Tables and Figures

Figure 8.1: Democracy in Brazil

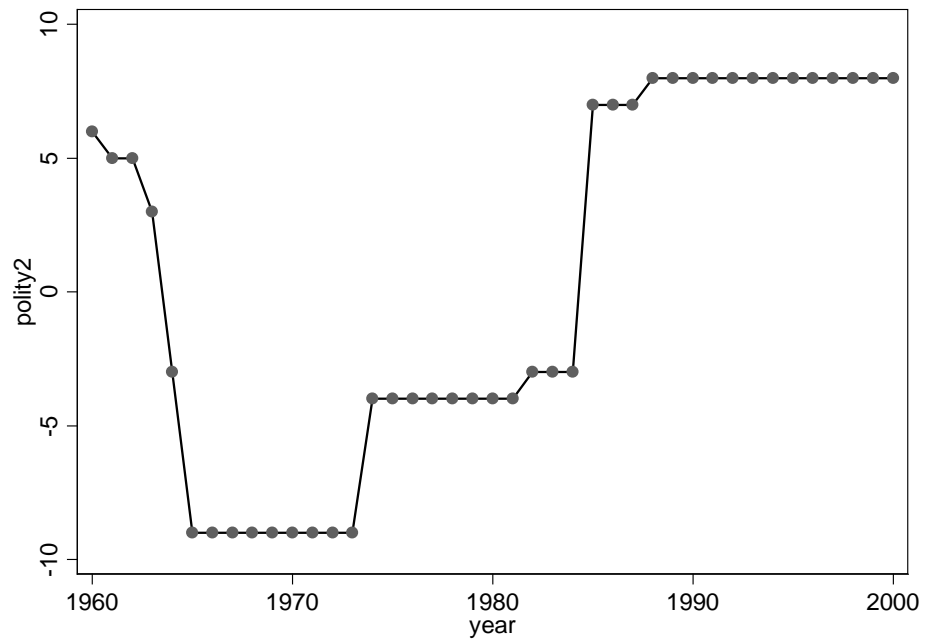


Figure 8.2: GDP Per Capita in Brazil 1960-2000

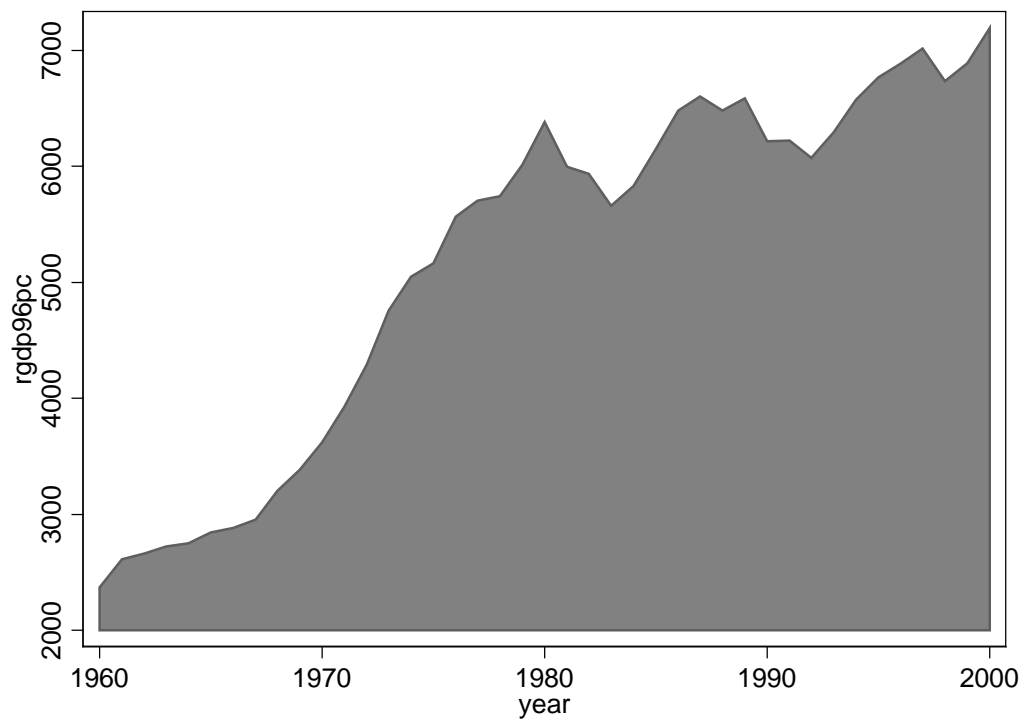


Figure 8.3: Brazilian GDP 1960-2000

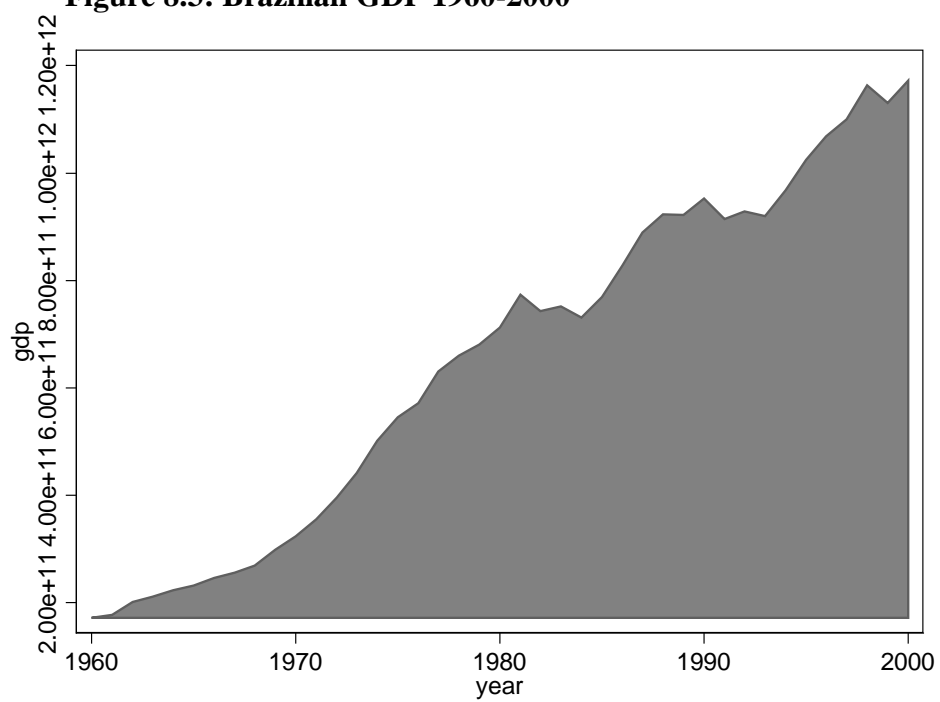


Figure 8.4: Total Trade as a Share of GDP 1960-2000

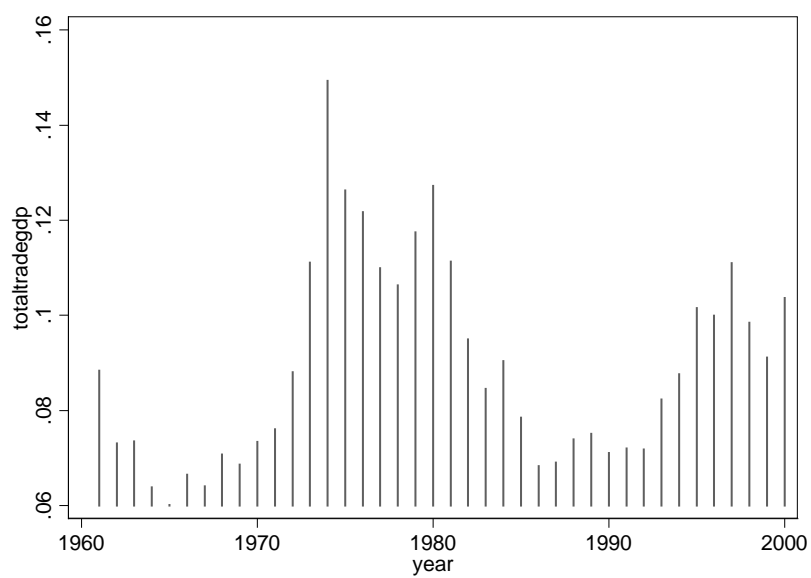


Figure 8.5: Regional Trade as a share of GDP 1960-2000

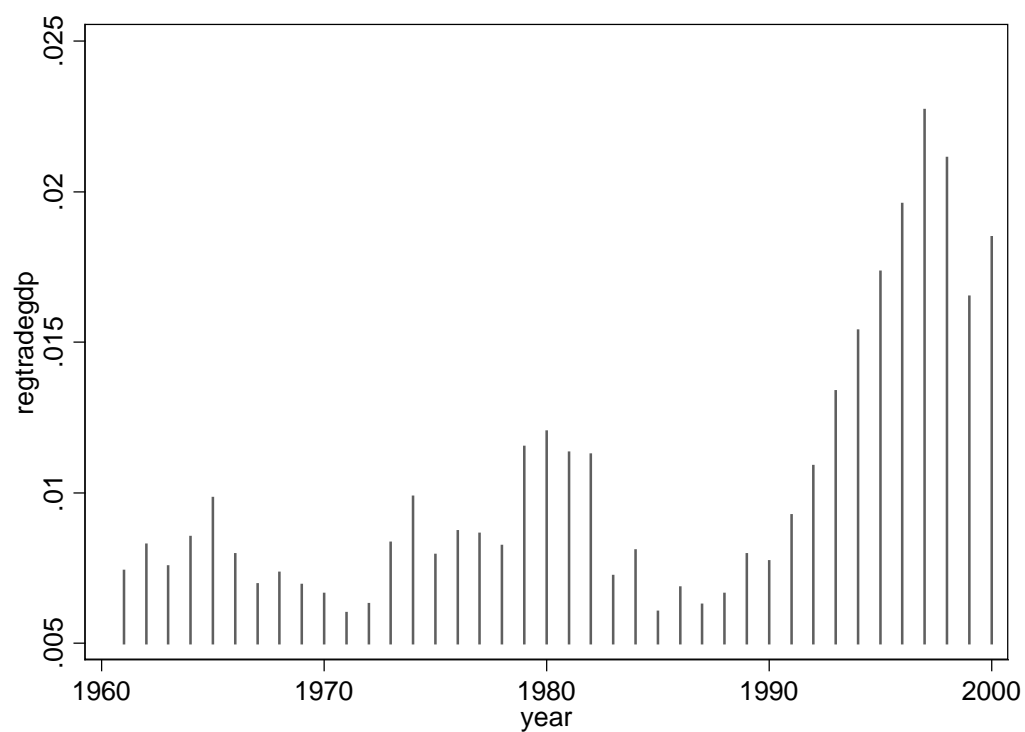


Figure 8.6 Total IGO Memberships for Brazil 1960-2000

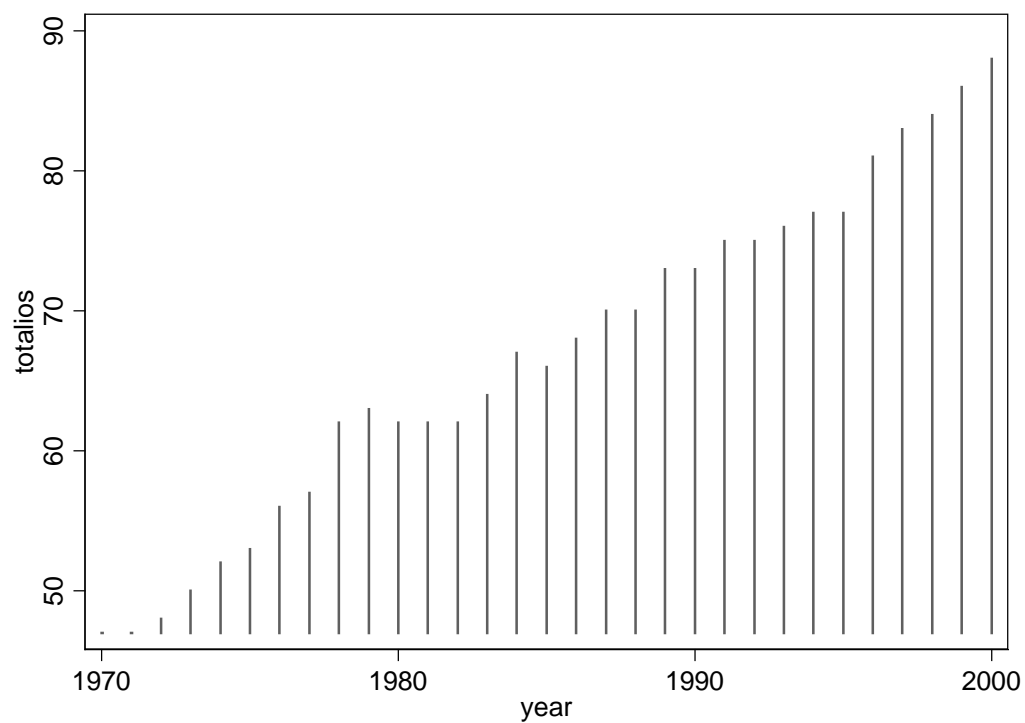


Figure 8.7: Democracy Rating During Junta Rule 1964-1985

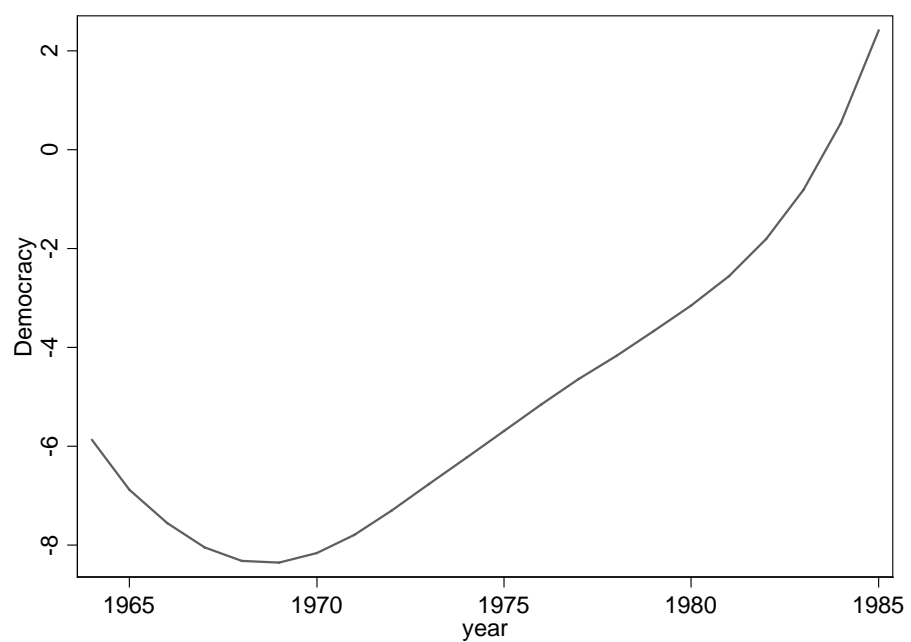


Figure 8.8: Total Trade During Junta Rule 1964-1985

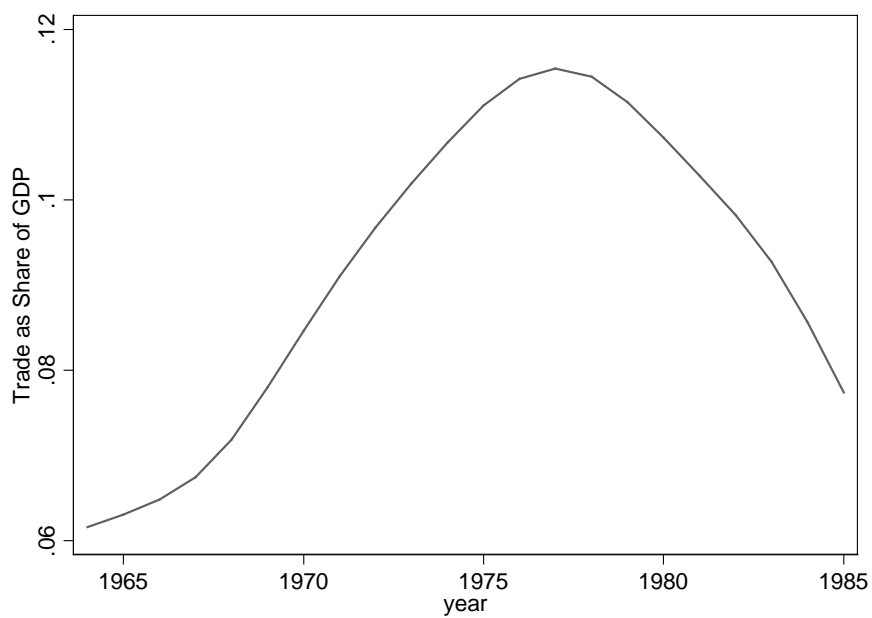


Figure 8.9 Regional Trade During Junta Rule 1964-1985

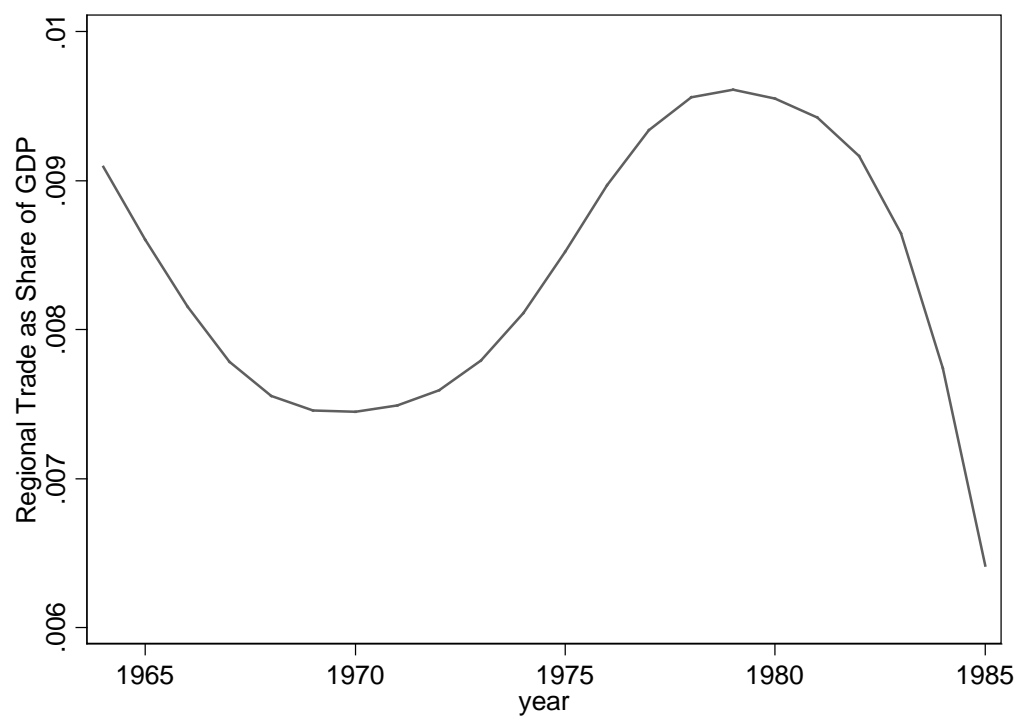


Figure 8.10: IGO Membership During Junta Rule 1964-1985

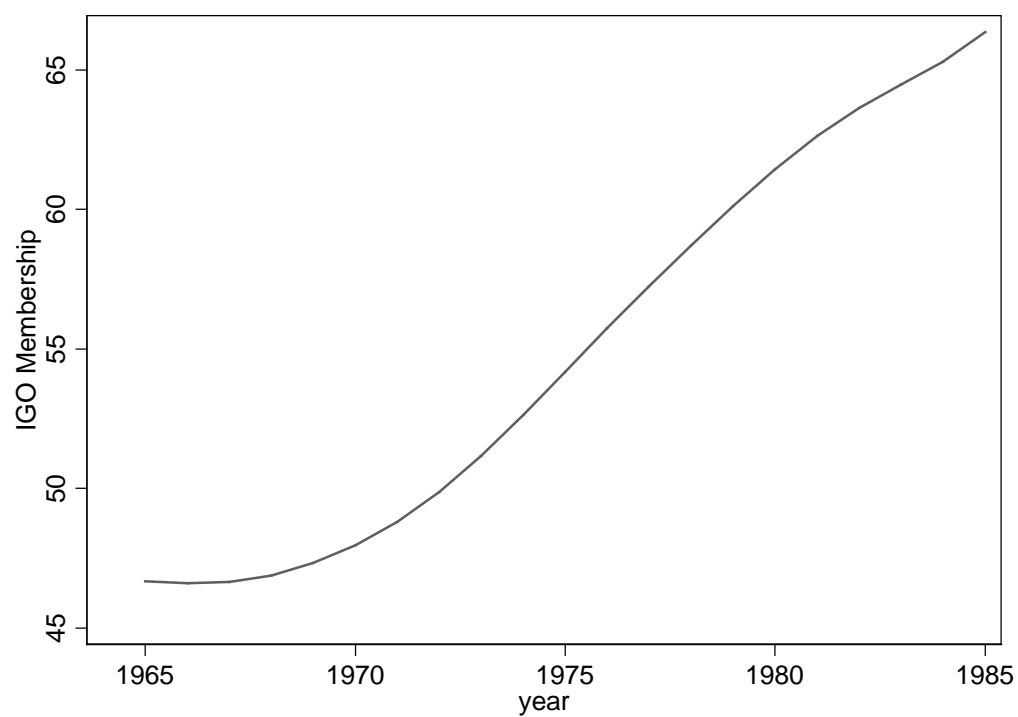


Table 8.1: Number of Brazilian IGO Memberships 1960-2000

	End of First Democratic Period 1964	End of Junta Rule 1985	End of Second Democratic Period
IGO 1	28	42	59
IGO 2	9	12	14
IGO 3	10	10	14
PBOs	4	4	4
Total IGO Membership	47	66	88

Figure 8.11: Military Spending During Junta Rule 1964-1985

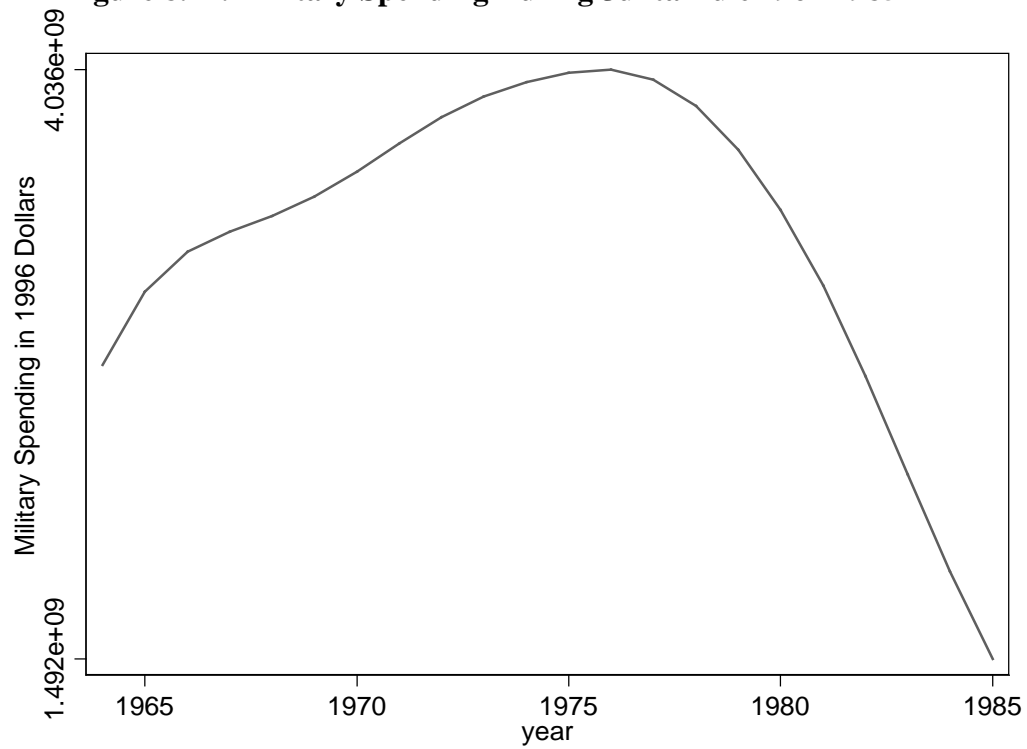


Figure 8.12: Democracy in the New Republic 1985-2000

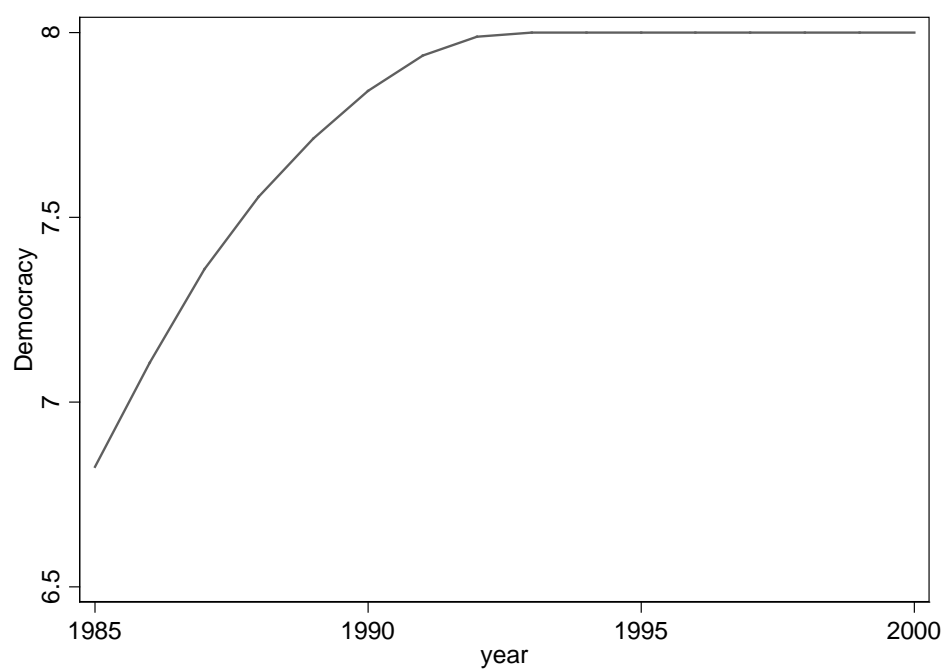


Figure 8.13: KOF Globalization Rates in Brazil 1972-2000

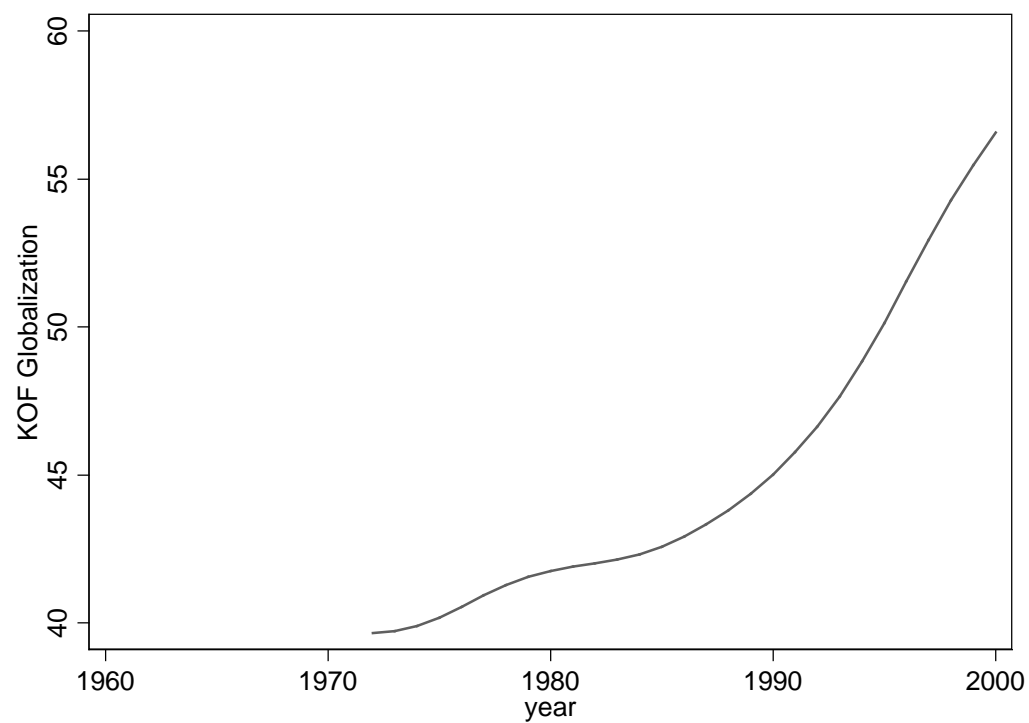


Figure 8.14 International Trade in the New Republic 1985-2000

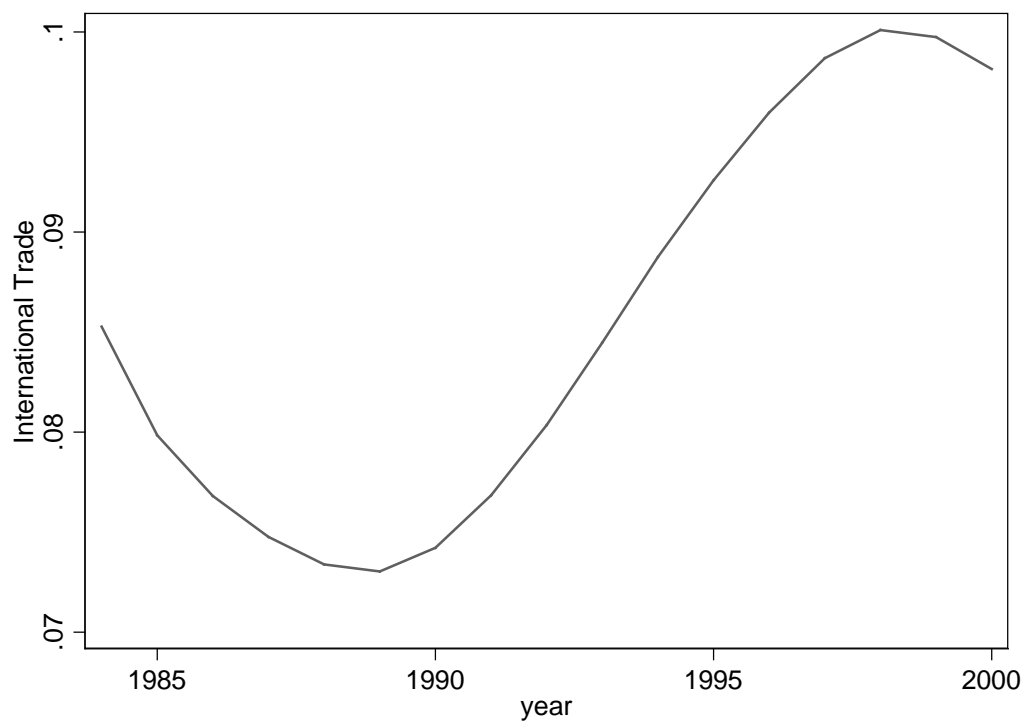


Figure 8.15: Regional Trade in the New Republic 1985-2000

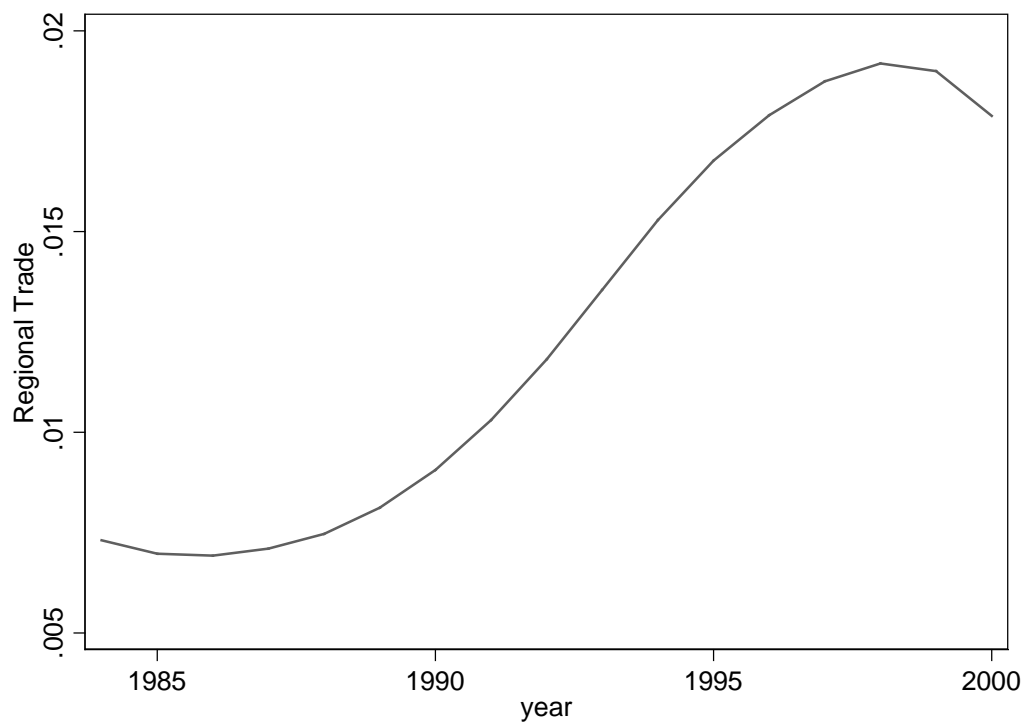
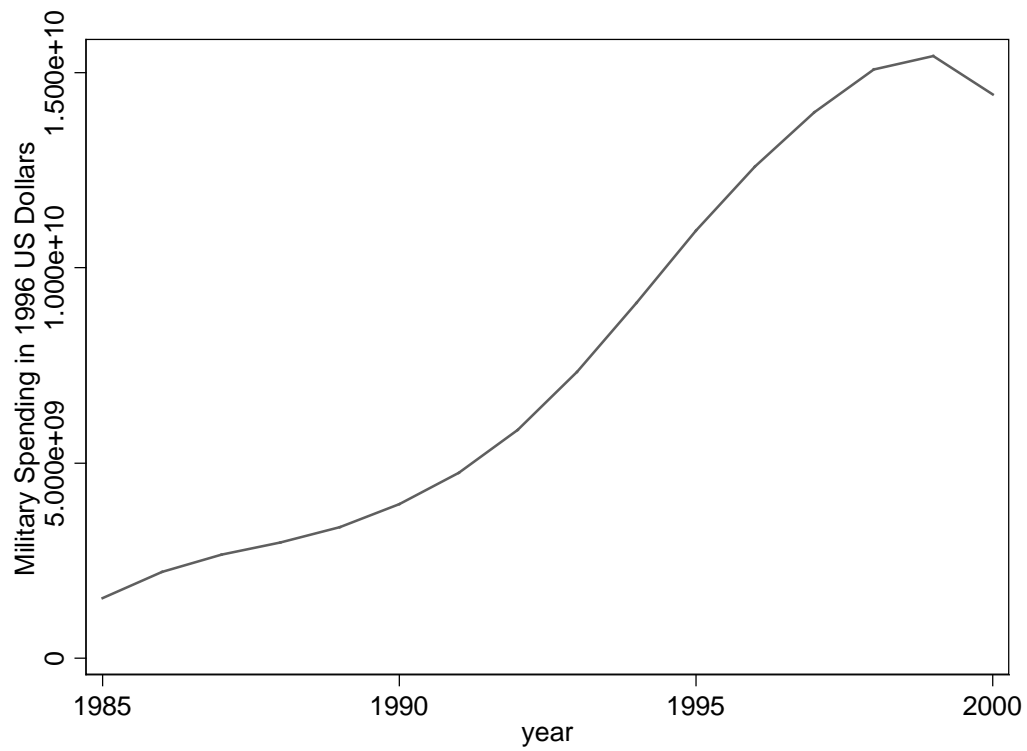


Figure 8.16: Military Spending in the New Republic 1985-2000



Chapter 9: Conclusion

Introduction

This project has examined the role the Kantian Triangle has on defense budgets for a forty year period, with findings that suggest that liberalism does not have a universally pacific influence on military spending. These findings offer the field the most coherent examination of how the Kantian Triangle influences defense spending decisions among states, and advances the field's understanding of both the role of liberal influences in state decision making, and the influences of military spending. The findings of this project suggest that democracy and IGO membership work to reduce military spending in a limited capacity, while economic interdependence increases it. These findings offer little support for the premises first advanced by Immanuel Kant over 200 years ago, that standing armies will slowly disappear as the world's states adopt liberalization. In this chapter, I review the main findings of the project, and draw conclusions about what can be inferred about the relationship between liberal influences and military spending. I then examine the limitations of the study, and close with a discussion on directions for further research.

Section 1: Evaluating the role of liberal influences

The premise of this project is that the Kantian Triangle works to reduce military spending as states adopt those institutions. This study has tested this premise, using both a large quantitative dataset spanning a forty year period from 1960-2000, and an in-depth case study on the country of Brazil for the same time period. The major findings of the project can be summarized as follows:

Democracy

- As states progress toward stronger democratic structures they reduce their military spending levels regardless of whether they are democratic.
- Variation among established democracies, in the form of legislative and electoral institutions, does not shape military spending rates.
- Countries experience further reductions in military spending the longer they are a democracy regardless of institutional strength.
- Democracies had lower rates of military spending in part due to their successful partnership with major power allies, while authoritarian states were not affected by such partnerships.

IGOs

- IGO memberships reduce military spending.
- IGO Duration reduces military spending at similar levels to *Total IGO Membership*.
- Security IGOs work to reduce military spending at higher rates than non-security IGOs, who do not have a universal effect on military spending rates.
- Not all security organizations work to reduce military spending consistently.
- Peace Brokering Organizations have a negative and significant relationship with military spending when considering regional indicators.
- Powerful IGOs reduce military spending.

Economic Interdependence

- International trade increases military spending
- Regional trade, when controlling for non-regional trade, increases military spending.
- Overall exposure to the economic marketplace in terms of FDI, trade, and currency exchanges increase military spending.
- Social, political, and economic globalization combined does not increase nor reduce military spending, neither do social or political globalization independently shape defense expenditures

General Findings

- Most of the relationships mentioned above hold when considering the percentage of citizens enlisted in the military.
- When considered together, the three points of the Kantian Triangle work consistently to influence military spending.
- The results are robust, with few exceptions to changes in control variables, temporal, or spatial considerations.
- Brazil serves as an example of the complex interactions between the points of the Kantian Triangle, and the notion that liberal forces do not have a universally pacific effect on defense spending.

- The Brazilian case highlights the positive role international trade shares with military spending.

The findings examining democratic structures indicate that the nature of democratic structures has limited effect on the defense spending of states. While democracies spend less on the military than authoritarian states, structural variation has no significant influence on military spending rates. Once states become democracies, they do not continue to decrease their military spending as they consolidate and build stronger democratic structures. These findings pose questions regarding what democratic structures ultimately bring to the security planning of the state, and the ways in which democracies view and build security institutions. The idea that an increasing number of democratic and consolidated states continue to allocate more funds to their social agendas and away from security planning is false, nor does it hold that if democratic states continued to strengthen their institutions that they somehow will abandon their militaries. What emerges from this analysis is the notion that the behavior of democratic states in relation to military spending is a mixture of both liberal and realist theory on state behavior. While democracies offer open competition for state resources resulting in a reduction of military spending, democracy does not turn states into pacifists, or result in a complete abandonment of standing armies. The relationship that democracy shares with military spending levels is clearly complicated, given the competing arguments between the normative and institutional arguments outlined in Chapter 2 (i.e. duration vs. democratic strength). The results indicate that the institutional position, which argues democracies continue to reduce military spending rates as they consolidate, is not accurate. However, the longer a country is democratic the more likely they are to reduce their military spending rates, which supports the normative argument. These findings

suggest that those states that do not experience continued improvement of their democratic structures, but retain their democratic status experience a relationship between citizen preference and security policy that consolidated democracies do not. This is a reversal of the expectation of this study, in terms of the lack of power the institutional variable has on military spending. Therefore, these findings both undermine and support the position argued in this project.

The findings of this project also suggest that legislative and electoral structures play no meaningful role in reducing military spending budgets among democracies. This finding clearly undermines the argument presented in the project that parliamentary and consensus systems allow for closer representation of citizen views who want a decrease in military spending in favor of social priorities such as health, education, and housing. In fact, proportional representation systems have a strong positive relationship with military spending, indicating that these systems that arguably have more homogenous party systems in which more views are represented do not have a pacific effect on security policy among democracies.

IGOs also work to reduce military spending. This project provides the first systematic examination of IGO membership on *Defense Burden* and *Human Defense Burden*, and findings indicate that IGO membership works to reduce military spending and military personnel rates. These findings suggest that IGO memberships have a pacific influence on security policy by changing the internal calculations of states who substitute IGO membership for military strength, and that the influence of IGOs extends beyond dyadic relationships. IGOs have established their role in the international system by coordinating the actions of numerous states on a number of vital issue areas, including

security, and clearly shape and encourage pacific domestic behavior, in addition to providing stability and peace between member states. These findings also extend to the variations in IGO types.

This finding is undermined, however, by the fact that it is security IGOs are the real drivers of these reductions. While there are clearly some non-security IGOs that lower military spending levels, the basic structure of IGOs is not enough to change the internal decision making of states regarding military spending levels. Likewise, the IGOs whose memberships consist of more powerful states do not systematically work to reduce military spending. In short, IGOs matter but in a more limited capacity than what this study has hypothesized.

International economic interdependence does not share the pacific relationship with the other two points of the Kantian Triangle. Trade increases military spending, perhaps because of the relationship it shares with economic strength. However, this is an unlikely explanation given the robust controls for that influence included in the modeling. Trade may also increase military spending based on the increased need to have a military option to secure important trading routes, relationships, and to provide leverage in the international system. The explanation presented in Chapter 8 is that in the case of Brazil, trade coupled with neoliberal economic reforms recalibrated the perception of Brazilian elites to the need to both protect further intrusion into domestic affairs by outside influences, both IGO and state, and to ensure that the world understands Brazil as a regional and international power via military strength. A functioning and competent military offers the world insight into what the Brazilian state is capable of. Offers to lead the peacekeeping mission in Haiti give the Brazilian state an opportunity to showcase that

capability in action, and demonstrate their interest in matching its global leadership with its economic rank.

Regional trade relationships work to decrease military spending, suggesting that economic interaction in a confined territory and with neighbors has a significant and important role in shaping military spending decisions. This finding is supported by the Brazilian case, where the fall of the junta coupled with reducing tension with Argentina had a considerable impact on the security discourse in the country. The effect of this massive change in relations was overshadowed by the growing international presence Brazil now maintains. In short, however, the notion that economic relations with neighbors can reduce tension is an important finding that is supported by other contributions to the literature.

These findings suggest that the realist notion that states will militarize, develop power, and advance their interests through military means at all times lacks the power to explain the influence democracy and IGO memberships have on military spending. The expectation and prediction of the theory presented above is that states will reduce their military budgets and personnel, not eliminate them, dramatically reduce them, or completely diminish the ability of a state to defend itself. With that said, it is apparent, based on these results, that the points of the Kantian Triangle shape the way states view the world they live in and the security threats contained within. The analysis examining economic interdependence with the international marketplace suggests that the realists may be correct in how trade and exposure to the market place shapes security planning. If either rationalization offered in this project is correct, then the realist's notions that power and wealth are driving forces in security planning are accurate.

The major conclusion of this project is that military spending is influenced by a multitude of factors. Liberal and realists factors have the power to shape military spending, and while neither side is able to paint a complete picture of how states conceptualize security and achieve it, they do offer guides to how to build a more complete theory of military spending. This project advances the field's understanding of how liberal influences shape domestic decision making, and in addition, sheds light on the influences of security planning. I have established a credible and strong link between the liberal influences and military spending. These influences specify that liberal institutions do *not* have a universal pacific influence on military spending, indicating that Kant's famous argument is not an accurate depiction of military spending influences in the later half of the 20th century, where liberal institutions grew in substantial numbers. Liberal influences work to reduce military spending, but the liberal parts of the world are nowhere near the abolition of standing militaries.

Section 2: Limitations of Study

There are limitations with this study. As discussed in Chapter 3, there are a number of limitations with the data. Some of these are addressed in the Chapters 5 through 7, which utilize alternative measures of the independent and dependent variables of interests. Of those issues, the greatest limitation is the military spending data. Clearly, this data is not a complete and perfect description of the actual dollar amounts states spend on the military. This issue was previously discussed in Chapter 3, specifically Lebovic's (2001) analysis, where he concludes that while specific dollar amounts cannot be considered reliable, the directionality of the data is accurate, and therefore the

conclusions drawn in this study hold merit. Moreover, the use of Military Population as an alternative dependent variable provided some further confirmation that the relationships presented in Chapter 4 are accurate depictions.

As discussed in Section 2 of this chapter, disaggregation of both the independent and dependent variables of interest in this study are needed to provide a more clear idea of which elements of liberal influences shape specific parts of a state's security policy. The results in this project do not describe the changes in security doctrine or strategy that accompanied the reduction in spending. We know that military population tended to decrease with democratic institutions and IGO memberships, and had no clear relationship with total trade, but the results do not indicate if the reductions in military spending involved the forgoing or abandonment of nuclear weapons programs, the labor costs associated with military personnel, other weapons systems, or the actual avoidance of a conflict. The argument presented in Chapter 2 articulates a general reduction of military spending, and I believe the statistical models built and the case study of Brazil accurately capture what the theory articulates. However, beyond that additional work is required to properly specify the specifics of the relationship.

This study, while examining the role of spatial clustering, does not consider potential regional or cultural influences on military spending and security decision making, which may be captured by the lagged dependent variable, but are not elaborated in the analysis. Moreover, it may be that the liberal influences affect different regions in varying ways. The analysis has been clear, however, that the pacific effects of the Kantian Triangle are not limited to the western states of Europe and North America, or any other region. Consider the role of IGOs: it may be that it is normative behavior that

shapes East Asian countries security decisions, and information sharing that changes the security calculations of European states. Neither of those connections are examined in this study, and therefore, while the directionality of the liberal influences are established, there is still more work to be done that captures the specific elements of influence. Consider for example the components of a consolidated democracy: it may be that these institutions, such as free media, elections, transparency laws, or civil liberties, shape military spending in radically different ways in the various regions. The analysis presented here simply does not capture those differences and changes.

A major counter argument to the theory that IGO memberships reduce military spending is the role of the hegemonic powers during the period of study. I have accounted for the influence that the nuclear umbrella of the U.S. and the USSR for the period of the Cold War had on state security planning. As discussed in Chapter 5, I believe that major power alliance does reduce military spending rates in most models while accounting for IGO memberships. This indicates that the realists' arguments are correct: an alliance with a major power does reduce military spending. But it is still the contention of this project, and specifically of the sections dealing with IGO memberships, that the IGO memberships reduce military spending in addition to and in spite of hegemonic influence.

Section 3: Directions for Further Research

This research can be extended in several directions, as there are a number of questions that this study generates and does not answer. First and foremost, the dependent variable needs to be disaggregated in order to determine how liberal influences

shape strategy in addition to the sheer value and cost of defense. For the most part, this study has been unable to capture what states are actually forgoing in relation to their military budgets as they make the transition to democracy and increase the number of IGO memberships. Is it just that they abandon or choose not to advance nuclear technology for military uses? Or is it other specific weapon systems? We know from the analysis that labor costs associated with the military decrease with democratic structures and IGO memberships, but what type of military personnel are reduced: navy strategy, air force, research and development, something else? The list of possible budget cuts that could happen given the shift in strategy that occurs are numerous, but this study does not provide answers to these questions. Moreover, what changes in military strategy does international trade facilitate is still unclear. Where does the additional military spending go? These dynamics are left uncovered in this project.

Further evaluation of the independent variables of interests are also warranted. Clearly democratic institutions shape military spending rates, and this project answers many additional questions such as the role of democratic duration and systems variation, which are not a factor in major spending shifts. But there is more to the relationship between democracy and military spending than what is covered in this project. First, how does strategic decision making and overall democratic institutions and life shape the meaning of security and the overall procurement of it? There is clearly a great deal of work on the relationship between civilian leadership and military leadership, and how democratic structures shape the reaction to conflict, conflict duration, casualties, conscription, among other issues. What is still not entirely clear is how every day citizens transform their conceptions of security into their political support, and in general

how representational is security doctrine, in terms of citizen support. Scholarly work should explore how security preferences by citizens are translated into actual policy in democratic structures. While a great deal of critical theorists examine the role of the security institutions in democratic states, there is little empirical work that unpacks democratic structures, public opinion, and policy outcomes in the realm of security issues.

There are a number of avenues of further research which can be conducted on the relationship between IGO memberships and security policy. While it is clear that security IGOs, and more powerful IGOs shape military spending rates, there is still much to be learned as to when and how these memberships change security policy. This study does not address or show the specific mechanisms of IGOs that shape security policy. Is it communication, information, norms or some other element of participating in global governance? The case is made in this project that there is a clear link between these conflict resolution mechanisms, and that in conjunction with one another they work to reduce spending. What remains unanswered is which mechanisms do the heavy lifting? Are they all equal in their influence?

The relationship between economic interdependence and military spending is by far the area of further research with the most potential. The literature has slowly been establishing the importance of trade ties in the democratic peace, in addition to shaping state's conflictual behavior. If trade has a pacific effect in the dyadic context, but a militaristic one in the monadic, then what does this mean for the convergence of liberal and realist theory in international relations? I made the argument in Chapter 8 that Brazil suffered from a number of cultural and structural influences that occurred after the

opening of the domestic market economy and the adoption of several neoliberal policies that resulted in the growth of military spending rates. This argument, while not new, has been typically kept in regional studies or within the civil-military relations literature, and has not addressed military spending directly. Creating a model that captures the security spending outcomes from international globalization, trade, and neoliberal policies would be a worthwhile endeavor.

Lastly, the role of regional factors offers a possible opportunity for further investigation. First, in Chapters 5-7, regional indicators were used to examine if cultural or geographic considerations may shape the results. Those findings indicated that key variables, such as alliance, rivalry, and GDP Per Capita, did not maintain their significance when regional indicators were included, suggesting that these important variables for the pooled data do not have a universal relationship with all states. This is especially relevant given the approach to pooling states together, but also for understanding how perhaps a western notion such as an alliance, may play less of a role in other countries.

Conclusion

This project makes three general contributions to the field of international relations. First, this has contributed to the literature by striking down the notion that liberal influences have a universally pacific influence on state behavior. Liberalism is both capable and limited in making states more pacific, as well as increasing a state's willingness to allocate additional resources toward the military. As with many relationships in international relations, the one liberalism shares with military spending is

a complicated one. This project has made a substantial contribution to expanding that base of knowledge. While the project has not dramatically altered the field's understanding of how defense spending decisions are made, it has clarified the important and under-theorized role liberal factors have in military budget decision making. Second, this project has offered specific conclusions as to where and when liberal influences will shape military spending, and in general has offered a more cohesive story to how military decisions are made. By clarifying the specific contributing elements to military spending, this project advances the fields understanding and knowledge. Lastly, this project offers policy makers a more comprehensive understanding of how security decisions are made. States should continue to be aware of all contributing factors to defense spending decisions within their own countries and abroad.

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Appendix A: Peace Brokering Organizations and Security IGOs

Peace Brokering Organizations (PBOs)

Andean Community
Caribbean Commission
Council of Europe
European Union
Organization of African Unity
Organization of American States
Organization of the Islamic Conference
Organization for Security and Cooperation in Europe
Permanent Court of Arbitration
United Nations
Western European Union
African Union
Arab League
Arab Maghreb Union
Association of Southeast Asian Nations
Commonwealth of Independent States Charter
Economic Community of Central African States
Economic Community of West African States
Nordic Council of Ministers
Organization of Eastern Caribbean States
Southern African Development Community

Security IGOs: Consists of the PBO groups as well as the following:

European Bank for Reconstruction and Development (EBRD)
Inter-American Investment Corporation
International Atomic Energy Agency
International Bank for Economic Cooperation
International Bank for Reconstruction and Development (World Bank)
International Civil Aviation Organization
International Council for the Exploration of the Sea
International Fund for Agricultural Development (IFAD)
International Labour Organization
International Monetary Fund
United Nations Industrial Development Organization (UNIDO)
World Intellectual Property Organization (WIPO)
World Trade Organization (WTO)

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