

**Alliances from the Inside Out:
A Domestic Political Explanation for Alliance Behavior**

By

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politics**

Abstract: Existing work cannot explain why countries form or maintain alliances absent security threats, though we know countries routinely do just these things. I argue countries form alliances to manage the essential problem that they must use finite budget resources to provide domestic security and national security; the guns versus butter dilemma. States sometimes form alliances to “contract out” national security so they can allocate more resources to domestic concerns. Not only should we expect alliances to form and endure absent threats, but also we should expect more generally that domestic political and economic demands will influence alliance decisions. I examine those claims on sample of all country years from 1816-2000 using a probit model.

This paper proposes a different explanation for the question of why states form interstate alliances. Existing explanations of alliance formation fall in either a narrowly defined realist informed perspective based on the necessary existence of threats or a large, poorly defined liberal perspective based on a vague concept of preference convergence.¹ As a result, there is little theoretical consensus on the specific causes of alliance formation among states. This paper suggests a domestic politics based explanation for alliance behavior by linking the literatures on political survival and the distributional dilemma. Alliance formation explanations based on domestic political considerations are not new as Altfeld (1984) and others (Barnett & Levy 1991; Levy and Barnett 1992) have tried to integrate elements of domestic political calculations into their respective research. However, most existing explanations lack a specific mechanism to identify what causes states to form alliances.

I identify a causal mechanism arising from the link between a leader's concern for domestic political survival (Bueno de Mesquita et al. 1999, 2003) and his/her need to efficiently manage the distributional dilemma (Powell 1999). Moreover, I introduce a variable which captures this causal mechanism in a unique way. Finally, I provide an empirical analysis supporting the link between domestic politics and alliance formation on all states between 1816 until 2000. This analysis, as a first cut, has the benefit of providing a broad look at the relationship between my proposed causal mechanism and the alliance formation process by analyzing a large number of cases in a rigorous manner. Moreover, this project suggests several interesting extensions related to foreign policy substitution and alliance partner compatibility comprising other parts of this research program. Thus, the goal of this paper is to present the general argument and provide some compelling analyses to support its claims.

I. Why outsourcing security can affect political tenure?

Most alternative explanations for alliance formation lack a precisely defined causal mechanism.ⁱⁱ For example, realist explanations tacitly rely on the existence of threats, caused by changes in the systemic distribution of power, to motivate major states to ally (Morgenthau 1948). However, significant changes in the systemic distribution of power are overwhelmingly rare relative to the aggregate number of alliances appearing in the empirical record. At the system level, only about a half-dozen instances of such changes in power have occurred (Tammen et al. 2001), while the number of observed alliances, even among major powers, is much higher. Even shifting to a regional perspective (Walt 1987) still requires the existence of threats for alliances to arise, yet a number of alliances identified as being formed in an environment where states lack significant threats exist.ⁱⁱⁱ On the other hand, most alliance formation explanations drawn from the liberal perspective rely on a vague concept of a simultaneous and joint convergence of preferences upon cooperation (Stein 1990). In principle, this loose explanation is reasonable, however existing analyses applying this perspective have typically measured preference convergence using some measure of jointly similar regime type (Lai & Reiter 2000; Simon & Gartzke 1996; Siverson & Emmons 1990). While analytically easy, this approach has a number of limitations including the assumption that similar regimes are equivalent to convergent preferences and the question of whether similarity of regime can be considered a causal mechanism. Thus, existing claims drawn from both realist and liberal perspectives have limitations suggesting the need for a more precise explanation of the causes of alliance formation.

The explanation I propose is based on two general assumptions: Actors are rational and Leaders act to retain power. In brief, the first assumption suggests, consistent with rational theories for behavior, leaders choose the alternative deriving the greatest expected utility and

having the highest probability of success. The second assumption is consistent with the claim that all incumbent leaders have rivals who would like to attain political power. The survival-seeking assumption suggests leaders will be responsive to the demands of those individuals deciding who receives political power (Bueno de Mesquita et al. 2003). Rational leaders want to please the minimum number of individuals required to retain power because they would like to minimize their chances of removal from office in the next selection cycle. Thus, the institutions which shape the political process act as constraints upon leaders. Additionally, the argument assumes the resources available to leaders are limited requiring leaders to balance resource allocations. “Were resources unlimited, then there would be no trade-off and no need to engage in any sort of internal balancing of resources. Allocating more to the military would not reduce the amount that could be devoted to achieving intrinsically valued ends” (Powell 1999, 45). These are standard assumption used widely in the political science literature by a number of other scholars including those cited here.

Using intuitions drawn from both the political survival literature (Bueno de Mesquita, Smith, Siverson, and Morrow 2003) and the distributional dilemma research program (Powell 1999), I argue leaders face a resource allocation problem where they must provide appropriate allocations towards both guns and butter to retain political office.^{iv} Since leaders have limited resources, the trade-off between external security and internal wealth/social security is a crucial balancing game. While a leader’s failure to appropriately provide external security may dangerously weaken the security of the state, a leader’s failure to provide social security can lead to his undesired removal from office. Thus, the ‘guns versus butter’ dilemma is an important challenge facing leaders as they try to maximize current and future consumption (Powell 1999, 53). Thus, my goal is to explain the behavior of rational, office-seeking leaders operating under both

structural and resource limitations and attempting to maximize consumption possibilities (i.e. create efficient^v and effective policies).

The distributional dilemma is important because leaders need to provide both efficient and effective policy allocations towards both desired ends to maximize their absolute level of welfare (Powell 1999). However, some leaders face an additional constraint—they have a larger number of individuals to provide with goods to retain office. The selectorate is the group of individuals with “government granted say in the selection of leaders” (Bueno de Mesquita et al. 2003, 42). Membership in the selectorate gives individuals the possibility to be a member of the MWC. The minimum winning coalition (MWC) is “the subset of the selectorate of sufficient size such that the subset’s support endows the leadership with political power over the remainder of the selectorate” (Bueno de Mesquita et al. 2003, 51). The ratio of the MWC to the selectorate is commonly called the loyalty norm and as this ratio gets closer to 1 it indicates that nearly any voting individual is likely to be in the future winning coalition.^{vi}

Due to variations in the size of MWCs, leaders have different needs regarding policy making efficiency. As the size of the MWC increases, indicating higher levels of political competition, leaders need to provide policies benefiting the broader public’s demands (i.e. public goods), whereas leaders with small MWCs can provide policies (i.e. goods) that are private in nature to retain office (Bueno de Mesquita et al. 2003).^{vii} As leaders must effectively provide both guns and butter to retain political power, efficiency in policy making is a necessity so both the MWC is satisfied and the state is protected.

For leaders who are responsible to large MWCs, maximizing policy efficiency given their limited resources is key to political survival; and providing public policies/goods requires greater resource allocations than private goods. In fact, “the survival of democrats (in political office) depends upon their public policy performance” (Bueno de Mesquita et al. 1999, 800) since they

face more political competition. In contrast, leaders distributing only private goods to a small group of individuals to retain office have different needs for efficiency as those leaders are generally less constrained.^{viii} Therefore, larger MWCs encourage leaders to be more efficient in their policy allocations “because, as the winning coalition grows the prospects for political survival increasing hinge on successful policy performance” (Bueno de Mesquita et al. 1999, 804).^{ix} The need for efficient policies encourages leaders to seek out the policy instruments that “produce the maximum amount of the desire good given the resources available and the environmental constraints...the policies that we observe empirically are efficient” (Morgan & Palmer 2003, 185).

One overlooked path leaders can pursue to make security policy allocations more efficient is to form international security contracts (i.e. create interstate alliances). Morgan and Palmer^x (2003), for instance, claim, “if an alliance is formed, each signatory must be able to produce the same foreign policy goods it was producing before the alliance with fewer resources, freeing those resources for use in other policies” (187). In essence, those observed alliance contracts allow states to ‘out-source’ some portion of their security burden. The crucial claim here is that observed alliances: 1) increase foreign (or security) policy efficiency and 2) free resources for allocation towards other demands. Thus, as leaders may have reasonable expected beliefs about the future benefits of forming alliances, they should seek alliances when challenged by demands. A key element of this argument is leaders form alliances due to efficiency concerns over policy allocations or the need to maximize allocations between national security and domestic/social security. Morgan and Palmer argue for an alliance to form “at least one state must have experienced a change in circumstances that would make it prefer an alliance that it previously did not desire” (2003, 187). In this project, the “change in circumstances” (i.e. the causal mechanism) is an increased demand for allocation towards social security (or national security)

policies.^{xi} This is consistent with the second type of change causing alliances to form according to Morgan and Palmer (2003, 188) “the cost to form and maintain an alliance goes down, relative to the costs of other actions.” The alternative action which has become more costly to leaders is to do nothing to address changes in the demand for greater social security policies. Their political inaction increases their risk of losing political power and consequently the leader becomes willing to pay higher costs for an alliance. Under the contracting explanation states form alliance contracts in response to demands for greater policy efficiency since leaders are constrained by, and must respond to, the distributional dilemma.

My claim in this project is states outsource some portion of their national security (through the formation of alliances) in order to allocate more resources towards domestic demands, thus satisfying their MWC and increasing their chances of retaining office. This is consistent with liberal claims that both domestic politics and broadly defined efficiency/welfare concerns affect foreign policy. But it also suggests a solution to the realist puzzle as to why alliances might form and endure absent security threats. The contracting explanation points to domestic politics as the source of alliance behavior when states lack security threats. This is not the first research arguing domestic politics shape alliance behavior (Altfeld 1984; David 1991; Levy and Barnett 1992; Barnett and Levy 1991); however, it is the first systematic study of the claim with a clearly identified causal mechanism.

Michael Altfeld (1984) considered the domestic trade-offs between security, autonomy, and wealth states make when forming alliances. His research suggests alliances impose opportunity costs on the actors involved because of those trade-offs consistent with the claim that states balance across competing demands. Additionally, his conception of wealth encompasses all government spending on the civilian economy not related to the procurement of security, thus illustrating Altfeld is also concerned with the domestic politics of alliance behavior. Relatedly,

Steven David (1991) argues states, facing threats to the regime, may seek external alliances to secure themselves. David's (1991) omnibalancing principle asserts leaders respond to threats affecting their sovereignty by forming alliances with states which enhance the legitimacy of the existing government through the provision of economic and/or military assistance. The omnibalancing concept departs from the core of realist theory by suggesting internal politics are consequential to alliance decisions. While David's revision of balance of power theory provides a more general application (i.e. to small states) of realism and is consistent with the contracting explanation insofar as political survival is a primary concern motivating foreign policy, it still relies on perceptions of threat to motivate alliances. Finally, Michael Barnett and Jack Levy (1991; Levy and Barnett 1992) are interested in the domestic sources of international alliances as well. They suggest the important potential consequences for leaders who fail to consider the distributional dilemma when extracting resources for protection.

Even if a country does have the necessary resources, extraction of them may provide short-term military security at the cost of weakening the long-term strength of the economy and therefore the long-term military potential and security of the state. Military spending can also reduce a state's ability to satisfy important domestic welfare goals in the short term as well as the long term (the guns-butter trade-off), and the inability to satisfy these goals at some minimal level can generate social discontent and undermine political support for the regime in power (1991, 375-6).

Political survival is affected by allocational choices according to those authors providing a link between the distributional dilemma and political survival. Their main concern is with the trade-off between internally mobilizing security and seeking sources of external security and they link the tradeoff between domestic welfare and military security to the political survival of the leader. None of the aforementioned research explores the implications of their arguments in a systematic fashion and relies on decision-theoretic formal implications (Altfeld 1984) or case based evidence (David 1991; Barnett and Levy 1991; Levy and Barnett 1992) to support their

claims. This project intends to provide a systematic analysis and integrate causal mechanisms from both the domestic and international political environment into a model of alliance behavior. The works of Altfeld (1984), David (1991), Barnett and Levy (1991) and Levy and Barnett (1992) provide an adequate starting point from which to begin considering the influence of domestic politics on alliance behavior. However, a more cogent theoretical framework is necessary, in which case, the works of Powell (1999) and Bueno de Mesquita and his colleagues (1999; 2003) provide a more refined theoretical basis for this project.

II. Implications of the Contracting Explanation of Alliance Formation

The explanation for alliance formation proposed here suggests leaders are challenged by complex demands on resources. Leaders, seeking to retain office, must create efficient policies and increasing demands for social security (or national security) goods can cause leaders to seek alliance contracts they may not have been willing to invest in previously. Forming these alliances frees policy resources and allows leaders to channel them to meet those internal demands they face which is preferred over the option of doing nothing to meet the internal demands thereby risking their political future. This explanation does not wholly reject realist explanations based on threats. However, it, more importantly, provides an explanation for alliances formed when states lack major security threats. Thus, the first implication of this explanation is that for leaders interested in retaining office security policy and social policy expenditures are inter-connected. Leaders cannot increase allocations towards one policy without sacrificing allocations to the other policy.^{xii} Since leaders provide two basic types of policies to retain power (i.e. national and social security policies) their decisions about allocating between those policies *must* be linked. Anecdotal evidence of that link is apparent in the policies of the United Kingdom early in the 20th century. At that time, “increases in the size of the electorate

were leading to *considerable “social” spending* for the first time...although Britain was one of the heaviest spenders on defense prior to 1914, it needed to allocate *a smaller share* of its national income to that purpose than any other Great Power in Europe” ((emphasis added) Kennedy 1987, 230). Leaders are cognizant of their limited budgets since the only alternatives for increasing the budget are to increase taxes or borrow, which are typically not attractive options--especially if leaders must provide public goods to maintain their office.^{xiii} The distributional dilemma is acute for states facing higher levels of political competition (i.e. with large MWCs) and, therefore, leaders are conscious not to enact policies likely to displease their constituents since policy performance is crucial to retaining political power.

The second implication of the contracting explanation of alliance formation is that domestic political demands “cause/trigger” alliance contract formation. Since the domestic political institutions and processes of a state determine the office tenure of a leader, he is, therefore, naturally reactive to domestic political processes. Moreover, those political processes may increase the necessity to engage in certain types of interstate behavior. Demands for more efficient policy allocations (e.g. changes in the demand for social security policies), which must be met in order for the leader to retain office, can cause states to form alliances. Engaging in alliance contract formation alleviates the distributional dilemma “(b)y producing one good (security) more efficiently than was previously the case, alliances can allow the state to channel resources elsewhere and pursue other goals” (Morgan & Palmer 2003, 190). Thus, demands for greater spending on either national or social security policies can lead to the formation of alliances.^{xiv}

Therefore, this project explicitly links domestic political behavior, that is, changes in the demand for social and/or security policies shaping a leader’s beliefs about office retention-- to a

specific foreign policy behavior (i.e. alliance formation). By “contracting-out” a portion of the necessary security policy provisions, states/leaders can allocate resources more efficiently and effectively to meet those changing demands. The contracting explanation also provides a crucial reason for why states might engage in alliance formation in the absence of threats to their security despite realism’s implicit assumption that only security threats cause alliance behavior. This approach suggests peacetime alliances are a consequence of demands for greater social policy goods.

The implications of the contracting theory of alliance behavior illustrate the interdependence of domestic and international politics in shaping foreign policy behavior. The argument presented here is novel insofar as it provides a quantifiable domestic based mechanism for the cause of alliance behavior, domestic demands for social security goods, allowing an empirical analysis of a clearly defined domestic based theory of alliance behavior. Those implications suggest a set of hypotheses which can be examined using quantitative evidence. Hypotheses are presented below followed by an explanation of how those hypotheses will be systematically examined.

III. Hypotheses derived from the Contracting Theory of Alliance Formation

The main argument is policy efficiency demands inspire leaders with office-retention concerns to engage in more efficient security spending through alliance contract formation. In an effort to increase clarity about the mechanisms associated with the contracting explanation, I present Figure 1. [Figure 1 about here] Figure 1 presents a simple representation of the contracting argument as explained thus far. There are several assumptions worth mentioning before I continue 1) resources are limited so social security effort and national security effort (the

only two goods leaders choose between) must be less than or equal to 1 (i.e. $A + B \leq 1$); 2) a state's effort to supply these goods is nearly equal to their demand by citizens (i.e. effort approximates demand); and 3) all leaders will face a reselection in some future period so they must be concerned with changes in policy demand today. During the earlier period (t-1) a state chooses its level of social security (A) and national security (B) effort. In the current period (t), the state experiences a change in the demand for social security (ΔA) from its citizens given its current (and now sub-optimal) level of effort (A) requiring the leader to seek more efficient policy options to retain political office in the future. In other words, a "change in circumstances" inspires the leader to search for more efficient policies to meet the changed level of demand. This leads the states to select to form an alliance at the end of the period (F). In the future period, the formation of an alliance leads to the same level of national security as in previous periods (B) plus Z (resources freed from the alliance). Those resources are then reallocated towards A making A' (the new level of social security effort after the alliance is formed which accommodates the change in demand by citizens)^{xv}. The empirical model presented here is interested in capturing the process happening at time t which leads to the formation of an alliance though extensions of this model can attempt to explore whether F has the intended effect on A in the shadow of a possible re-selection. I include variables to capture A and B in the previous time period but the major focus here is on understanding changes in A and B as causal mechanisms affecting alliance behavior in the current time period (F). According to the simple representation above, there are two general sources of those efficiency demands: constituent demands for greater spending on social policy (ΔA); and threats to the political control of the leader or survival of the state requiring greater policy allocation towards national security (ΔB). My primary interest here is on identifying and understanding the former source of efficiency demands

(ΔA) since it has remained undeveloped in the alliance literature, though I will also include measures of the latter efficiency demand (ΔB) arising from the external environment.

The first implication of the contracting theory suggests social policies and security policies are linked expenditures for leaders. Thus, if budgets are limited (as assumed here) and states cannot form alliance contracts, then we should expect increases in social policy spending to lead to decreases in security policy spending and vice versa. However, the second implication is that those domestic politics (i.e. processes and spending policies) are also linked to interstate alliance behavior because leaders believe formed alliances to be efficient suggesting increases in the demand for either social or security policies (i.e. changes in circumstances) should increase the chances a pair of states forms an alliance contract.^{xvi} Those demands made upon governments require rational leaders wishing to retain political power to respond in some satisfactory fashion, most alternative responses to these demands involve a time-inconsistency problem since investment in further arms production does not materialize until the next period (Powell 1999) and, likewise, the reorganization of the domestic budget to free resources to spend on social goods is also likely to take time. Since resources and time are limited for leaders, alliances can be a relatively efficient method for managing those demands. A general inference drawn is that increases in the demand for social policies given earlier allocations toward social goods lead to increases in the need for security policy efficiency or the formation of an alliance contract. I lead with the most general inference because the simplest form of the argument suggests alliances can substitute for changes in security policy spending and, thus, satisfy the need for more allocation towards social policies.

H1: As the demand for social security policies within states increases, the likelihood of alliance formation should increase.

Alliance formation should occur as a consequence of demands within states for social security politics because rational and responsible leaders should respond to these changes in circumstances by seeking more efficient ways of supplying the same level of security to free resources to meet other needs.

The contracting explanation also suggests states have different needs for policy efficiency depending on the constraints imposed by the government's institutions. Leaders who are responsible to large MWCs with large loyalty norms must provide efficient and effective foreign policy to meet demands for both social and national security. In other words, it is more difficult for leaders experiencing higher levels of political competition to find an optimum balance between social security effort and national security effort to maintain the support of their MWC. Leaders responsible to larger numbers of individuals in order to retain office must provide public goods, which require greater resources (Bueno de Mesquita et al. 2003, 96). Thus, managing the distributional dilemma to ensure appropriate policy allocations is crucial for leaders in states with large loyalty norms facing more competition for political office. Since those leaders are constrained by the types of goods they must provide to ensure their political survival, leaders of states with large W/S ratios should be more likely to form alliances relative to less constrained states. Observed alliances increase security policy efficiency and reveal resources for allocation towards other policy demands (Morgan and Palmer 2003), thus alliances are a good policy tool for responsive and rational leaders facing resource allocation constraints.

H2: As the size of a state's loyalty norm, then it is more likely to form an alliance.

The hypotheses above suggest several endogenous or internal state-level explanations for foreign policy behavior. Other scholars positing endogenous explanations for foreign policy behavior include Bueno de Mesquita and colleagues (1999, 2003), David (1991) and Levy and Barnett

(1992). However, this explanation does not exclude exogenous explanations for behavior as well such as threats.

Finally, the contracting theory also asserts that demands for national security policies because of threats lead states to form alliance contracts. Threats should uniformly lead to increases in security policy allocation and, thus, alliance formation as it is a cost-effective way to increase security. This claim is consistent those of realists about the relationship between both power politics (Waltz 1979) and external threats (Walt 1987) with alliance behavior.

H3: As threat levels increase, then the likelihood of alliance formation increases.

I have just outlined three hypotheses to be systematically examined. The argument presented above suggests a description of the causal process of alliance formation however, this argument lacks an explanation of the barriers or disincentives to alliance formation. A problem arises because many of the common barriers to alliance formation are unobservable and non-measurable in an empirical sense (e.g. credibility of commitment, uncertainty about the future distribution of gains, beliefs about the reputation of the signatories, costs of trusting one's potential partner). Additionally, I assume that each state is equally likely to form an alliance in any given period, in other words, that a compatible partner exists for each state in each time period. Compatibility is an extremely important component of alliance behavior and I address it elsewhere as a crucial obstacle to forming alliances (Author, no date), however since the goal of the current research it to present and provide support for a general argument I will rely on a simple measure explained below to capture to some extent the barriers to alliance formation (i.e. military capacity). The next section details the evidence examined and the method of analysis used in finding support for the claims.

VI. Research Design

A. Measurement

Four basic elements require measurement to identify support for the most general version of the contracting theory of alliance formation. 1) A measure of alliance formation must be located. 2) A measure of social policy demand must be located. 3) I must find some measure(s) of threat. 4) A measure for the minimum winning coalition / selectorate ratio must be identified. First, I discuss how I measure each basic element of the theory and any issues associated with each measurement. Additionally, I discuss the control variable which will also be included in the analysis. Finally, I provide evidence in the form of a probit model suggesting both social policy demands and the presence of external threats increase the chances a state forms an alliance.

1. Alliance Formation – The Dependent Variable

Alliance formation is perhaps the simplest variable to measure because we can observe if two states signed a new alliance agreement in a given year (assuming it is not a secret commitment). The data used herein are part of the Alliance Treaty Obligations and Provisions (ATOP) project on alliance reliability being collected by Brett Ashley Leeds and co-authors (2000, 2002). These data were originally collected to improve upon alliance reliability data collected by Sabrosky (1980) based on the Correlates of War (COW) Alliance Dataset.^{xvii} I chose the ATOP data because they include a larger geographical domain than the COW data (based on v. 2.1, 1996 [Leeds et al. 2000]). Moreover, a substantial difference between ATOP and COW in terms of the number of alliances formed exists (Leeds et al. 2000; Leeds and Mattes 2005) and the ATOP data includes more specificity regarding the responsibilities of each signatory. These data are publicly available from 1816-2000. The

dependent variable is coded '1' if the state is a signatory to a new alliance agreement during a given year and 0, otherwise.^{xviii}

2. Social Policy Demand

A. Measuring social policy demand

Social policy demand is the most difficult concept to capture. A historical explanation for the development of the welfare state and review the major theories for the welfare state would be insightful; however, space considerations prevent me from pursuing such a review here.^{xix}

I assume (consistent with Powell 1999) leaders must provide both social policies and security policies to retain office. Additionally, leaders must provide some amount of social policies depending upon the size of their W/S ratio. Social policies, in this light, are any expenditure by the government meant to increase the welfare of constituents not related to military expenditures.

When examining social policy expenditures there are two crucial interrelated concepts to address: the relationship between social policy *supply* by the government and social policy *demand* by the constituents. Two problems are faced here: 1) supply does not have to equal demand (though they are likely to be highly correlated) and 2) we only have measures of social policy supply for a limited time domain. In other words, governments have only started voluntarily reporting social policy expenditures since the Second World War and the voluntary aspect of their reportage limits both their spatial and temporal availability. Most states facing demands associated with the distributional dilemma are likely to supply social policies nearly equivalent to the demands for those policies.

Since social policy expenditures themselves are available for a limited temporal domain and would require conversion from national currencies to an international standard, I am

better served by finding some measure of social policy demand that is highly correlated with supply and available for a longer temporal and wider spatial domain. Infant mortality rates provide a useful measure of social demand which can serve as a proxy for the government's supply of social policy goods as these rates are extremely responsive to government expenditures on social programs (Pampel Jr. and Pillai 1986; Riphenberg 1997; van der Berg 1998; Willie 1959). Geographers have noted infant mortality rates are sensitive to the extent to which individuals are socially disadvantaged and changes in national policies can help individuals overcome those issues (Peters and Larkin 1998). Conley and Springer have shown after accounting for country level effects that "public health spending does have a significant impact in lowering infant mortality rates, net of other factors, such as economic development...state spending affects infant mortality both through social mechanisms and through medical ones" (2001, 768) in an analysis of 19 countries from 1961 until 1991. In fact, those authors suggest infant mortality rates are sensitive over a short time frame to state investments in health and medical care (2001, 769) and "infant mortality is a generally accepted indicator of a nation's health and quality of life, particularly for the poorest members of society" (2001, 770). Infant mortality has been used by others as a quality of life measure (Esty et al. 1999; Urdal 2005) and captures the distributional aspect of government goods more closely than alternative measures such as GDP per capita. In other words, infant mortality rates can be used to reflect a government's respect for the welfare of its citizens (Abouharb and Kimball 2007). As infant mortality rates increase, it indicates a decrease in the government's respect for social welfare resulting in an increase constituent demand for social policy allocations.

There are several benefits of using infant mortality rates (IMR) to capture government respect for its citizen's welfare (Abouharb and Kimball 2007) (or, alternatively, the extent to

which there are internal demands for greater allocations toward butter). First, IMRs are collected by most states in regularly scheduled censuses though the intervals between censuses vary widely within and across states. Second, interest by the United Nations in measuring the ‘quality of life’ has led that organization to collect IMR data for all recognized states from 1950 onwards, suggesting those data will be more highly available than data on social policy expenditures for the same period. Finally, IMRs are naturally on the same metric, whereas actual social policy expenditures would be reported in national currencies and require conversion into a dollar equivalent, which may vary across years due to inflation. Here infant mortality rates are recorded as the number of deaths (by infants less than 12 months old) per 1,000 live births (excluding still births).^{xx} Therefore, the values for each country are directly comparable making interpretation easier.^{xxi} The reporting of IMRs in the 19th century was much more sporadic than in the 20th century thus, I report models for the time period of 1816 until 2000 as well as from 1900 until 2000.

B. Operationalizing social policy demand

The models reported herein utilize two variables created from the infant mortality rate. The first variable accounts for the level of infant mortality in a given year. States’ IMRs decrease as they allocate more budget resources towards social security policies and programs, thus lower IMRs suggest a state has allocated more resources toward social policies implying its budget is somewhat constrained (i.e. it would be difficult for this state to allocate more resources toward national security policies without sacrificing allocations toward social security policies). I expect as the infant mortality increases, alliance formation becomes more likely. This variable ranges from 2.4 to 355 and has a mean of 90 and standard deviation of 66.

A second variable accounts for changes in the annual infant mortality rate which the equivalent to increases in the demand for social policy goods. This variable is a dichotomous indicator which is equal to one if the state experienced a change in its infant mortality at least one standard deviation above the average change in infant mortality. Thus, this variable most closely captures what Morgan and Palmer (2003) call a “change in circumstances” as a causal mechanism to motivate alliance formation since this variable captures the effect of increases in infant mortality rates relative to the previous year. When states experience large changes in their infant mortality rate relative to the rate of the previous year, states need to provide more social security policy allocations to counteract those large changes. Thus, I expect significant increases in the infant mortality rate to be positively related to alliance formation since the demand for social policies will be higher the larger the deviation from expectations; this variable might alternatively be considered a measure of the deviation from a state’s expectations based on its previous effort level and, thus, measure the demand for social security policies. The dichotomous variable is calculated from the change in the IMR relative to the previous year which has a mean of -1.538 and a standard deviation of 12.8. Thus, I expect as demands for social policy increase, states should be more likely to form alliances (Hypothesis 1) as the cost of forming and maintaining alliances has decreased relative to the costs of inaction.

3. External Threats

There are many conceptions of threat leading to the problem of including only some imperfect cross-section of the types of threats leaders’ likely face. In this project, I explore several measures of external or exogenous threats. External threats comprise threats to the external security of the state. I classify external threats into two categories: direct security

threats and indirect security threats. Direct security threats comprise threats directly affecting the security of the state. The measure of direct security threats included in this analysis is the number of rivals for the state. This continuous variable ranges from 0 to 16 with a mean of .165 and a standard deviation of .668. As the number of rivals a state has rises, then the chances the state forms an alliance increase (Hypothesis 3). Indirect security threats comprise threats to states due to their surrounding environment. The measure of indirect security threats I utilize is from Zeev Maoz's work on Politically Relevant International Environments (PRIE) (1996, 1997). I include a variable accounting for the number of militarized interstate disputes (MIDs) in a state's PRIE not involving the state itself. This variable has a mean of 20, a standard deviation of 18.6 and a range from 0 to 165. As the number of MIDs in a state's PRIE increases, then the chances it forms an alliance increase (Hypothesis 3). Thus, I expect positive coefficients on both of my external threat measures.^{xxii}

4. Minimum Winning Coalition

The size of the MWC is the last explanatory measure used in these analyses. This measure has been used by Bueno de Mesquita and his colleagues (2003) in the multiple econometric models presented throughout their book.^{xxiii} They created a variety of measures to examine the selectorate theory and herein I use their measure of the W/S ratio ranging between '0' and '1.3' with higher scores representing states with more democratic features. The selectorate measure or S accounts for the extent to which legislative selection is limited or broad, it ranges between 0 and 1 with higher values indicating a popular selection method (2003, 134). W is a composite measure accounting for the extent to which political competition exists within a state and "polities that meet more of the criteria seem to us more likely to have a larger coalition than polities that meet fewer criteria, because the criteria

speak directly to the dependence on more or fewer people in gaining and holding political office” (2003, 135). While W is a measure of political competition, Bueno de Mesquita and his colleagues also suggest the loyalty norm or ratio of W to the size of the selectorate is also important. The W/S ratio is conceptualized as being the probability that each member of the selectorate has for being a successor in a future winning coalition (2003, 66). Small sized winning coalition to selectorate ratios induce risky behavior on the part of actors because challengers are less likely to need the support of any individual i to attain office. Thus, states with smaller loyalty norms are unlikely to be as responsive to domestic demands for social security policy since the support of fewer individuals is needed to retain office. In these models I include the size of W/S ratio, I expect as the W/S ratio increases there will be a positive relationship with the chances a state allies since as states become more democratic (i.e. their W/S ratio approaches 1) they are increasing judged on efficient policy performance to retain office and they should form alliances to free resources to meet domestic demands.

5. Control Variable

I include a control variable to account for a factor which may systematically affect the relationship between domestic demands and alliance behavior (i.e. to capture the potential disincentives to ally). I include a measure of military capabilities.^{xxiv} However, I do not hypothesize on capabilities, although power is undoubtedly an important facet of alliance behavior and I include it here to account for the disincentives to ally. The concept of power and its affect on alliance behavior has been explored more thoroughly elsewhere (Kimball 2006; Kim 1989; Levy 1981, 1983). In general, the expectation is that as a state becomes increasingly powerful it should be more likely to ally in order to protect its interests and the status quo.^{xxv} Thus, weaker states are constrained from allying since they are likely to have

minimal security materials to share with an ally and their weak capacity serves as a disincentive for allying. I expect as a state becomes more powerful, it should be more likely to ally.

B. Basic Analysis of the Contracting Theory of Alliance Formation

As mentioned above, the dependent variable is dichotomous in nature suggesting a probit model would be appropriate in this case.^{xxvi} This model estimates the probability an alliance is formed as a function of a series of explanatory and control variables. It should also be noted that the probit model assumes all observations have an equal ex ante probability of success, here forming an alliance, and as I mentioned earlier differences across states with respect to compatibility are an important limitation on the chances they ally which unfortunately cannot be addressed here. I also include Beck, Katz, and Tucker (1998) time splines to correct for temporal dependence among the observations. The units of analysis are state-years for varying time periods. Since I use infant mortality rates as the key measure of social policy demand, some concern exists over their limited availability before 1900 despite having over 75% of the possible observations for the entire time period. Thus, I also report models for only the 20th century where I have more than 90% of the possible observations for infant mortality rates. On Table 1 the time domain is 1816 until 2000 (version A) and 1900 until 2000 (version B), whereas the end of the time domain on Table 2 is constrained to 1995 due to the data on MIDs in the PRIE provided by Maoz. The first model reported on Table 1 is specified as follows:^{xxvii}

$$P(\text{Alliance Formation}) = \beta_1 \text{Level IMR}^{\text{xxviii}} + \beta_2 \text{W/S Ratio} + \beta_3 \text{Sum of Rivals}^{\text{xxix}} + \beta_5 \text{Capabilities} + \beta_7 \text{Alliance Years} + \beta_{8-10} \text{Time Splines} + \epsilon_i$$

[Insert Table 1 about here]

Table 1 provides results for the most basic models based on the contracting argument presented above. Each model specification is reported for the entire time period (version A) and for years after 1899 (version B). Results from Model 1 support the hypothetical claims as the level of domestic demands, measured by the state's level of infant mortality, increases then, the chances a state forms an alliance also increase. Additionally, a positive relationship is uncovered between loyalty norm and alliance formation because as states become increasingly democratic they are more likely to ally in order to increase policy efficiency and indirectly address domestic demands. Rivalries are positively associated with alliance formation behavior providing support for realist based models of alliance behavior. Results for the more constricted time domain (version B) are highly consistent with results reported for the entire time period though the magnitudes of the coefficients on the domestic variables are somewhat stronger. Results reported from Model 2 are again strongly consistent with those reported from Model 1. Of particular interest to the claims presented here is the effect of changes in domestic demands for social security goods, since this is the variable which most closely resembles the "change in circumstances" motivating states to choose to form an alliance rather than do nothing (Morgan and Palmer 2003). A log-likelihood test of these models suggests model 2 is the better model relative to model 1. The effect of changes in the infant mortality rate relative to expectations is positive as anticipated supporting hypothesis 1. More specifically, the marginal effect^{xxx} of an increase in the demand for social security policy goods is to increase the probability of alliance formation from chances of 3 in 100 to chances of 1 in 20 further underlining the important effects of social policy demands on alliance behavior.

[Insert Table 2 about here]

Table 2 presents results for models including the effect of indirect external security threats. These models are highly consistent with those reported in Table 1. MIDs in a state's

PRIE are negatively associated with alliance behavior contracting the expectation based on realpolitik motives for state behavior. While the number of observations reported in these models is somewhat lower than previous models, all other expected relationships hold across the models further supporting the claim that increases in domestic demands for social security expenditures are positively associated with alliance formation behavior even after accounting for the effects of threats to state security suggesting the trade-off between domestic and national security is an important challenge leaders face. It should also be noted that no relationship can be determined between military capacity and alliance formation in the more constrained time period (after 1900) across all of the models suggesting controlling for military capacity may not be the best manner to capture disincentives to ally.

[Insert Figure 2 about here]

Figure 2 plots predicted probabilities of alliance formation with all variables set at their means (or modes for dichotomous variables) based on Table 1 Model 2A as a state's number of rivals increase. For states with no rivals the chances of allying are about 2 in 100, while about 1 in 10 states are likely to ally when they have 16 rivals. These results suggest external threats remain an important element shaping alliance behavior.

[Insert Figure 3 about here]

Figure 3 compares the difference in predicted probabilities of alliance formation when there is an increase in the demand for social policies relative to the status quo across a state's number of rivals. When a state has no rivals and there is no demand for greater social policy goods, the chances it forms an alliance are about 2 in 100. However, the presence of demands for social security goods nearly doubles its chances of forming an alliance even in the absence of rivals, thus suggesting support for the claim that domestic demands can provide an explanation for alliance behavior in the absence of security threats as almost 1 in every 50 states which lack

rivals but experiences domestic demands will form an alliance. States experiencing both external threats with 16 rivals and domestic demands are far more likely to ally at rates of about 1 out of every 5 where as only 1 in 10 states without domestic demands but with high levels of external threat will ally. These results strongly support the claim that both endogenous and exogenous factors are crucial in shaping alliance behavior.

[Insert Figure 4 about here]

Figure 4 plots predicted probabilities of alliance formation across changes in the level of domestic demands. As the level of domestic demands increases states are more likely to ally. The chances for alliance range between about 2 in 100 to nearly 4 in 100 for states without increasing domestic demands. However, the effect of an increase in domestic demand for social policy spending is to change the probability of alliance formation from chances of 3 in 100 to chances of 6 in 100 suggesting at the highest levels of domestic demand about 3 in 50 states will form an alliance. This not only provides support for the first hypothesis presented in this paper but also suggest a crucial link between the pressures imposed on leaders by the welfare state and interstate behavior.

[Insert Figure 5 about here]

One way to evaluate model fit in general is to examine the successful predictions of the model. Figure 5 plots the Receiver Operating Characteristic (ROC) Curve for Model 2A from Table 1.^{xxxi} This curve plots the trade-off between sensitivity (i.e. the fraction of alliance formation observations (1's) correctly classified by the model) on the vertical axis and specificity (i.e. the fraction of non-alliance formation observations (0's) which are correctly classified) on the horizontal axis. The closer the curve is to the diagonal line which represents essentially random guesses (Clark and Reed 2005), the less accurate the model. The upper left quadrant of the graph indicates 100 percent of both the ones and zeros are correctly predicted. "Thus, the

farther above the diagonal line a curve drawn on the basis of an empirical model falls, the better is the model performance” (King and Zeng 2001, 641). The curve plotted for this model falls reasonably well above the diagonal line towards the upper left quadrant. The area under the curve represents the accuracy of the model where 1 represents a perfect model and .5 represents a worthless model. This model receives a score of .69 indicating it does a “fair” job at separating out cases of alliance formations versus non-alliance formations. In fact, the model classifies 96% of all cases correctly.

V. Conclusions

These analyses suggest changes in the domestic demand for butter and guns do affect interstate alliance behavior providing a domestic based explanation for alliance formation. Leaders facing the distributional dilemma will contract out security policies when they face changes in internal demands these changes are the clear causal mechanism motivating alliance behavior. Democratic leaders are particularly sensitive to this dilemma and are more likely to form alliances in the post WWII era regardless of changes in policy demand. Thus, this project also provides an important link between comparative studies of the effects of the welfare state and international relations by suggesting domestic distributional policies and demands can have important effects of interstate behavior. Moreover, external security threats have a significant influence on alliance behavior providing some support for realpolitik theories of state behavior. However, that important effects are uncovered for domestic factors clearly suggests realism is too limited in its expectations of what causes alliance behavior. Finally, the results here lend support to liberal based models of interstate behavior and, further, they contribute to our understanding the interactive and interdependent nature of domestic and international politics.

While this theory is tested within the alliance literature specifically, it is applicable well beyond traditional security institutions. Both economic and political institutions addressing security related issues are also consistent with the argument put forth herein suggesting interesting applications of a domestic politics based theory of cooperation outside of traditional security studies. Future extensions of this project also include relaxing the strict substitution assumption between military spending and alliance formation as other portions of this project have uncovered that states substitute towards alliances instead of increasing military spending under conditions of increasing internal demands. Additionally, I would like to examine if the type of alliance matters. Moreover, the analyses here assume all states have available partners with whom to ally, this is a strict assumption, and yet another part of this project relaxes that assumption and provides some interesting findings. Finally, I would like to further examine the relationship between power and alliance particularly with respect to how power shapes the availability of potential alliance partners.

In closing, this project has provided a domestic politics explanation for why states ally and tested it systematically across all countries from 1816 until 2000. This is one of the first systematic applications of the intuitions suggested by the distributional dilemma (Powell 1999) and the political survival model (Buono de Mesquita et al. 2003) to the study of international cooperation. This project advances our knowledge of alliance behavior by providing a rigorous and domestic based explanation for why states might engage in interstate alliance while accounting for traditional power politics factors as well suggesting a more comprehensive theory of alliance formation.

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Table 1: Probit Model Results of the Probability of Alliance Formation

	Hyp# (Direction)	Model 1A 1816-2000	Model 1B 1900-2000	Model 2A 1816-2000	Model 2B 1900- 2000
Infant Mortality Rate	H1 (+)	0.00102*** (2.40)	0.00108** (2.08)	0.00075** (1.69)	0.00080* (1.49)
Significant Increase in IMR	H1 (+)	---	---	0.2337*** (2.93)	0.2377*** (2.69)
W/S Ratio	H2 (+)	0.2106** (2.16)	0.2278** (2.17)	0.1981** (2.03)	0.2112** (2.01)
Number of Rivals	H3 (+)	0.0595** (1.78)	0.0617* (1.54)	0.0559* (1.64)	0.0587* (1.44)
Capabilities	NA	0.9196* (1.40)	0.4536 (0.51)	1.0145* (1.53)	0.5957 (0.67)
Constant	NA	1.4835*** (13.92)	-1.4584*** (12.42)	-1.5066*** (14.19)	1.4810*** (12.71)
Number of Observations		9,189	8,313	9,189	8,313
Log-likelihood		-1374.54	-1225.00	-1370.41	-1221.60
Chi-Square (df)		178.58*	156.85*	185.99*	162.53*
Pseudo R-Square		0.057	0.056	0.060	0.059

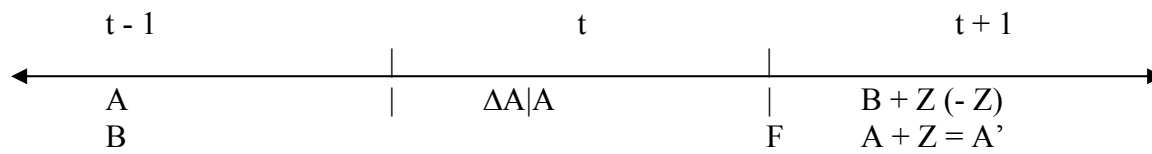
*p<.10, **p <.05, ***p<.01, two-tailed, robust standard errors, & z-score reported in parentheses.
Time splines and alliance years not reported, available upon request

Table 2: Probit Model Results of the Probability of Alliance Formation with MIDs in PRIE

	Hyp# (Direction)	Model 1A 1816-2000	Model 1B 1900-2000	Model 2A 1816-2000	Model 2B 1900- 2000
Infant Mortality Rate	H1 (+)	0.00073* (1.61)	0.00082* (1.52)	0.00048 (1.02)	0.00056 (1.01)
Significant Increase in IMR	H1 (+)	---	---	0.2164** (2.70)	0.2179*** (2.45)
W/S Ratio	H2 (+)	0.2087** (2.12)	0.2253** (2.12)	0.1974** (2.01)	0.2101** (1.98)
Number of Rivals	H3 (+)	0.0644** (1.90)	0.0662* (1.62)	0.0609** (1.77)	0.0633* (1.52)
Number of MIDs in PRIE	H3 (+)	-0.0023* (1.55)	-0.0025* (1.54)	-0.0023* (1.55)	-0.0025* (1.57)
Capabilities	NA	0.9790* (1.45)	0.6934 (0.72)	1.0723* (1.58)	0.8427 (0.88)
Constant	NA	-1.4004*** (12.04)	1.3741*** (10.85)	-1.4230* (12.26)	1.3951*** (11.07)
Number of Observations		8,456	7580	8456	7580
Log-likelihood		-1320.52	-1170.62	-1317.02	-1167.82
Chi-Square (df)		162.10*	141.07*	167.70*	145.21*
Pseudo R-Square		0.055	0.054	0.057	0.056

*p<.10, **p <.05, ***p<.01, two-tailed, robust standard errors, & z-score reported in parentheses.
Time splines and alliance years not reported, available upon request

Figure 1: Simple Presentation of the Contracting Explanation



Let

- A = Social Security Government Effort (or Citizen Demand for SS)
- B = National Security Government Effort (or Citizen Demand for NS)
- F = Formation of an Alliance Contract
- Z = Freed (e.g. excess) resources due to Alliance Formation

Figure 2: Predicted Probability of Alliance Formation

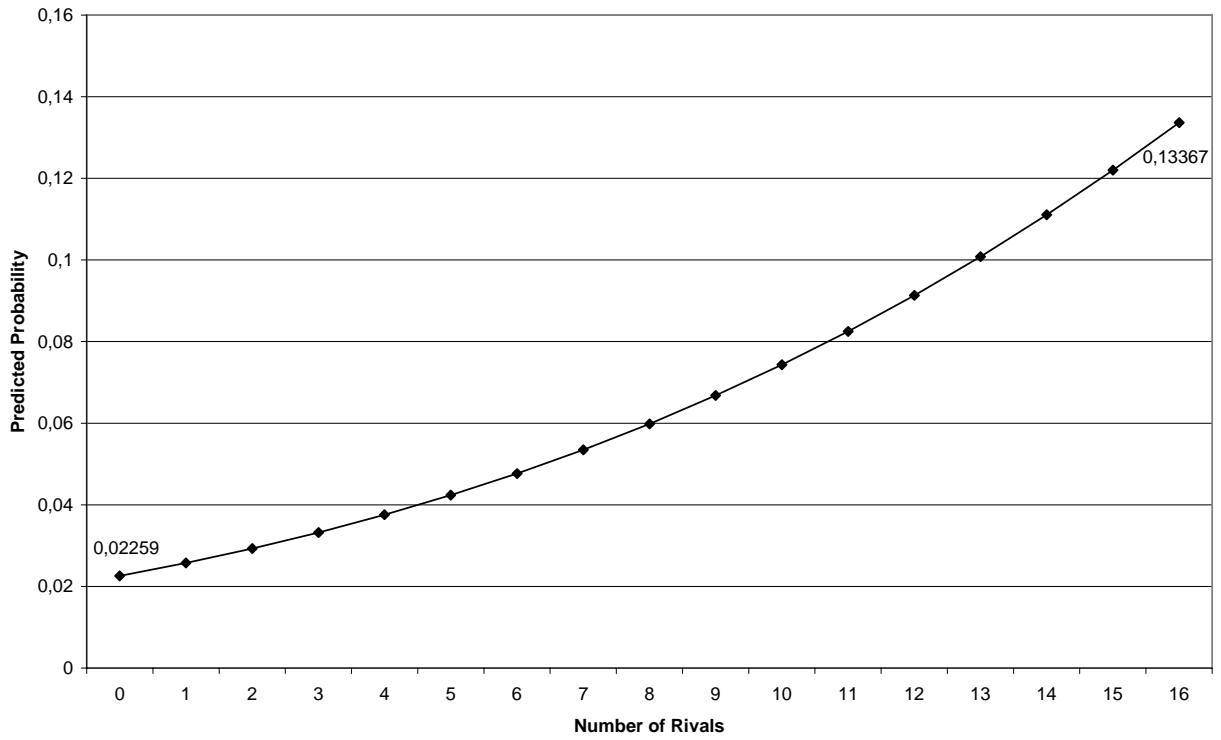


Figure 3: Probability of Alliance Formation Given Increased Demand for Social Policies Across the Number of Rivals

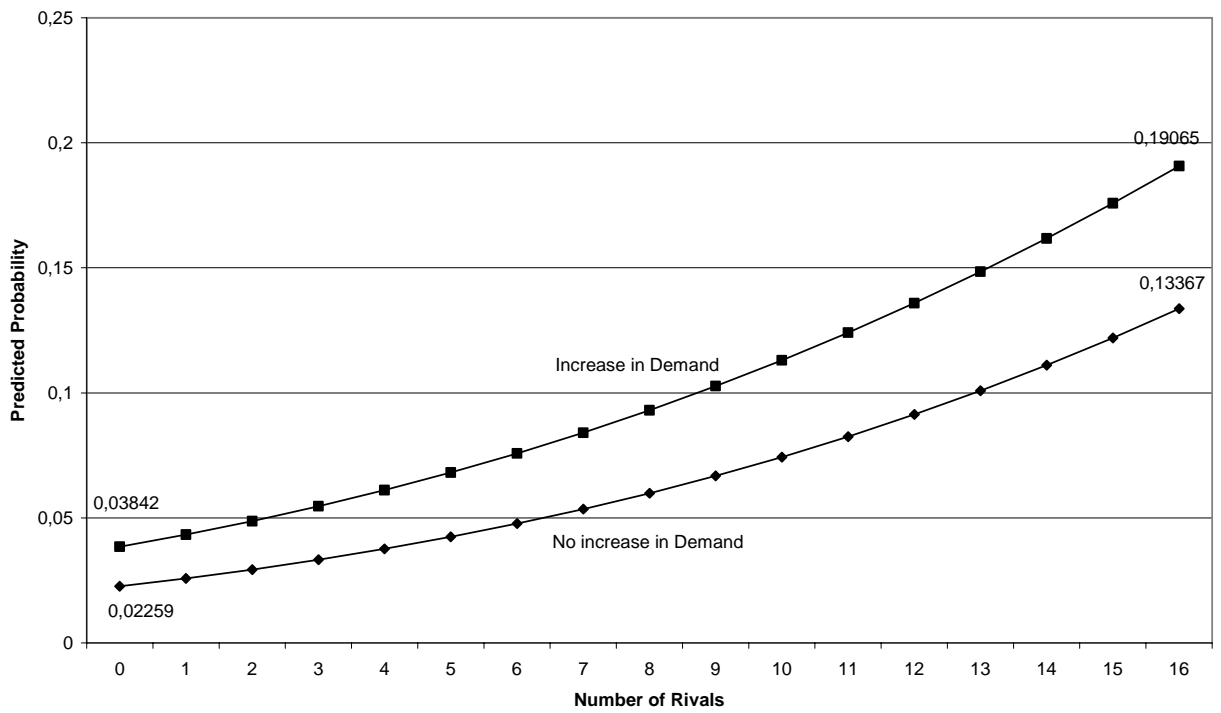


Figure 4: Predicted Probability of Alliance Formation by Increasing Demand for Social Policies Across IMR

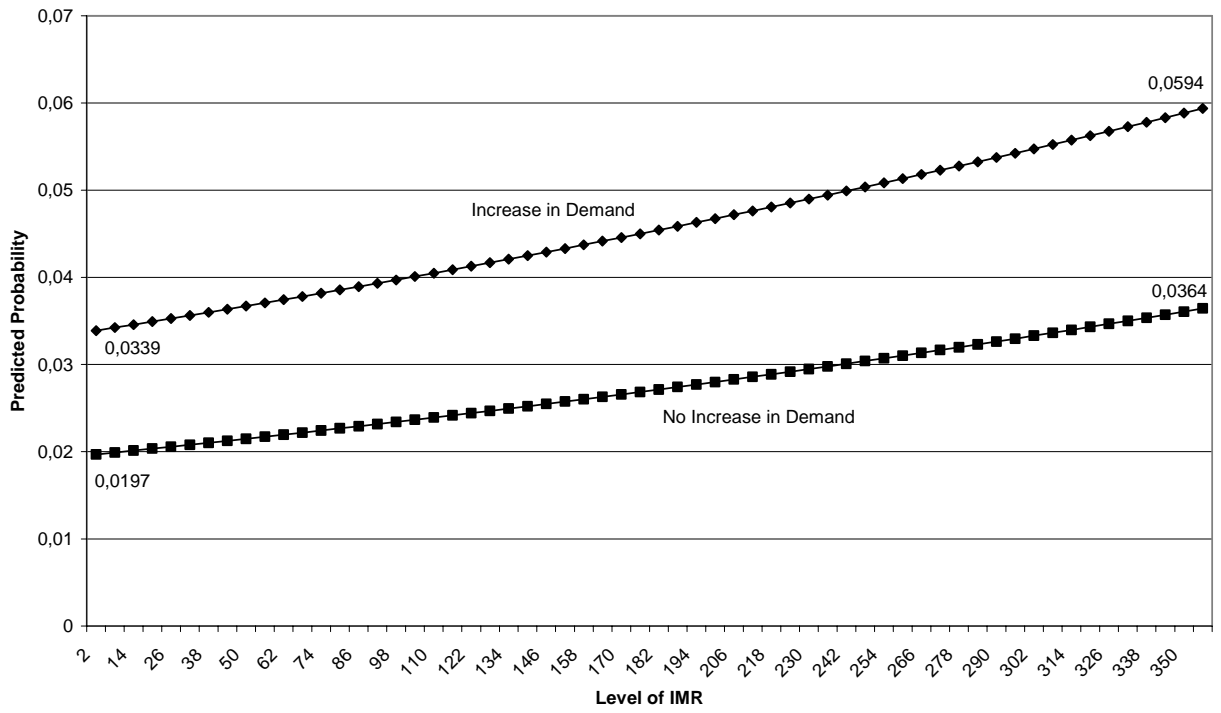
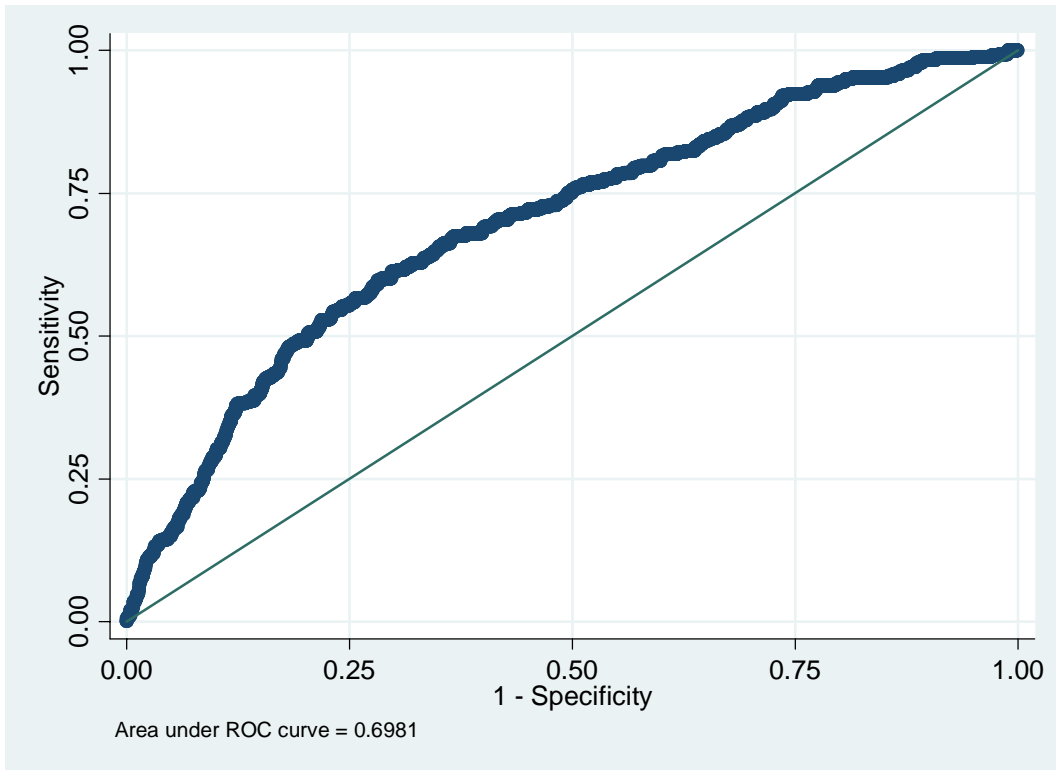


Figure 5: Receiver Operating Characteristic Curve for Model 2A, Table 1



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ⁱ Research informed by the realist perspective includes Walt (1987), David (1991), Christensen & Snyder (1990) and Sweeney & Fritz (2004). Research that broadly draws upon the liberal approach includes Simon & Gartzke (1996), Siverson & Emmons (1990), and Lai & Reiter (2000).

ⁱⁱ As a result of space limitations, the review provided here will naturally be incomplete and open to debate.

ⁱⁱⁱ Examples of alliances which can be characterized this way include: 1893 Austria-Hungary and Yugoslavia; 1901 Italy-Romania; 1924 France-Czechoslovakia; 1976 Gambia-Mali, each of those alliances were among states sharing one or no rivals and experienced numbers of MIDs in their relevant environment lower than the average (for more information see the section on Research Design).

^{iv} This is consistent with the claim that “leaders have only limited resources to allocate to different policy goals and to help keep them in office” (Bueno de Mesquita et al. 1999, 793).

^v By efficient policies, I mean specifically that leaders must provide policy allocations which simultaneously maximize domestic distribution and retain sufficient national security.

^{vi} In the paragraphs below in an effort to keep the argument simple I refer almost exclusively to the size of the MWC but the dynamics of the argument are identical with respect to the loyalty norm or the W/S ratio.

^{vii} It is important to note that there are differences over what the meaning is of goods or policies. For the purposes of this project, goods/policies are items provided by the government/executive to the MWC to retain power. National security policies encompass any policy goods related to increasing the security of the state. Social security policies are designed to satisfy the needs of the broader population and are of greater consequence to the extent the MWC is large.

^{viii} However, that small MWC leaders do not have equal demands for efficiency (since private goods require fewer resources) does not suggest those leaders are entirely unreactive to the demands of their MWC.

^{ix} Though these authors are referring to how democratic leaders will allocate resources during a conflict, there is reason to believe these same constraints operate constantly, even in the absence of war, as democratic leaders almost always face the pressures and uncertainty of reselection.

^x Their argument is discussed in more detail in Palmer and Morgan (2006).

^{xi} Most of the emphasis in this paper is placed on social security demands as a causal mechanism to explain alliance formation since this represents a divergence from previous arguments.

^{xii} The classic description of the guns-butter trade-off assumes the policy goods are strict substitutes for one another (Powell 1999)—here I take an analogous approach. Relaxing that assumption is an area for future research.

^{xiii} Also leaders might increase their budgets through foreign aid or deficit spending. However, the implications of those activities will not be explored in this paper since engaging in either of those actions is likely to be politically unpopular. Relaxing the limited budget assumption is an area for future research in this project.

^{xiv} States engage in alliance formation in response to demands, rather than engaging in domestic policy allocation redistribution, because leaders can more easily and efficiently free resources

through alignment in a timely manner than the reorganization existing resource allocations (i.e. by sacrificing resources towards one policy to increase allocations to the other policy good).

^{xv} Other qualities that must hold given the relationship described above include $\Delta A = A + Z$ and $A+B+Z \leq 1$ since Z is a subpart of B .

^{xvi} Results about the exact nature of the relationship between arms and alliances are far from unified and comprise another portion of this research program. Here I take my point of departure from the formal work of Palmer and Morgan (2006) who suggest that alliances must increase the efficiency of security policies or those alliances would not be formed. Relatedly, an anonymous reviewer suggested that the costs of trusting a state's partner are also an important calculation. Recent empirical research has suggested most alliances are reliable suggesting the unreliable alliances would never be formed (Leeds et al. 2002) thus the costs of trust appear unobservably in the alliance formation calculation of leaders. In this portion of the project, I also assume alliances are equally available to all states, an assumption I have relaxed in other research (Author, no date).

^{xvii} The COW alliance dataset, originally compiled by Singer and Small from 1816-1960s (1966; 1968) and further updated through 2000 by Gibler and Sarkees (2003), is the best known alternative to the ATOP data. Though the temporal domain of COW dataset is extensive, there is evidence it under-reports alliances formed outside of the Western world. Furthermore, the coding of the obligations is symmetric, meaning the alliance is coded as one of the following: defensive; neutrality/non-aggression; or entente. This coding may be too simplistic as I continue to refine this project, thus I chose to use the alternative data set available on alliance formation.

^{xviii} This variable only accounts for new alliances, so all other years the alliance is in effect are coded as 0.

^{xix} For a complete description of the relationship between the welfare state and military concerns in early 20th century in Lloyd George's United Kingdom see Wrigley (1976) and for a comparison with its precursor Bismarck's Germany see Ritter (1986). Information and theoretical explanations of the welfare state can be found in Korpi (1983), Baldwin (1991), Keech (1995) and Swank (2003).

^{xx} The annual infant mortality rate data for all countries in the world used in this project were collected by Abouharb and Kimball (2007). More information can be found in the Research Note (Abouharb and Kimball 2007), Codebook and Web Appendix accompanying that project.

^{xxi} Despite the benefits of using infant mortality rates to proxy demand for social policies several caveats should be noted (for more details see Abouharb and Kimball 2007). First, governments might strategically underreport infant mortality rates in an effort to conceal poor social policy allocations suggesting the governments themselves engage in behavior leading the reported rate to be less than the actual rate. However, one can identify the characteristics of states making them more likely to engage in strategic underreporting as they are more likely to be autocratic, or "closed", systems that are underdeveloped or engaged in intra or inter state conflict. Relatedly, as infant mortality data is collected via national census births outside of hospitals or among minority groups are *less* likely to be reported despite the fact that those infants are much more susceptible to experiencing mortality in the first year. Nonetheless, I do believe the mortality rates collected closely reflect the actual mortality rates within states.

^{xxii} The PRIE data is only available from 1816 until 1995, I report separate models using these data on Table 2.

^{xxiii} The authors discuss their institutional measures consistent with the selectorate theory in their book (2003, 134-135).

^{xxiv} These data come from the Composite Index of National Capabilities (Singer et al. 1972) and are generated from EuGene (Bennett and Stam 2000).

^{xxv} The relationship between power and alliance commitments is explored in a more rigorous manner than space permits here in author (n.d.).

^{xxvi} Greene (2003, 666) provides the econometric specification for the probit model.

^{xxvii} This model is implemented in STATA 8.0. Coefficient estimates for the Alliance Year count variable and the time splines are not reported in the tables to save space; they are available from the author upon request.

^{xxviii} In a second model on each table, I include a variable accounting for the changes in the current IMR relative to the previous year.

^{xxix} In table 2 I include additional external threat variables to account for the sum of the MIDs in a state's PRIE.

^{xxx} Marginal effects were calculated using the "mfx" command in Stata after the probit model estimated for model 2A.

^{xxxi} This is implemented using the "lroc" command in Stata and can be implemented after a probit model. ROC curves have been used by others in political science applications, see King and Zeng (2001) for a discussion and interpretation for ROC curves as well as Clark and Reed (2005) for a recent application.