# Research Statement

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My research interests lie in the domestic political influences on international cooperation and conflict, such as military alliances or wars. I am also interested in how international politics influences domestic political outcomes such as leaders' behaviors and regime changes. In addition, I seek to apply the insights and methodologies of the study of international politics to intrastate events such as civil wars. In particular, my dissertation investigates game theoretically and empirically the propensity to form asymmetric (or symmetric) alliances and how their formation depends on state characteristics. Using subgame perfect Nash equilibria and comparative statics produces the following new results regarding alliance formation. I distinguish between states that are targets of threats and states that are prospective defenders. First, if the target states are more autocratic, it becomes easier to accept an alliance. On the contrary, if target states are more democratic, it becomes harder for them to accept an alliance. Second, if the defender states are more democratic, it becomes easier to offer the alliance, while for more autocratic defender states, it is more difficult to offer the alliance. Third, alliances between a strong autocracy (the defender) and a weak democracy (the target) are least likely. My third essay tests the hypotheses in the first essay using the alternative measurements developed in the second essay. Existing studies on alliance formation tend to focus only on power or only on democratic pairs, while the effects of regime type on alliance formation has been less thoroughly investigated. My research thus makes the following contributions to the study of alliance formation.

First, my research explores the mechanisms that link regime type to alliance formation. Leaders' optimal responses to alliance formation differ across regime types. Through game theoretic models and comparative statics, my research identifies the incentive structures that shape leaders' choices to engage in alliance formation for each regime type. In doing so, I create the foundations for establishing an eventual "causal link" that is typically overlooked in the study of alliance formation.

Second, my research contributes to a better understanding of the different patterns in alliance formation patterns across the various regime type pairs. Existing studies typically focus on the question of whether or not democratic pairs stand out in alliance formation. Conventionally, those studies do not identify defenders and targets in alliance dyads, implicitly assuming that all states are targets of threats. I argue, however, that identifying defenders and targets is important because leaders under those conditions have different motivations to join alliances. Thus, in contrast to existing literature that focuses on which combination of regime types is most likely to form an alliance, my research – based on the distinction between defenders and targets – sheds light on how all possible regime type pairs differ, and why certain pairs may be indeterminate in frequency.

Third, in the course of testing hypotheses, my research has indicated that the existing foreign policy similarity measures have theoretical and/or operational interpretation problems. Foreign policy similarity measures have to be defined rigorously based on precise scientific concepts, because there is no gold standard to assess the exactness of the measurements. Furthermore, the operational interpretations must be guaranteed for comparability. My research proposes an alternative measurement scheme that overcomes common theoretical problems and provides a solid operational interpretation. The alternative measurement, furthermore, successfully approximates existing measures such as to reveal the key differences between those existing

measures and to provide the possible approximate interpretation of the existing measures. The alternative measures are expected to support most of the core results of previous studies that have used the old measures. In addition, due to the concrete scientific concepts and operational interpretation of this new alternative measure, it becomes easy to judge the relationships between the measurement and the other variables; specifically whether they are confounding, intervening or independent in a statistical model. By doing so, my research contributes to more rigorous scientific research in international politics.

# Alliance formation and domestic politics

Why do states form alliances? A massive literature attempts to provide an answer to this question, with a review of the literature suggesting two general trends. First, some scholars focus on power aggregation and assert that states form alliances to cope with an external or common threat. This type of alliance is referred to as "capability aggregation alliance", which is usually formed among major powers as weak states are not able to make significant contributions to an alliance in terms of power. These alliances tend to be temporal because they dissolve when the treat disappears. In this case, forming an alliance also works as a signal to the threat that allied states will fight against the threat together. Aggressive behavior by the threatening state can sometimes be deterred by the signal. Other scholars focus on the trade-off between autonomy and security in the status quo.¹ They argue that states form an alliance not only to cope with a threat but also to increase their autonomy. If a potential defender can receive some policy concessions from a potential ally in exchange for providing security to the potential ally, then forming an alliance may be beneficial.

This approach acknowledges an alliance between a stronger and a weaker state as well as one among states of the same power level. The asymmetries in power and motivations make an alliance more durable than the capability aggregation alliance. However, most existing studies on alliance formation have focused only on the power of each state; domestic political pressures in the potential allied states are not often considered.

Meanwhile, other studies have tried to see whether democracies tend to form alliances with each other more than all other combinations of regime types. Although some studies have addressed alliance formation or behavior within democracies, no study has presented a complete mechanism that explains alliance formation within and across different regime types. Empirical results are also inconclusive. My dissertation thus attempts to incorporate domestic political concerns into the alliance formation process related to policy concessions, in order to address this gap in the existing literature. By presenting a game theoretic model and empirical tests, this study systemically analyzes the incentives that states' leaders face depending on the regime type and the roles in alliance. In this regard, the research contributes to a more nuanced and systemic understanding of alliance formation.

The first essay in my dissertation presents a three-player extensive game model with complete information that incorporates domestic political concerns into the alliance formation process regarding policy concessions. To enter into the alliance, the target has to make a policy concession to the defender (D). If the target rejects the deal, she has to choose whether to buy weapons or do nothing to increase her military capabilities. Depending on the target (T)'s

<sup>&</sup>lt;sup>1</sup> James D. Morrow.1991. "Alliance and Asymmetry: An alternative to the capability aggregation model of alliances", *American Journal of Political Science*, pp.904-933

decision, the challenger (C) chooses to make or not make a demand to the target with a threat. If the challenger decides not to make a demand, then the status quo prevails. If the challenger makes a demand, war occurs depending on the target's response. After the international results have been revealed, political competition occurs within the target state and the defending state. Hence, the model not only endogenizes the external threat and policy concessions, but also addresses the effects of political competition on the alliance formation. Using subgame perfect Nash equilibria and comparative statics produces the following results. First, if the target states are more autocratic, it becomes easier to accept the alliance. On the contrary, if target states are more democratic, it becomes harder for them to accept the alliance. Second, if the defender states are more democratic, it becomes easier to offer the alliance, while for more autocratic defender states, it is more difficult to offer the alliance. Third, alliances between a strong autocracy (the defender) and a weak democracy (the target) are least likely.

The second essay in my dissertation addresses the foreign policy similarity measures. In particular, I reviewed the theoretical grounds and operational interpretations of the S-score, tau-b, Cohen's  $\kappa$  and Scott's  $\pi$  and found that all of the measurements have significant limitations. This dissertation also identifies some limitations of UN vote data in analyzing high politics issues. To resolve these issues and provide a more rigorous estimator using alliance portfolios, this study introduces an alternative measurement that approximates both the S-score and tau-b. Based on this alternative metric, the tau-like and S-like measurements are reinterpreted and their application is discussed. In doing so, the paper provides a better understanding of the two measurements and the relationships between them and other variables in empirical research designs, leading to a stronger foundation for the statistical models used in the study of international relations. For empirical applications of the measures, three practical issues of alliance similarity measures are discussed: the reasons why alliance similarity should be included in statistical models for alliance formation, how to adjust national capabilities considering the alliance effects, and alliance similarities in a k-adic research design. As an empirical example, I replicate Leeds (2003).

The third essay of my dissertation represents an empirical test of the hypotheses derived in the first essay. Of course, the new measurements proposed in the second essay are used. According to the model in the first essay, the motivation for forming an alliance is a challenge made by a challenger. That is, a challenge is a necessary condition for an alliance formation. Therefore, challenges constitute a logical basis for gathering data on whether or not to form an alliance. Among various types of challenges, I focus on territorial disputes, for several reasons. First, territorial disputes are one of the most important and frequent challenges. Second, territorial disputes can be evaluated with well-developed datasets such as iCOW. Third, territorial disputes, despite being only one of the policy issues that may prompt an alliance formation, constitute one of the most important policy issues for examining "theoretical relationships in critical cases and specific contexts". The accumulation of critical cases and specific contexts is important not only because those accumulated empirical results increase the reliability of a theory but also because there may not be the "Holy Grail" of a model that can be applied to every incident of alliance formation.<sup>2</sup>

I matched potential alliances with territorial dispute dyads' target states for the year of and the year after the disputes.<sup>3</sup> Defenders, however, are limited to the states that are more powerful than

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<sup>&</sup>lt;sup>2</sup> Kelly M. Kadera and Sara McLaughlin Mitchell. 2005. "Manna From Heaven or Forbidden Fruit? The (Ab) Use of Control Variables in Research on International Conflict.", *Conflict Management and Peace Science* vol.22. pp.274-275 <sup>3</sup> This is similar to the research design of Johnson (2017), except that I include the year after the disputes data and exclude powerful targets.

the targets. First, basically, alliances with policy concessions are based on Security-Autonomy Trade-off theory. A powerful target may not need to sacrifice her autonomy for security. Second, although a powerful target might need some (usually limited) help from a weak defender, an alliance is also very costly for the target as it may entail entrapments, future commitments and audience costs. The powerful target may also have other much cheaper policy options to buy or induce help from the weak defender, such as foreign aid. Third, allowing a weak defender can make it easy to commit a lazy induction. For example, in case of the US-Korea alliance, the alliance was made due to the territorial challenge made by North Korea in 1953. However, the US had seven cases of territorial disputes in 1953. Thus, if we allow for a weak defender, not only is the US coded as the defender of South Korea, but South Korea is also coded as the defender of the US. Even though those territorial disputes are collapsed into one, the US-Korea alliance was clearly not formed because of the US's territorial disputes in 1953. The data for these empirical tests contains 104,909 observations.

In the results, as a target of a threat, democratic regimes tend to be harder to convince to join an alliance than are autocratic regimes. Conversely, democracies that act as prospective defenders of the target are more likely to offer an alliance than are autocratic defenders. In general, whereas studies typically focus on which regime type pairs most frequently lead to alliances, this research suggests that there is no clear answer to that question. Instead, the results indicate that – among the various regime type pairs, a select few are notably *less likely* to form alliances. In particular, alliances between strong autocratic defenders and weaker democratic targets are unlikely to form.

# **Working Papers**

# (1) The Decision to Arm: Domestic Political Concerns and Armament

While my dissertation focuses primarily on alliance formation, the decision to ally is not an isolated one. Instead, leaders who choose to ally do so over other alternatives such as armament. In this context, Chapter 1 of my dissertation examines alliance formation in relation to buying weapons or doing nothing. According to the analysis, the decision to arm is also shaped by domestic politics. Leaders of different regime types have different incentive structures. If the benefits of arming, in particular the increase in the state's own military capabilities, outweigh the advantages of allying, democratic targets will be more likely to buy weapons, whereas autocratic targets are less likely to choose to arm if forming an alliance is feasible. The analysis also shows, moreover, that even if forming an alliance is better than arming, democracies will sometimes still prefer to buy weapons. Autocracies, on the other hand, are more likely to choose alliances, regardless of the potential advantages that buying arms may provide.

# (2) Armament, Alignment and Alliance in Anticipation of Potential Conflict: The Impact of Domestic Politics in Extended Deterrence (With Alastair Smith)

We propose an incomplete information model of extended deterrence in which nation A can attack nation B. If attacked, B decides whether to resist and then nation C decides whether to intervene. Nations B and C have several options to enhance their fighting capability and potentially deter nation A. For instance, nation B can invest in additional weapons, an option that

is more attractive to democratic targets than autocratic ones. Alternatively, B can shift its policy position to align with C's policy goals. Such policy alignments increase the chances that C will intervene on B's behalf, but this approach to building security is relatively unattractive when B has inclusive political institutions, such as democracy. Nation C can deter A from attacking by forming an alliance with B, an option that is relatively popular for powerful democratic nations.

### (3) Improving Dichotomous Foreign Policy Similarity.

One of the advantages of a dichotomous measure is its tractability. To improve dichotomous foreign policy similarity measurements, it is important to deal with non-allied states. As Signorino and Ritter (1999) pointed out, there are three possible instances in the "no alliance" category: no alliance because of hostility, because of irrelevancy to each other's security, and because of an implicit alignment. For non-allied states who perceive each other as irrelevant to their own security, we can take advantage of statistical reasoning. Without any additional information, considering the high costs that states face in entering into an alliance and the huge number of dyads, we may assume that a prior probability of interest congruence in foreign policy with a non-allied state is 1/2 before a security threat or a war-prone situation emerges. Thus, in times of peace, we should assign non-allied states a baseline probability of 1/2 both on capabilityweighted and unweighted alliance portfolios. More importantly, another set of cases exists for which we can determine whether non-allied states represent hostility or implicit alignment: combatant states in disputes/wars. If we wish to gauge the foreign policy similarity of two nonallied states and they fight together in combat with a coalition or third state, we can consider those two states as "allied" states. On the other hand, if non-allied states fight against a state with a similar foreign policy measurement, the non-allied states would be considered "non-allied" with that state in the coding scheme, because of hostility. Thus, we can code "states fighting together" as "allied" and "states fighting against" as "non-allied" with a probability of 1.

#### (4) Leader Specific Punishment – Evaluating Domestic Political Concerns

I extend McGillvray and Smith (2000)'s model to incorporate domestic political concerns. In the original paper, the agents' accountabilities depend on the impatience and the costs of replacement. The payoffs are all public goods. In this paper, however, the agents' accountabilities depend primarily on the regime type. And the payoffs consist of both public goods and private goods. In particular, the extended model specifies which strategy we should employ to induce the cooperation of a non-democratic state. That is, instead of the public goods aspect of punishment, we have to focus on the punishment of private goods in the non-democratic target country. Since public goods are all the same inside and outside the winning coalition of smaller  $W_i$  states, for the punishment to be effective, punishing private goods provisions is far more effective. On the other hand, in a large winning coalition system, democracy, it is more efficient for a state to punish the public goods aspect. Hence, in developing an agreement, the contents must differ depending on what kind of regime type the partner state has. If it is a democratic state, the contract should focus on the public goods of the partner state. Then, if the partner state defects, the audience in that state, which is a large winning coalition, will react promptly. If, conversely, the partner state is autocratic, the contract should focus on the private goods aspect of the partner. Then, if the leader of the partner defects, it immediately affects the private goods provision of the state, and the smaller winning coalition will react in a desirable direction. Note that this model does not need

the condition that "if both agents are accountable" in terms of public goods provision for the agent specific grim trigger (ASGT) strategy to be a subgame perfect Nash equilibrium.

#### **Future Research**

#### (1) Selectorate economic sanctions.

I will propose a model of selectorate economic sanctions. A few studies have applied Selectorate theory to economic sanctions, but they do not present a formal model and have some issues in testing the hypotheses, largely because they focus on comprehensive sanctions. The Selectorate sanction theory is basically a theory of targeted sanction (smart sanctions) because according to the Selectorate theory, economic sanctions will be effective only if they are aimed at the winning coalition members' welfare. Smart sanctions have been applied to target states and non-state actors such as terrorist organizations by the UN since the mid-1990s. However, little in the way of theoretical foundations have been developed for the empirical evaluations of the effectiveness of targeted sanctions. As noted, the selectorate sanctions theory suggests that for economic sanctions to be effective, they must aim at the welfare of the winning coalitions of the targeted states. Thus, for autocratic regimes, sanctions must aim at the private goods of the small winning coalition or at the leaders' private resources used to reward their small winning coalition members, whereas for democratic targets, sanctions must be made against public goods as this will directly affect the large coalition members' (or voters') welfare.

Therefore, per Selectorate theory, true regime effects can be evaluated if we consider the winning coalitions, not just the nominal regime types. Sanction effects differ between targeted sanctions and comprehensive sanctions depending on the regime type: targeted sanctions are more effective against autocracies and comprehensive sanctions are more effective against democracies. For a targeted sanction to be effective, in addition, it must decrease the prospects of political survival for the leaders of the target state. To do that, the sanction must decrease the rewards that the incumbents can provide to their winning coalition to a point far lower than the rewards that the new leaders can provide after the sanction ends. If so, the leaders of target states will surrender before the actual sanctions are implemented. This is consistent with Smith (1995). Therefore, the more the effective the sanctions, the less likely that implemented sanctions will be successful. This explains why targeted (actually implemented) sanctions have not been so successful and in some cases have even led to worse outcomes.<sup>5</sup> Because of the selection effect, to assess the success of economic sanctions, we have to consider both the threat to sanction as well as the actually implemented sanctions. Therefore, I will use the Threat and Imposition of Sanctions (TIES) data 4.0 (Clifton, Bapat, and Kobayashi 2014) and the Targeted Sanctions Consortium dataset (TSC), instead of the widely used Hufbauer, Schott, and Elliott (HSE) dataset.

# (2) Keeping alliances: the guns vs butter tradeoff

<sup>4</sup> Alastair Smith. 1995. "The Success and Use of Economic Sanctions". *International Interactions*. Vol.21, No.3, np 229-245

<sup>&</sup>lt;sup>5</sup>Daniel W. Drezner. 2011. "Sanctions Sometimes Smart: Targeted Sanctions in Theory and Practice", *International Studies Review*. Vol.13. pp.96-108

As in my dissertation, alliances are formed because there are military (security) and policy (autonomy) gains from the alliance. Once those gains are embedded in domestic political resource distributions, the leaders of alliances can consistently save resources for their own good as long as they maintain the alliances. In particular, if an alliance is terminated, a defender has to pay the costs of the policies that the alliance target previously paid by concessions under the ex-alliance. A target, on the other hand, has to make up the decreased military capabilities due to the disappearance of the defender or risk being exposed to potential threats (if power decreases, security decreases). Usually, there is a division of labor in force structures under an alliance, so a target may have developed an asymmetric force structure that is balanced by the defender. Therefore, even though the target may not need to increase her military capabilities, she may need to spend a considerable amount of resources to fill in the gap in force structure after the termination of the alliance. Furthermore, considering synergy effects of the alliance, the cost to make up the vacancy of the defender can even be higher. Therefore, an alliance termination may decrease the leaders' discretionary resources – for both defenders and targets – that previously had been used for their own political survival, which is ultimately disadvantageous for their ongoing political survival.

In case of democratic defenders, if they terminate alliances, they have to pay the policy costs that were previously taken up by targets as well as reputational costs. Since autocratic defenders, on the other hand, are less sensitive to public goods related policy issues, they have less incentive to maintain alliances compared to democratic defenders, holding other factors constant. Democratic targets must weigh the military costs due to the disappearance of a defender against the savings due to discontinuing the policy concessions if they terminate an alliance. If the savings are greater than the costs, they have an incentive to terminate the alliance. To autocratic targets, on the other hand, the savings from stopping policy concessions may not be large because from the beginning, they would have been less concerned about the policy issues that did not pay much for them. Therefore, relative to their democratic counterparts, autocratic targets tend to be influenced more by the military costs if they terminate an alliance, and they have less incentive to terminate the alliances compared to democratic targets. In general, holding other factors constant, the alliance durability of democratic dyads depends more on the relative size of democratic targets' savings from policy gains to military costs caused by the military void due to an alliance termination. The relative size, however, depends on each target's policy issue salience such that the durability can be either longer or shorter than other pairs of regime types. In the mean time, autocratic defenders and democratic targets are most likely to terminate alliances if the threat is gone.

#### (3) Civil war and selectorate theory

The selecotorate theory is a theory that connects domestic politics to international politics. Its core insights, however, can also be carried over to the study of intrastate war. Unlike the states as actors that selectorate theory typically addresses, civil wars can happen within states that are still in the course of institutionalizing the loyalty norms (W/S) or after the existing institutions collapse. To apply selectorate theory to civil wars, we should consider the difference between institutionalized regimes and uninstitutionalized regimes.

If governments have dominant force, it is difficult for civil wars to occur; this is why civil wars typically occur in not-fully-institutionalized or collapsed states. The abrupt change in balance of power between governments and rebel groups can be achieved through the collapse of the central government, power vacancies when the former dominant nation retires due to colonial

independence, foreign government support for anti-government forces, and acquisitions of new resources.

When domestic political arrangements are not fully institutionalized, the affinity of the winning coalition members cannot be taken as the same and, essentially, some winning coalition members may be leaders of their own regions within a state with military forces. In those regions, the leaders may also have their own winning coalitions to remain as leaders. According to selectorate theory, to expel an incumbent leader, at least one winning coalition member has to be obtained by a challenger. To survive, the incumbent has to provide the rewards that equal or surpass the expected rewards that the challenger is expected to provide. If we apply the framework of selectorate theory to civil wars, civil wars can be understood as the process of trying to obtain the national or the challenger's regional resources exclusively, and to redefine and purge the selectorate and the winning coalition by instigating and mobilizing people using ethnicity, religion and/or ideology.

Redefining and purging the selectorate and the winning coalition have two effects. First, it affects the loyalty norm, or the probability that the current winning coalition members will be included in the new regime. By making it clear who will be purged through the redefining selectorate, the challenger may be able to induce the betrayal of some of the current winning coalition members including the leader herself. Second, it affects the size of rewards that the winning coalition members will receive. By reducing the selectorate size and the winning coalition size, the challenger can increase the expected size of rewards for winning coalition members, which also contributes to seducing some of the current winning coalition members. Redefining and purging the selectorate and the winning coalition may appear in the form of genocide or politicide.

Whatever it is, if political leaders can mobilize people and redefine the selectorate and the winning coalition, this can be an excuse for civil wars. Representative examples for excuses for such mobilization tend to be ideological and identity-based, because they are the most accessible and appealing pretexts. In other words, ethnicity, religion, and ideology can send a signal of the expected reward to some of the current and potential winning coalition members by informing them how the selectorate and winning coalitions will be redefined in the new regime. The decline of civil war from 1995 may not be due to international arbitrations or pressures, but rather to the settlement of national or local level loyalty norms through purges and redefinition.

In this context, a civil war has a considerably higher mortality and duration than a general international war, in that it seeks to "replace the leader" with a challenger. This occurs because, following the redefinition of the selectorate, it is necessary to kill or expel people who do not fit the redefined selectorate, and often to "replace the leader", which result in the strongest motivations both to the incumbent and the challenger. Therefore, we might need data on the factions and the winning coalitions and selectorates of the factions in the states in civil wars or potential civil wars. However, I think that the rebel groups can be assumed autocratic in general, whereas the governments can either be democratic or autocratic. Fortunately, we have data on governments' regime types. So, based on the assumption that the rebel groups are autocratic, we may apply the selectorate theory to civil wars. Data on the military capabilities of each faction are also needed.

As mentioned earlier, regarding the onset of civil wars, civil wars may occur if the existing balance of power between the government side and the anti-government side breaks. Opportunity or power increases can even create intentions that were not even present before.

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<sup>&</sup>lt;sup>6</sup> Of course, the exclusive access to national or regional resources also can increase the expected rewards.

Since revolutionary civil wars, if successful, secure exclusive access to resources for the entire country, the expected rewards are usually great. Therefore, civil wars can occur even with relatively low probability of winning, as rebel groups may wage civil wars even under relatively poor power conditions. On the other hand, in a secessionist civil war, the secessionist's expected resources are limited to the region, so the utility is relatively small after independence. Therefore, seccesionist civil wars are likely to occur when the power is relatively larger than in the revolutionary case.