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Trade Blocs, Interstate Conflict, and the Collective Impact of Economic Integration

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Abstract

Economic integration agreements – also called preferential trade agreements or regional trade agreements – have dramatically expanded in scope since World War II. While the proximate goal of economic integration is to increase commercial exchange between member states, there are strong reasons to believe integration influences relations across economic agreements as well. I argue that economic agreements foster enclaves of regional interdependence at the expense of multilateral, global interdependence. As a result, highly central economic agreements are partially insulated from the ill-effects of militarized conflict with other agreement areas. Furthermore, the coveted markets of highly central trade blocs afford them a degree of economic leverage that increases the effectiveness of non-violent conflict resolution mechanisms. Ultimately, these dynamics suggest highly central agreements will tend to engage in conflict with other central agreements due to the mutual isolation of said agreements. Relations between central and marginalized agreements, however, will be more peaceful given the latter's dependence on access to central agreement markets. Using eigenvector centrality scores as my primary measure of agreement centrality, I test my theory using a large-N statistical analysis. I ultimately find support for the notion that dyads with more central agreements are more conflict prone other types of dyads.

Economic integration agreements – also called preferential trade agreements or regional trade agreements – are cornerstones of commercial policy for states today in every region of the world. By lowering commercial barriers, agreements increase trade and investment between member states. As a consequence, the number of extant agreements now numbers close to three-hundred unique arrangements with many more in various stages of negotiation. The proliferation of agreements is accompanied by increasing complexity. Many economic agreements now incorporate external trade policy harmonization and factor mobility in addition to standard trade liberalization. In addition to increasing commercial exchange, states also gain from agreements by increasing their bargaining power in multilateral negotiations and signaling political commitment to particular policies. Furthermore, rhetoric from scholars and politicians alike suggests that commercial integration is as valuable for peace and security as it is for economic prosperity. French minister Robert Schuman, when advocating for the European Coal and Steel Community, firmly believed in economic cooperation as a means to peace:

> "By pooling basic production and by instituting a new High Authority, whose decisions will bind France, Germany and other member countries, this proposal will lead to the realization of the first concrete foundation of a European federation indispensable to the preservation of peace." (Schuman 1950)

While the effects of economic agreements on member states are general positive, giving credence to policymaker's claims, the aggregate welfare effect of their proliferation is a source of debate. On one hand, economic agreements may serve as springboards to greater multilateral openness and improve global economic efficiency. Regional integration affords states the opportunity to work through trade issues with fewer players complicating the dynamic. On the other, they may dampen individual states' zeal for additional liberalization or simply fail to create meaningful gains in efficiency. If member states prefer the sanctuary of the trade agreement to increase competition from external states, this is likely the case. Furthermore, trade

agreements may simply divert trade from extra-agreement to intra-agreement sources without improving economic efficiency. Consequently, while agreements may foster greater global interdependence, they may also limit or even sever it in certain circumstances.

In this paper, I consider whether the proliferation of economic agreements and their potential impact on global interdependence influences interstate conflict. A broader literature in political science finds that interdependence tends to discourage conflict through various mechanisms. If economic agreements act as vehicles or obstacles of interdependence, though, we might expect them to influence the aggregate behavior of their member states. I specifically argue that economic agreements create enclaves of interdependence that substitute regional for global connectedness. While this may promote peace within the agreement itself, it likely sparks inter-agreement conflict if member states are central members of the global trading network. Hence, while economic agreements may promote the welfare and security of states within the agreement, they may sacrifice extra-agreement security with ambiguous overall implications. My research, therefore, provides important insight into the political ramifications of economic agreements as one of the most dynamic trends in international relations.

In the sections that follow, I lay out my argument and empirically test it using a large-N study. The next section briefly surveys the existing literature on economic interdependence and interstate conflict. Following this, I present my theory arguing that economic agreements restrict or sever global interdependence, thereby encouraging inter-agreement conflict. I then offer empirical assessment of my theory using statistical analysis. Ultimately, I find that agreements comprised of highly central states are more likely to engage in conflict with each other than with less central states. I conclude with some policy implications and avenues of future research.

Economic Integration and Interdependence

Economic integration agreement, as I use the term, refers to institutions removing barriers to commercial exchange. In general, this is broadly similar to the conventional use of regional trade agreements. The World Trade Organization (WTO) defines a regional trade agreement as a territory that maintains separate tariffs or regulations for a "substantial part of the trade of such territory" (WTO 1947, Article XXIV). This definition distinguishes regional economic agreements from more universal arrangements like the General Agreement on Tariffs and Trade or the WTO in that, first, it liberalizes beyond WTO standards and, second, membership is restricted. Through this paper I use the terms economic agreement, trade bloc, and regional trade agreement interchangeably, as they refer to the same basic entity.

Economic integration agreements typically offer substantial commercial advantages for member states. By reducing the barriers to commerce, goods and services flow more freely between member states owing to lower overall transaction costs. The potential gains from removing obstacles increase as the scope and depth of activities covered in agreements expands. Indeed, a robust body of literature exists in economics and political science details the ramifications of commercial integration. First, agreements tend to increase trade between member states due to reductions in tariff and non-tariff barriers (Baier and Bergstrang 2007; Carrere 2006). Second, the convergence of intra-agreement trade policy resulting from lowering barriers implicitly broadens the markets of member states. This is analogous to an exogenous increase in the size of domestic markets. Larger markets created by economic agreements may increase foreign direct investment into member states as corporations look to exploit newly realized economics of scale (Joumotte 2004). Finally, agreements are often "sticky" or difficult to rescind without suffering consequences from members states and domestic and international

markets in general. In this way commercial agreements act as constraints on decision-makers and bind domestic policies to more open, liberal orientations (Whalley 1996). Accession to an agreement is therefore a signal of specific policy intentions (Fernandez and Portes 1998; Schiff and Winters 1998).

Overall, as a result of these mechanisms, economic agreements foster interdependence between member states in ways that are thought to reduce conflict between members. Stemming from Immanuel Kant, who believed economic interdependence reinforced legal systems and socialized states to prefer cooperation rather than conflict (1991 [1795]), may have argued the pacifying effects of interdependence. The most developed branch of this argument holds that trade between nations confers tangible, material gains that provide incentives to avoid conflict. In short, benefits accrue to states engaged in trade through the mutual exchange of goods. War puts at risk these commercial ties and chances the long-term prosperity of the relationship. Trade therefore reduces conflict through opportunity costs insomuch as trade is disrupted by war (Polachek 1992; Russett and Oneal 1997; 1999a; 1999b; 2001 for confirmatory evidence; See Barbieri 1996, 2002 for contrasting conclusions). Additionally, more in line with Kant's original thoughts, trade may pacify states through a socialization process that encourages the acquisition of resources through exchange rather than conquest (Keohane and Nye 1977; Rosecrance 1986; Hegre 2000). Somewhat underdeveloped as a mechanism is the possibility that economic interdependence increases the effectiveness of alternative conflict resolution mechanisms (Stein 2003). In other words, policies short of war may be substituted to achieve foreign policy goals. For example, economic sanctions may be used to selectively harm the economy of another state if interdependence is sufficiently high (Baldwin 1985, 189-195; Baldwin 1993; Whalley 1996; Mastanduno 2003, 176; Morrow 2003, 91). War is therefore unnecessary between

interdependent states. For their part, the literature specifically addressing economic agreements finds they too encourage peace by reinforcing interdependence (Mansfield and Pevehouse 2000; Bearce 2003; Bearce and Omari 2005; Haftel 2007).

Economic integration does not exist in a vacuum, however. Agreements can profoundly affect the global trading landscape by altering commercial dynamics between states. On one hand, agreements may simply divert trade from non-members to members without actually increasing aggregate trade flows. This process was first identified by Viner (1950). In short, goods are shifted from lower- to higher-cost producers due exclusively to the selective removal of trade restrictions (Viner 1950; Krugman 1991; 1999; Findlay and Panagariya 1994; Pomfret 2001). Empirically, numerous studies either using gravity models to predict baseline levels of trade or case studies identify trade diversion across several trade agreements (see Schiff and Winters 2003, 190 for a review, as well as Bayoumi and Eichengreen 1995; Eichengreen and Frankel 1995; Baldwin, Forslid, and Haaland 1996; Yeats 1997; Gupta and Schiff 1997; Chang and Winters 2002; Magee 2008). Consequently, trade agreements may create or perpetuate economic distortions rather than foster efficiency.

Perhaps more importantly, however, are the broader political implications of economic integration. Trade agreements can also incentivize protectionism among agreement members vis-à-vis the external world. Depending on the agreement type, barriers between members and non-members may actually increase once agreements are signed (Viner 1950). Indeed, Krugman (1989; 1991; 1993) and Schiff and Winters (1998) show formally that agreement members have strong incentives to raise external barriers and generate trade diversion as a welfare-maximizing strategy and means to improve their terms of trade. Regional agreements may also be hindering multilateral trade liberalization and thereby limiting global interdependence. Indeed, the larger

the RTA, the more inward looking it may become, and conclude that the additional members or further liberalization will not benefit the group significantly (Bhagwati and Panagariya 1999; Krugman 1999). Krugman (1991) demonstrates formally the relationship between agreement size and demand for liberalization. The optimal strategy of relatively large agreements is to limit exposure to the external world, thereby maximizing internal gains. Newly minted economic agreements may therefore pursue more aggressive trade policies in an effort to leverage aggregate market power. Indeed, the subdued role of the European Community in 1982 multilateral trade negotiations may have reflected contentment with the progression of internal trade agreements to date.[1] Likewise, many economic agreements in the 1980s and early 1990s were specifically created to counter Japanese economic influence (Bergsten 1991).

Finally, despite the fact that it is bad economic theory, trade diversion may be good politics. Constituencies within agreement members that benefit from trade diversion have strong incentives to maintain and accelerate the process (Olarreaga and Soloaga 1998). This effect is most pronounced within agreements where states possess similar factor endowments (Levy 1997). As an example, Brazil lobbied heavily for the inclusion of extensive information technology trade liberalization in MERCOSUR negotiations, but subsequently opposed a similar potential multilateral agreement (Schiff and Winters 2003, 72).

While extant political science research has focused on the intra-agreement influence of economic integration, a robust economics literature suggests their potentially effects on extra-agreement dynamics are equally profound. If trade blocs are indeed substitutes for far-reaching, multilateral economic liberalization, then the pacifying effects of interdependence may be limited or severed. In the next section, I consider the possible influence of integration on interstate conflict at the agreement level.

[1] Bhagwati, "Regionalism and Multilateralism: an Overview" 21, 24; Schiff and Winters 204.

Trade Blocs and Interstate Conflict

Regional economic agreements, in many ways, are substitutes for broad, multilateral liberalization. Insofar as international trade is characterized (by policymakers, at least) as a prisoner's dilemma, states desire agreements to ensure reciprocal trade concessions. When global agreements – like those under the auspices of the World Trade Organization – are not feasible or slow to mature, states often seek arrangements with proximate or important trade partners. Often times, as a robust literature in economics indicates, multilateral liberalization is less likely as a result. Consequently, states entering into regional economic agreements purchase regional at the expense of multilateral interdependence. This process affects conflict behavior by reducing the salience of extra-agreement commercial ties and lowering the relative cost of conflict between trade blocs. Not all agreements are equal, however. Highly central agreements comprised of important trading states are likely the most affected by this process. Marginalized agreements with peripheral states, in contrast, are still dependent in the global trading system. Consequently, central agreements are more conflict prone than others.

Reduced Salience of Inter-agreement Commercial Ties

As noted, economic agreements tend to promote commercial exchange by reducing barriers between member states. As a result, the salience of economic relationships between agreement members increases. Trade is the most basic type of relationship changed by economic integration. As tariffs, quotas, and regulations within agreements fall, the total amount of bilateral trade between members likely increases as states realize comparative advantages, economies of scale, and increased efficiency from production (Viner 1950). The formal arrangement of economic agreements also implies expectations about future interactions and policies. States that sign agreements both signal the importance of their commercial relationship

and the desire to see it develop further. In other words, states seek economic agreements to lock-in and enhance access to markets they view as important and critical for future development (Whalley 1996; Schiff and Winters 1998). Given these factors, members likely identify their long-term economic interests with those of the agreement broadly and its constituent states.

Economic agreements, however, foster this regional interdependence at the expense of interdependence with the rest of the world. The implication of the increased salience of ties between agreement members is a corresponding decrease in salience with other trade blocs. Shifting sources of imports and markets for export from non-members to members necessarily decreases the relative importance of those ties. Alternatively stated, agreement members tend to rely on partner states for greater portions of their trade portfolio. Members therefore rely on other trade blocs less for commercial viability and overall trade. Furthermore, material exchange does not necessarily have to decrease between members and non-members of agreements provided expectations of greater exchange or policy stability are generated. The more states look to the agreement for future commercial relations the less important become other agreements. This is particularly true to the extent economic agreements encourage protectionist policies. Economic agreements that raise barriers to trade both reduce the material exchange between trade blocs *and* signal intentions of future policies and goals. The marginalization of inter-agreement ties is also compounded if trade diversion occurs. Agreements that draw trade internally at the expense of external parties or other trade blocs further reduce the importance of inter-agreement linkages. Trade diverting agreements, furthermore, have incentive to further marginalize the world and stymie interdependence (Winters 1996; Olarreaga and Soloaga 1998).

In turn, the marginalization of economic ties between economic agreement members and non-members influences conflict behavior by reducing its opportunity cost. One of the important

reasons interdependence reduces conflict is the forgone benefits states incur by engaging in combat (Polachek, 1980; Doyle 1997). By diversifying trade partners, or even emphasizing certain ties over others, states necessarily decrease dependence on any one source. Martin, Mayer, and Thoenig (2008) argue that decreases in systemic trade costs, part of which is associated with barriers, reduce the multilateral impact of bilateral conflict. That is, lower systemic trade costs allow states to shift trade to other nations thus reducing the negative externalities of conflict. Consequently, as economic agreements reduce trade costs for members, the ability of members to leverage intra-agreement ties in potentially absorbing excess trade affected by hostilities with non-members reduces the overall cost of those conflicts. In a way, economic agreements create trade sanctuaries the partially insulate their members of the negative effects of conflict with states in other trade agreements. Having a place in a ready-made, codified trade network reduces the ill-effects of trade disruptions with non-agreement members. Given the overall marginalization of ties between agreement members and non-members, the deterrence influence of conflict is restricted. Hence, just as self-reliant states likely suffer less from conflict and therefore employ it more frequently (Maoz 2006), we might expect more self-reliant trade blocs to experience more conflict through similar mechanisms. The notion that trade deters conflict is also in part based on a long-term expectation future trade relations will be hurt by war (Barbieri and Levy 1999). By erecting an implicit barrier between members and non-members, economic agreements marginalize the future utility of trading relationships in ways that similarly impede their deterrent effect.

Agreement Centrality and Conflict Propensities

The extent to which economic agreements affect the interdependence of member states with the external world is not uniform across trade blocs, however. Economic agreements are

comprised of different trade partners and possess unique attributes that profoundly affect their aggregate impact on member-state behavior. As the economic literature indicates, larger trade blocs are expected to act differently vis-à-vis the external world than smaller ones. In many ways this is a direct function of their realized or potential economic leverage. Consequently, as I will argue, trade blocs that occupy a central location in the global trade network are more self-reliant and autonomous. As a consequence, central agreements are likely more conflict prone.

Economic agreements, in reality, are a highly heterogeneous lot in terms of state composition, issue coverage, and overall objective and goals. Trade blocs tend to divide regionally based simply on the tendency for major trade partners to be spatially clustered and the political feasibility of penning agreements with familiar states. The geographic clustering of agreements can result in either a highly homogenous set of states (such as most African agreements) or a hub-and-spoke style of organization where one state is clearly the dominant trade partner (like the Commonwealth of Independent States around Russia or the South African Customs Union around South Africa). Likewise, issue coverage is quite diverse. While all agreements address trade to some extent, some go further to include the creation of common external tariffs or the free movement of labor and capital. Agreement objectives are often multifaceted and complex. At the most basic level, all agreements want to increase trade between members. That said, the reason for doing so is often different. Several early South American agreements sought the creation of self-sufficient areas through import substitution programs. Others, like the early incarnations of the European integration, sought internal security through interdependence.

Heterogeneity between economic agreements in these capacities results in a varied set of unique characteristics. Some trade blocs are comprised of very important states in the global

trading system linked together for political and economic reasons. Other blocs contain smaller, more marginalized states motivated by the implicitly larger market created by economic agreements. Following from this heterogeneity, the economic leverage of a trade bloc as a whole is derived both from the attributes of its constituent states *and* their position within the global trade network. In turn, the degree to which an economic agreement fosters an enclave of interdependence is in part a reflection of these attributes.

Consider first highly central economic agreements comprised of states at the core of the global trade network. Central trade blocs possess states that trade with a majority of the world and have extensive intra-agreement ties. These characteristics afford them substantial leverage in two distinct ways. First, highly central agreements sit in coveted positions of the trade network where market access can be wielded as power (explicitly or implicitly). Trade blocs implicitly cordons off the external world if only by defining the limits of member-states' economic openness (Baldwin 1993). Furthermore, the creation of an economic agreement creates a relatively larger market for potential firms looking to invest or trade (Joumotte 2004). Access to a central agreement gains states and their constituent businesses entrée to highly connected, relatively large trading states. As a consequence, states excluded from the central agreement likely desire access to the central agreement's markets. This is evidenced in part by the zeal with which many states have courted "Fortress Europe" and the creation of the Central American Free Trade Agreement in the wake its North American counterpart. Second, central agreements are better able to utilize economic power in conflict. On one hand, as argued, agreements afford member sanctuaries from the ill-effects of conflict. The ill-effects of conflict are mitigated to the extent states can leverage their trade bloc to divert forgone trade. On the other hand, central agreements can actively wield economic power by controlling market access.

Central trade blocs, by virtue of their relatively large, highly desirable markets, can coordination sanctions effectively to compel policy change in target states. Indeed, several trade blocs have pursued coordinated action against non-member states, including the European Union and Economic Community of West African States (Blunt 2005; European Union 2008).

Consider now marginalized trade agreements that are less central to the global trading system. First, market access to less central agreements is relatively less desirable than for central agreements. Their position on the fringe of the global trade network is less valuable or sought after by other states or areas. Losing access to a marginalized agreement, in other words, is less likely to significantly impact other states or agreements. Furthermore, marginalized agreements are more likely to depend on the core of the global trading system. On one hand, more peripheral trade blocs are more likely to depend on access to a few, highly central states for export markets. On the other, even if this is not the case, states in marginalized agreements likely *desire* access to more central agreements in order to bolster or diversify their trade network. Consequently, marginalized agreements are less salient than central ones in the global trading system. Furthermore, less central agreements possess less economic leverage with which to coerce other states. Their smaller trade network indicates, first, they have fewer ties from which to leverage economic power and, second, possess less maximal force when coercing.

The dichotomy between central and marginalized trade agreements suggests important differences in conflict behavior when paired dyadically. Central agreements benefit from possessing desired positions in the trade network and high economic leverage. When two central trade blocs square off, however, these characteristics are limited or mitigated. First, because both agreements possess highly salient trade networks from their bloc, we might expect *both* to be insulated from the cost of conflict to some degree. Furthermore, while central agreements

likely still desire access to other central agreements, it is not as imperative as for less central agreements. Highly central trade blocs that contain salient states are robust trade are less interdependent with other blocs or areas of the world as a result. Consequently, as the cost of conflict is less on both sides of the conflict, the use of force is more likely to occur. Second, for many of the same reasons, economic coercion that is enabled by highly central trade agreements is less effective against other central agreements. Central agreements are less interdependent with the rest of the world, and as a consequence are less affected by the imposition of sanctions or their long-term effects. The reduced effectiveness of economic coercion between highly central agreements decreases the likelihood they are employed. As a result, military force may be the only viable option with which members of central agreements may coerce members of opposing trade blocs. For this reasons, we might expect relations between highly central economic agreements to be more conflict prone than with less central agreements:

H_1: Highly central agreements are more likely to engage in conflict with other highly central agreements than less central ones.

Relations between highly central and marginalized states, in contrast, are likely less conflict prone. First, marginalized agreements are still dependent to some extent on central trade blocs. They either depend on markets in certain central areas or aspire to preferential access. Conflict against central trade blocs for marginalized trade blocs, therefore, can be costly in the short- and long-run. Second, economic coercion is more effective against marginalized trade blocs. Less central trade blocs possess fewer alternatives to shift trade lost by sanctions because their intra-agreement trade networks are less developed and market access to central agreements is proportionally more salient. Economic sanctions are therefore more effective when central trade blocs target marginalized ones by virtue of the latter's lack of options (Hirschman 1981). Consequently, when marginalized agreements are confronted by more central ones, they likely

capitulate either without coercion or once economic force is applied. The result of dynamics between central and marginalized trade blocs leads to my second hypothesis:

H_2: Less central agreements are less likely to engage in conflict with highly central agreements than equally central ones.

Conceptualization and Operationalization

To empirically test my theory that economic agreements influence conflict between trade blocs, I use a large-N statistical analysis of economic agreements from 1950 to 2001. I structure the dataset dyadically such that my unit of analysis is agreement dyad-years. My dependent variable is the initiation of a militarized interstate dispute between two different economic agreements. I code this variable 1 if dispute occurs between agreements in a given year and 0 otherwise.[2] I obtain data for this variable from the Maoz dyadic MID dataset (Maoz 2005).

My theory hinges on the centrality and salience of economic agreements. I specify two primary explanatory variables to address these characteristics of agreements. First, the centrality of an economic agreement refers directly to its position within the global trading system. More central states and agreements, I argue, command greater weight and wield more influence than less central ones. As this is network data, I employ a standard measure used in network analysis studies to reflect the centrality or importance of a state within the global trading network. Specifically, I capture the economic agreement centrality through the use of averaged eigenvector centrality scores of its constituent states. I consider two states to be connected if they trade during a given year. Ties are constructed using trade data from Barbieri, Keshk, and Pollins (2008).

[2] Approximately 10% of agreement dyads that experience MIDs experience multiple MIDs in a given year. While dichotomization discards these multiple MIDs, the relative infrequency of multiple occurrences limits the inferential impact of doing so. I also conducted analysis using a zero-inflated binomial count model. The results were not substantially different from the logit models reported in this paper.

Eigenvector centrality builds off simple degree centrality, which measures only the proportion a node's extant ties over all possible ties, by incorporating the centrality of all other nodes connected to one particular node. Mathematically, the eigenvector centrality is:

$$Ax = \lambda x$$

Where A is an adjacency matrix (where 1 indicates two nodes are connected), x is a centrality vector and λ is a diagonal matrix of eigenvalues that maximize the equation (Bonacich and Lloyd, 2001). Eigenvector centrality therefore accounts not only for how connected a particular state is, but also how connected are its trade partners. Intuitively, a state that trades with dozens of peripheral states might not be as economically central as a state that trades with only a handful of the most central states in the system. While the former has influence with several other states with whom it trades, that influence does not go very far due to the trade partners relatively limited connections. The latter, on the other hand, although it only has ties with a few other states, each of those states has a great deal of influence internationally due to their extensive connections. In other words, a state's centrality is proportional to the weighted sum of the states to which it is connected. I use the Maoz Social Network Program developed by Zeev Maoz' to derive eigenvector centrality scores for each state-year. I then average the scores of member states to arrive at an aggregated, agreement-level variable.[3]

My second primary explanatory variable addresses the aggregate economic weight of an agreement. The economic influence an agreement possesses is in part a reflection of how much trade it conducts. That is, agreements that foster relatively substantial amounts of trade are more influential than agreements that do not cover large areas of trade. To operationalize this, I calculate the total trade (imports + exports) occurring between states in an agreement per year

[3] I conducted robustness tests by including the standard deviation of centrality scores (and interactions with average centrality) in each statistical model to account for the cohesion of agreements themselves. The results did not deviate significant from those reported here.

using the aforementioned trade data from Barbieri, Keshk, and Pollins (2008). Total trade is then divided by the sum on agreement members' GDP to arrive at a normalized measure. I use GDP data from Gleditsch (2002).

Both the centrality and intra-agreement trade measures are then treated differently in two separate empirical models. The first model uses the weak-link assumption by including only the lowest values eigenvector centrality and intra-agreement trade in the dyad. My expectation is that these variables will positively correlate with the initiation of MIDs. This approach allows inference into whether highly central and/or salient agreement dyads engage in conflict. It does not, however, capture the relative positions of agreements completely, thereby rendering it ill-suited for hypothesis 2. I thus include a second model that uses the ratio of eigenvector centrality scores and intra-agreement trade (which is *not* normalized on GDP) within the agreement dyad by dividing the lowest value over the highest. The resulting measure is bound between zero and one with higher scores indicating more symmetry between agreements. This allows a more direct analysis of hypothesis 2 regarding the relationship between agreements of different status. I also expect the ratio measures will be positively correlated with MID onset.

I also use a number of control variables to account for competing explanations of conflict between trade blocs. Many of these variables are aggregations of dyadic measures seen in the prevailing conflict literature. First, I control for the relative capabilities of trade blocs using composite index of national capabilities (CINC) scores from the Correlates of War dataset. The measure is calculated as the sum of capabilities across members for each agreement, then made relational by dividing the smaller by the larger figure. I obtain data from the Correlates of War (Gibler and Sarkees 2004; Singer 1987). Second, in accordance with the democratic peace literature, I control for regime type with average democracy scores for members in an agreement

using data from the Polity IV dataset (Marshall, Jaggers, and Gurr 2007). I only include the lowest democracy score in the agreement dyad in according with the weak-link assumption.

Third, industrialization or absolute economic size may also influence conflict between agreements, as economically large areas more readily possess the means to wage war. Consequently, I control for the overall economic power of agreements using the sum of members' GDP. Only the lowest GDP score is included in my analysis. Fourth, as my theory addresses directly economic interdependence between agreement areas, I include a traditional variable for interdependence measured as the sum of bilateral trade between members of two separate agreements as a share of summed GDP. The lowest score is included in the statistical model to reflect the degree of dyadic agreement interdependence. Fifth, my theory specifically references the accessibility of economic agreements as an influence on conflict. To account for this, I include a variable for total agreement external openness measured as the sum of members' total national trade (less intra-agreement trade) as a share of summed GDP. The resulting measure captures the extent to which external parties can freely trade with the agreement area. Finally, because agreements are not symmetric, I include a count of the number of states in a dyad. This accounts for the logical notion that agreements with more states are more likely to engage in conflict by virtue of greater opportunities for conflict.

Estimation and Results

After account for missing data, my analysis includes approximately 16,000 agreement dyads. MIDs and sanctions occur in less than 3% of observations. Because my dependent variable is dichotomous, I use logistic regression with robust standard errors for statistical analysis.[4] I also lag all independent variables one year to help control for endogeneity and

[4] Given the relative rarity with which disputes occur (less than 3% of cases), I use rare events logistic regression developed by King, Tomz, and Zeng (1999) as a robustness check. The results are identical to those reported here.

protect the temporal integrity of the analysis. Finally, I include a cubic polynomial variable capturing the number of years between militarized disputes between agreement dyads to address potential dependencies between conflict events (Beck, Katz, and Tucker 1998; Carter and Signiorino 2010).

---- Table 1 Approximately Here ----

Table 1 includes descriptive statistics for all variables in my analysis. Focusing on the primary independent variables, the weak-link centrality has a mean of 9.113 with a fairly tight standard deviation. At the extreme end, however, the most central states easily double the mean score. Relative centrality is also normally distributed with a mean of approximately 0.75. The intra-agreement trade variables reveal some interesting patterns. First, looking at the weak-link variable that measures intra-agreement trade as a share of agreement GDP, it appears some agreements fail to generate meaningful intra-agreement trade. Indeed, the average of all agreements is approximately 0.2% of GDP, although some cover as much as 10% of agreement GDP. The ratio of intra-agreement trade, furthermore, is right skewed with a mean of 0.226. Asymmetry between agreements is therefore manifest mostly in the trade they engender.

---- Table 2 Approximately Here ----

Table 2 contains the results of the logit estimations for both models. Consider first the weak-link model capturing centrality as the lowest score in the dyad. The centrality variable is positive and significant, indicating that more central agreements are more likely to initiate MIDS against relatively more central agreements. This suggests that the more central an agreement is, the less interdependent it is with other agreement areas and regions. As a result, the cost of conflict is lower for central agreements. As a result, when two central agreements experience conflict, the probability of it militarizing increases. Intra-agreement trade, however, fails to

achieve statistical significance at conventional levels. Consequently, it does not appear that the aggregate size of the agreements factors meaningfully into their conflict behavior.

Turning to the relative centrality and intra-agreement trade model, we see similar results. The relative centrality variable is positive and significant, indicating that the more symmetric agreements are, the more likely they are to engage in conflict. By implication, asymmetric agreement relations are less likely to result in militarized conflict. This lends support to my argument that the most conflict-prone inter-agreement relations are those between central trade blocs. Disputes between one highly central and one marginalized agreement are likely to result in the capitulation of the latter prior to or with limited coercion. In contrast, when two central agreements conflict, it is more likely both trade blocs prefer militarized conflict to acquiescence. This would also seem to indicate, consistent with my theory, that less central agreements are more likely to fight their peers than central agreements. As with the weak-link model, however, the intra-agreement trade ratio variable fails to achieve statistical significance.

Two different substantive interpretations are offered in this paper. First, the last column of Table 2 includes the change in the predicted probability of observing a MID when the variable of interest moves from the first to third quartile. A shift from the first quartile of agreement centrality using the weak-link assumption to the third quartile – from roughly the South American Customs Union to the Arab Common Market – increases the probability of a MID by 17.1%. This effect is not insignificance, as it approximately doubles the effect of GDP on conflict probability. Likewise, a shift from the first to third quartile of relative agreement centrality increases the probability of conflict by 23.1%. This is equivalent to the shift between the Commonwealth of Independent States' (which centers on Russia) relations with Central European Free Trade Association (which includes many former Soviet Satellites) on one hand

and the European Free Trade Area (including non-EU European states) on the other. Once again, this effect is not insignificant compared to other variables, as it outweighs the substantive effect of both GDP and openness.

---- Figures 1 and 2 Approximately Here ----

The second means of interpretation is contained in Figures 1 and 2, which plot the predicted probabilities of conflict against agreement centrality in both models. Looking at Figure 1 first, which reflects the weak-link model, the probability of a MID increases in tandem with agreement centrality until a value of approximately 15. At this point, the effect plateaus before a decline. Rather than a non-linear affect, this likely reflects the paucity of observations at the tail of the graph.[5] It is also important to note that the confidence intervals of the graphs do not contain zero at any point, indicating the substantive impact of centrality is meaningful across the full range of possible values. Figure 2, which plots the relative centrality measure, indicates the same basic trend. More symmetric trade agreement centrality increases the probability of militarized conflict. This effect, furthermore, is significant across the range of possible values.

Turning briefly to the other variables in my analysis, some interesting results emerge. First, agreements of relatively equal capabilities are more likely to engage in conflict. This makes intuitive sense, as agreements of similar size are more likely to "like their odds" in combat. Second, consistent with the democratic peace literature, the more democratic the agreement dyad, the less likely it is to engage in military conflict. Third, higher values of trade between agreement areas actually increase the probability of conflict. This may reflect the severing of interdependence between agreement areas such that even bilateral links fail to prevent conflict. Fourth, the more developed the agreements, the more likely they are to experience military force, likely resulting from their ability to wage war. Fifth, as might be

[5] A polynomial term was tested in the model, but did not achieve significance.

expected, dyads with more members are more likely to experience conflict owing to the increase opportunity to do so. Finally, openness only achieves significance in the relative centrality model. Its coefficient is negative, indicating that more open agreements are less likely to experience conflict. This comports with my notion that agreements maintaining interdependence with other areas are less likely to see conflict as a viable option.

Overall, the results of my statistical analysis support the two hypotheses presented. Dyads comprised of highly central agreements are more likely to experience militarized conflict by virtue of the positive and significant coefficients in both the weak-link and relative centrality models. This suggests that highly central trade blocs are insulated in part from the ill-effects of conflict, and therefore are more apt to use it in disputes. Likewise, marginalized agreements are less likely to conflict with central ones given the positive and significant coefficient on the relative centrality measure. Less central agreements are more likely to capitulate to central ones in disputes, as they are more dependent on access to large markets for future economic success. Hence, agreements of roughly equal centrality are the most conflict prone. As a result of these findings, I find support for both hypotheses 1 and 2.

Estimation and Results

At the outset of this paper, I ask whether the proliferation of economic agreements influenced interstate conflict in meaningful ways. The answer to this question appears to be "yes," as more central economic agreements tend to experience more tension than other types of trade blocs. As highly central, salient states form trade agreements, they foster enclaves of regional interdependence at the expensive of more systemic, multilateral interdependence. The result is a generally lower cost of conflict for central agreements given their development of trade sanctuaries through economic agreements. When facing each other, consequently, two

central trade blocs are more likely to see military force as a viable policy option. Marginalized agreements, however, are still dependent on access to central areas. In turn, when facing a dispute with central agreements, they capitulate with little or no coercion applied.

Overall, the results from my empirical analysis suggest a number of interesting conclusions and important implications. First, in line with one particular segment of economics literature, the impact of regional trade agreements appears to be more divisive than unifying. While this paper does not indicate what a world without economic agreements looks like, it does suggest that the proliferation of agreements has not pacified relations between the most central agreements. Second, my results also have interesting implications for the liberal peace. In many ways my theory and analysis supports the important pacifying forces behind arguments of interdependence and conflict. Exclusion from economic agreements, I argue, reduces interdependence and the salience of trade ties. Consequently, integration severs the mechanisms by which the liberal peace operates between agreement areas. The core of liberalism is clearly intact and, indeed, is augmented by my analysis. What I do, however, is refine the conditions under which economic liberalism may succeed in preventing conflict between states. Economic integration may create security externalities for states if they significantly reduce the importance of external ties. Consequently, if my work criticizes the liberal peace, it is only by stating that the structure of trade relationships mattes for conflict in certain situations. Hence, not all trade openness can be expected to purchase a state security. Indeed, those states that seek economic integration as part of a security plan aimed at excluded states are likely to exacerbate conflict and strategic rivalry.

Overall, my analysis has two major contributions for scholarship and policy. First, it contributes to the growing body of literature exploring the effects of economic integration on

interstate conflict. While integration may pacify internal relations, as previous literature suggests, it may involve a tradeoff vis-à-vis external security. Second, in a related manner, my analysis addresses a generally neglected area of international relations. Specifically, how might the existence and operation of finite international institutions influence states excluded from membership? State decisions to seek integration are strategic choices that necessarily exclude certain parties. It follows, therefore, that institutions may have as profound consequences for non-members as they do members. I provide one piece of what might be a dynamic and interested research program.

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Table 1: Descriptive Statistics

Dependent Variable

		0 (None)	1 (Initiated)
MIDs	Frequency	15,934	331
	Percentage	97.96%	2.04%

Independent Variables

	Mean	Std. Dev.	Minimum	Median	Maximum
Centrality	9.113	2.214	3.729	8.688	20.805
Intra-Agreement Trade	0.002	0.004	0.000	0.001	0.096
Relative Centrality	0.751	0.162	0.187	0.767	1.000
Relative Intra-agreement Trade	0.226	0.260	0.000	0.116	1.000
Capabilities	0.269	0.278	<0.001	0.152	0.999
Democracy	-0.817	5.588	-9.667	-1.200	10.000
Openness	0.144	0.088	0.000	0.131	0.734
Bilateral Trade	0.003	0.012	0.000	0.001	0.260
GDP ($ billions)	247.000	514.000	1.120	54.500	9,320.000
Total Members	10.659	7.240	2.000	9.000	45.000

Table 2: Agreement Centrality and Interstate Conflict

Lowest Agreement Centrality and Trade

	Coefficient	Standard Error	Change in MID Probability (First to Third Quartile)
$Centrality_{Low}$	0.069*	0.030	17.1%
Intra-agreement $Trade_{Low}$	-10.17	10.922	-----
Capabilities	0.930***	0.203	35.2%
$Democracy_{Low}$	-0.052***	0.012	-52.1%
$Openness_{Low}$	-1.274	0.686	-----
Bilateral $Trade_{Low}$	8.627*	3.444	0.8%
GDP_{Low}	0.001***	0.000	8.4%
Total Members	0.059***	0.006	60.4%
Constant	-4.613***	0.325	-----
N	16,264		
Pseudo-R^2	0.1152		
Log pseudolikelihood	1430.41		

Relative Agreement Centrality and Trade

	Coefficient	Standard Error	Change in MID Probability (First to Third Quartile)
Relative Centrality	0.924*	0.401	23.1%
Relative Intra-agreement Trade	-0.379	0.239	-----
Capabilities	0.794***	0.203	30.0%
$Democracy_{Low}$	-0.049***	0.012	-48.8%
$Openness_{Low}$	-1.503*	0.703	-16.0%
Bilateral $Trade_{Low}$	9.869**	3.630	0.9%
GDP_{Low}	0.001***	0.000	8.6%
Total Members	0.058***	0.006	63.6%
Constant	-4.585***	0.360	-----
N	16,190		
Pseudo-R^2	0.1153		
Log pseudolikelihood	-1398.01		

*Dependent variable refers to the initiation of a militarized interstate dispute (MID); Estimates produced using logit and verified with rare-events logit; Robust standard errors in parentheses; Predicted probabilities calculated by holding all variables at thier mean values while manipulating the variable of interest. * p<.05 ** p<.01 *** p<.001*

Figure 1: Centrality and Conflict Probability

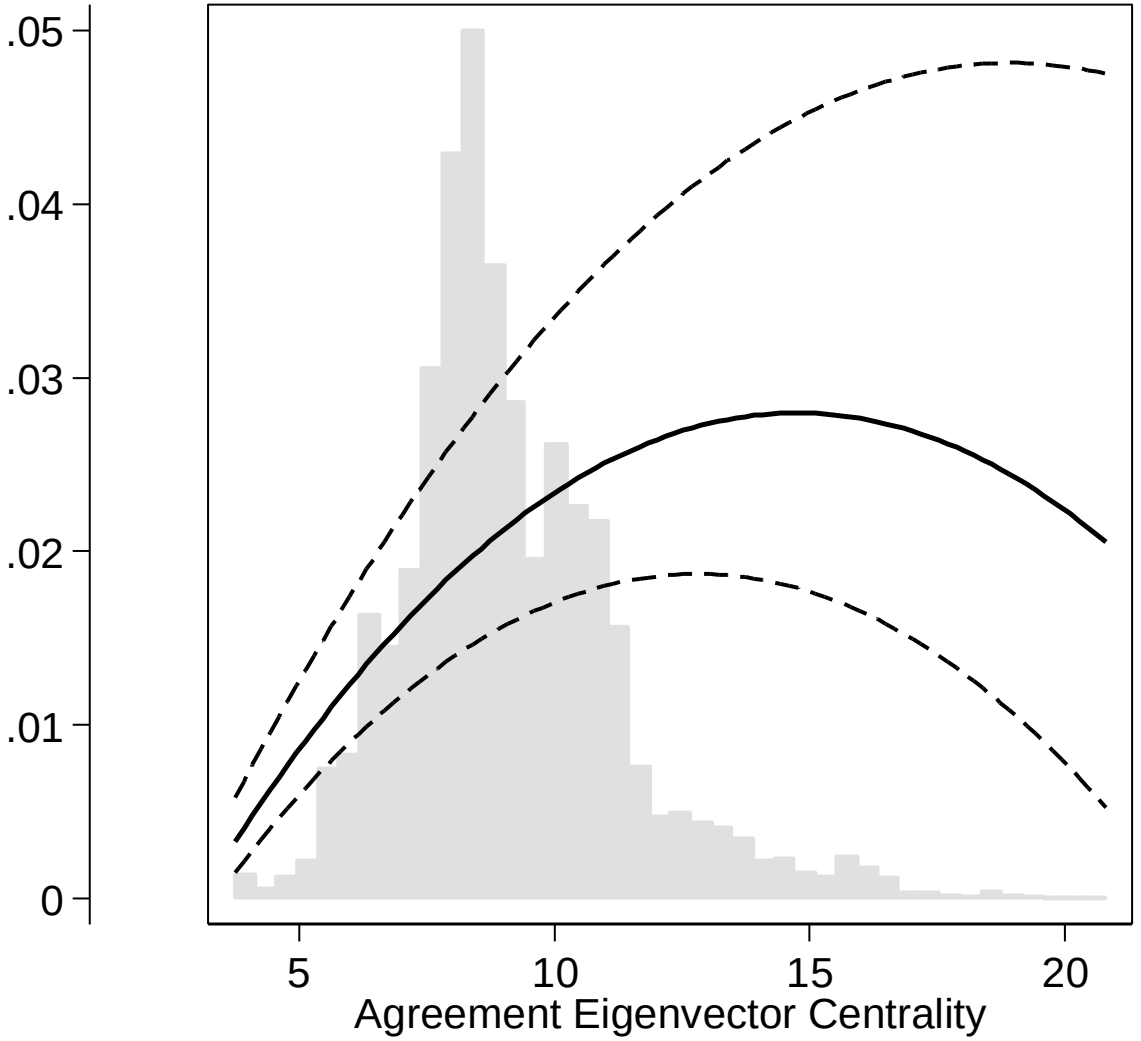

Figure 2: Relative Centrality and Conflict Probability