The Influence of Regional Power Distributions on Interdependence

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Abstract

Political economy debates about the influence of power and polarity in expanding, stabilizing, and maintaining global free trade ebb and flow with the wax and wane of the concentration of power in the international system. The manuscript engages the debate in a different way than previous scholarship. Employing a series of regression models that account for regional power parity and disparity, I argue that the global concentration of power is ill fit to be the primary predictor of trade liberalization, but instead, regional power fluctuations can dampen and enhance global trends. By incorporating sub-systemic power configurations, we gain a better understanding of the regional variation in states buying into or cashing out of interdependence.

1 Introduction

The academic interest in the causal link between power and global trade liberalization appears to ebb and flow with the flow and ebb of international power. While we see clear associations with liberalization during the 19th century and the latter half of the 20th century (Kindleberger 1973, McKeown 1983), scholars questioned the viability of sustained liberalization as American power seemed to be evaporating in the 1970s and 1980s (Keohane & Nye 2001, Keohane 2005). This series of debates, themselves, thinned by the 1990s as the American moment manifested and rapid changes in domestic and international institutions, political regimes, and economic policy ushered in a period of globalization that seemed unthinkable in the previous two decades.

While there have been some research programs that continue to evaluate how hierarchy affects global patterns of trade (e.g. Lake 2009), there is much about this relationship that remains unexplored. Across multiple works of scholarship spanning four decades, the impact of global power configurations and the influence those configurations have on global economic activity vary significantly; some research suggests that there is not a correlation between the concentration of power in the international system and liberalization while other research demonstrates a robust relationship.

This manuscript goes beyond a purely, structural systemic examination of how a dominant power may or may not influence trading patterns, but also explores how that effect may be underrepresented in previous studies by countervailing forces at a lower level of analysis: the region. This manuscript posits that, while there are global trends in trade that correlate with the rise and decline of power concentration at the systemic level, regional power configurations enhance and diminish those effects. When there is relative power parity at a regional level, then the effects of systemic pressures for liberalization are prominent as there does not exist a strong regional force to counteract a global power operating in the region. However, if a regional power is unchallenged in influence by its peers, then it is freer to act against dominant globalizing trends due to the absence of a significant regional rival. Consequently, while asymmetric global systems seem to

produce periods of liberalization, regions of asymmetry work to act against those trends; the most conducive power configurations for trade liberalization requires an asymmetric global power with a world of middle powers that rest at parity.

To ascertain evidence for this relationship between regional and global power configurations on trade, I analyze three different units: directed dyad-year, undirected dyad-year, and country-year (monad-year) levels of analysis. Looking at both import activity as well as total trade, I find that two distinct measurements of regional power parity correlate with increased trade activity while disparity in regional power suppresses trade activity. States in neighborhoods dominated by a single regional power tend to have weaker trade activity than states in multipolar neighborhoods.

This paper proceeds in four parts: the first section discusses the scholarly work on the relationship between power configurations, the second section details how regional configurations modifies our expectations from the first section, the third section elaborates on the research design for empirically testing the hypothesis from the second section, and the fourth section discusses and interprets the results from the quantitative model.

2 Power and Interdependence

The origins of scholarship that systematically explores the relationship between international hierarchy, power, and trade is a fundamental component of international relations research and, given the historical importance of both power and trade, transcends political science and political economy as scholars in related fields such as history (Gallagher & Robinson 1953), economics (Yarbrough & Yarbrough 1987), and sociology (Chase-Dunn, Kawano & Brewer 2000, Wallerstein 2000) research it. While early, dominant strains of realism dismissed the intersection between politics and economics as merely "low politics" (e.g. Waltz 1979), other scholars, notably Hirschman (1945), pursued the bidirectional influence of national power and foreign trade (Barbieri 1996). After the end of WWII, with the rise of a bipolar system and the seeming decay of the United States'

global liberalization agenda, the early 1970s saw the emergence of an entire research program dedicated to studying hierarchical system configurations, international institutions, and norms.

The research program of hegemonic stability theory begins to establish a wealth of research between structural and national power with liberalization and conflict in the 1970s. With the decline of US power seemingly evidenced by the US failure to achieve its objectives in Vietnam, the collective action of petroleum exporters to embargo the US and its allies, and the collapse of the Bretton-Woods system, it was apparent that the force that kept global financial, economic, and military institutions afloat was unlikely to persist. Kindleberger (1973) saw the current crisis and the crisis of the early 1930s as linked to the failure of those capable of exerting leadership being unwilling to do so; specifically, the United States had the potential to prevent economic retrenchment and, due to domestic pressures, did not don the mantle of global leadership in the 1930s. Krasner (1976) offered a structural version of hierarchy and found evidence for a causal relationship between periods of global hegemony and global trade activity; scholars replicated this result with varying definitions of hegemony, hierarchy, and structural power concentration (Mansfield 1993*a*, Mansfield 1993*b*, Mansfield 1995, Lake 2009).

The distinctions between leadership and structural theories of power and trade, as well as testing the implications of both theories, lead to an explosion of literature over the next decade. In the structural study of global power concentration, part of the debate became over establishing the conditions for why a dominant power would necessarily pursue liberalization. A persistent issue in international trade are states that erect barriers to imports to preserve some domestic industry or political industry (Rogowski 1987, Midford 1993). Tariffs are domestically inefficient and hurt both domestic consumers, domestic producers, as well as trading partners (Tullock 1967, Frankel, Romer et al. 1999, Melitz 2003). Some early explanations posited that global liberalization was an international public good that presents a basic collective action problem; it is only when a sole powerful state emerges that there is an actor with enough incentive to overpay for the public good and solve the problem (Krasner 1976, Gowa 1989*a*, Gowa 1989*b*). The issue of whether or not

liberalized international trade was actually a public good or an excludable private good persisted (Conybeare 1984, Snidal 1985), but ultimately does not matter for advancing our understanding here.

In either case, a dominant state that excels in financial, economic, and military power has a distinct interest in establishing an economically interdependent world by encouraging states to reduce and eliminate trade protections (Gilpin 1983, Khalilzad, Shulsky, Byman, Cliff & Orletsky 1999). In the short term, a dominant power will benefit from having other states drop their protectionist policies and open up their markets to global trade activity. Given that the dominant power is an economic and financial power, the state has a distinct interest in having access to raw materials, finished goods, and another market in which to sell its products. In the long term, as states become more dependent upon the established economic and political order, they will have less incentive to seek to change or overthrow the status quo (Organski 1958, Lemke 2002, Organski & Kugler 1980). This alignment of interests between a dominant power and an emerging power may explain why the United States and the United Kingdom do not go to war despite the US emergence as a major power by the end of the 1890s that quickly surmounts British power. These implications and empirical regularities are not confined to the the single case of the United States, but is consistent with the British experience in the 19th century (Gallagher & Robinson 1953, Scherrer 1995, Keohane 2005).

While it is clear that a rational power would pursue policies of global liberalization in other states, the tools in which the powerful state did this varies across theories (Lake 1993). Kindleberger (1973) offers the carrot of market access to potential free trading states while Krasner (1976) concludes in favor of a coercive power that punishes recalcitrants and excludes them from the gains of liberalization. Alt, Calvert & Humes (1988) demonstrate that, regardless of theoretical orientation, a rational actor is likely to use both carrot and stick methods with allies who are shirking in their participation of maintaining the economic regime.

The literature on the relationship between power, hierarchy, and liberalization, abated to a

significant degree after the collapse of the Soviet Union; the shift to multipolarity that seemed apparent in the 1970s and 1980s became an unlikely immediate prospect. However, the research, as well as debate, still offers active scholarship. Most prominently, Lake's (2009) recent research on hierarchy looks the provision of security, through alliances, as a series of contractual bargains between the United States and other actors. Other states trade away portions of their sovereignty, especially over their foreign policy decision-making, in exchange for security guarantees and military resources. This series of contractual relationships is the cornerstone in which the US maintains hierarchy. Not all hierarchical relationships are identical, but the fluctuation of US power enables and disables the United States' ability to bring more states into its network.

3 Regions of Prosperity

Drawing upon the relationship between the hierarchy of state power and global liberalization developed in the previous section, we should expect to see that a global concentration of power is likely to create the conditions that favor an increase in trade between states, all else being equal. A state in a dominant international position has both the capacity and the willingness to pursue setting up norms, institutions, and regimes that favor trade liberalization (Krasner 1976). However, this process is neither static nor uniform.

A globally dominant state seeks to integrate national economies by inducing trade liberalization as long as the costs of providing incentives (both coercive and cooperative) are less than the perceived benefits derived from that system. Despite a desire to pressure all states to globalize, a world power cannot solely enforce global norms as its own power is inevitably limited and costs of enforcing regimes become exponentially large (increasing by the number of potentially defecting states). Like any other actor, it faces opportunity costs in pursuing effective liberalization. If the global power attempted to curtail all defection from international regimes, it would invariably overstretch itself and create the conditions that encourage retrenchment instead of liberalization.

A dominant state, seeking opportunities that allow it to achieve its objective of increased liberalization, will look for regional configurations that are the least costly in encouraging its international norm-building. Within any given region, we see a replication of global polarity configurations as issues of power parity defines regions where two or more actors have similar power statures, or disparity where no other state rivals a prominent single state in power. Fundamentally, the global power would prefer to find actors that share a similar interest as itself to act on its behalf; having a regional actor with aligned interests means that it will be less costly for the global power to enforce the norms it desires to promote. In a region of asymmetric power distribution, there is only one actor that could be a possible agent to promote liberalization. This is constraining for promoting liberalization as an unchecked regional power does not have other regional threats to prevent it from renegotiating the regional or global status quo. Consequently, even if a regional power has similar aims for global regimes as a global power, it still affords it more opportunities to defect on maintaining such regimes. To invoke principal-agent dilemmas, the actors employed by a principal are not always faithful to the decrees of principal and the risk of agency loss is ever present (Ross 1973, Grossman & Hart 1983).

A region of relative power parity offers more opportunities for liberalization under a unipolar global system. By having two or more potent rivals in a region, such power parity, whether or not the states are friends or foes, act as checks on the behaviors of states attempting to renegotiate the status quo. A regional peer becomes a monitoring mechanism on behalf of the global power as the monitoring state has an incentive to encourage norm compliance—a renegotiation of the status quo would likely shift power away from the regional monitor in favor of the other state. The globally dominant state prefers to deputize agents instead of being the sole, global sheriff as norm enforcement and maintenance are increasingly costly (Alt, Calvert & Humes 1988); however, if a global power can defer costs to agents that are willing to bear the burden of monitoring and enforcement, then the global power will prefer to put liberalization pressure on regions that offer the best cost-benefit calculation.

In regional disparity, a state that challenges the status quo may or may not catch the attention of a global power. However, in regional parity, there are more checks upon actors that attempt to undermine international regimes. The role of regional configurations affords the following hypothesis

Hypothesis 1. *Countries in a region with a dominant regional power will trade less than countries in regions that have two or more powers at parity.*

We should expect both regional and global pressures for trade liberalization in regions of power parity. States, unable to cheaply defect on liberalization norms, will either reduce existing barriers or, at a minimum, not erect additional barriers to trade. Reductions in barriers and maintenance of existing trade liberalization policies make the opportunities for trade more lucrative and we should see a corresponding behavioral response to a reduction in those barriers: non-state actors will engage in more trade. The following section details the research design aimed at testing this hypothesis.

4 Research Design

Constructing an appropriate test of how trade fluctuates based on exogenous factors is not always a straight forward task as there are numerous ways in which scholars both conceptualize and empirical validate models of trade. To conduct a broad series of tests, I use three different units of analysis to see how regional disparity affects trade. For the first series of estimations, I use directed-dyad-years. That is, every pair of states for a given year is an observation. This data structure allow for looking at how states restrict or loosen their import barriers within any pair of state.[1] Starting with imports is appropriate as states are generally willing to export to other country and, historically, only put modest limitations on exports, while they are more likely to guard their domestic

[1]Technically, since it is directional dyads, a test of imports is also a test of exports since all flows from country A to country B are the inverse of flows from country B to country A.

industries; the majority of trade protectionism focus on protecting import-sensitive industries.

The second unit of analysis is the undirected-dyad-year where every pair of states in a given year is an observation. This data frame enables me to evaluate whether regional parity effects the total trade between two pairs of states. While the theory speaks less well to exports than it does to imports, the effects of power concentration should put consistent pressure to reduce trade barriers in both countries. As such, if both countries are reducing trade barriers, trade should increase in regions of parity. Given that the undirected nature of the dyads, any country-specific variable from the directed-dyads will require generalization to typify the dyad as a whole. For all such cases, I take the minimum value of a variable to test the threshold of the lowest-order actor in the relationship. Thus, when examining a pair of states and their regional disparity, I evaluate the dyad from the perspective of the state that has the most regional equality in power.

Additionally, this framework allows me another test of the causal variables of interest by employing current international political economy work in estimating bilateral trade activity in the context of the gravity model. Employing the estimation initiated by Rose (2004) and critiqued by Goldstein, Rivers & Tomz (2007), I use the undirected-dyad framework to estimate the concentration variables using the combined sample-space of the power configuration variables and previous international political economy research. This further test also examines whether regional or global trends exert an independent influence from the international institutions and trade agreements that support trade liberalization.

The third set of estimations are at the country-year level of analysis. Divorcing the data from dyads allows a third robustness check as to whether a country is systematically influenced by regional power structures to trade less or more with all countries as opposed to any specific country. The monadic version of the data can eliminate some level of pair-wise bias that may occur due to non-modeled variables that systematically increase or decrease bilateral trade. This set of data represents the broadest test of the theory as it eliminates controls available in dyadic estimates.

In all estimations, I employ linear regression to estimate either imports or total trade and use

the lag of the dependent variable to estimate trade in the observed year. All models employ robust standard errors in estimation, use dyadic or monadic fixed effects, and use a series of 4-knot, restricted cubic splines to account for temporal trends.[2]

4.1 Dependent Variables

To test the theory, I use three different sets of dependent variables to examine different types of trade measure in different time periods. To begin with, I employ the Correlates of War (COW) data on international trade (version 3.0) (Barbieri, Keshk & Pollins 2009). This data set affords an unparalleled look at cross-temporal trends as it contains data on bilateral trade flows from 1870–2009. This longer look at historical trading is atypical in the trade literature due to the missingness of much cross-spatial economic data prior to World War II. However, given the temporal range of the data, I must make some compromises in estimating this series of trade data. Notably, states did not calculate their Gross Domestic Product (GDP) prior to World War II and GDP is a fundamental component to estimating trade (Isard 1954). Thus, I use GDP substitutes when employing the COW trade data.

I draw a second set of trade variables from Gleditsch's (2002) expanded GDP and trade data. Gleditsch (2002) offers a more complete trade and GDP data set to work with as he filled in the gaps of previous data sets using both original research and imputation techniques. The trade data in this dataset runs from 1950–2000. While the data is more limited in scope, it provides a comparable set of data to estimate GDP as well as offering a secondary check on the models predicting the Correlates of War trade data. In all variations, I use the natural log of trade.

The final dependent variable is the average value of real bilateral trade that Rose (2004) draws from the *International Monetary Fund* (Goldstein, Rivers & Tomz 2007). This series of estimations cover 1948–1999.

[2] I do not report the spline coefficients in the results.

4.2 Regional Power

To include the role of regional power in predicting trade, I construct two different models of regional power considerations. To accomplish this, I start by using the COW Direct Contiguity data (version 3.1); I determine any given state's region by using the most relaxed assumption of contiguity (two states share a border or are within 400 miles of each other over water) to develop the observed states set of neighbors.[3] In terms of power considerations, a state is most affected by those states that can credible deploy military assets within its territory and the immediate neighbors are states that are most likely to have the capacity to accomplish such deployments (Bremer 1992, Lemke 2002). Thus, instead of using a static or artificial region like continents, each country exists in an immediate region of its neighborhood and states rarely have identical neighborhoods. These shifting regions represent different geographic areas of concern for any given state and allow for a regional power to remain uncontested in some regions while contested in others.

For each state's region, I construct two measures. To assess power, I employ the Correlates of War data on National Material Capabilities (version 4.0) that indexes six component measures of total population, urban population, electricity consumption, steel/iron production, military spending, and military personnel (Singer, Bremer & Stuckey 1972, Sarkees & Wayman 2010). The total of these six metrics form the Composite Index of National Capability (CINC) which represents a state's share of the world's total of those six indicators. The CINC score is a common proxy measurement for a state's relative, actual, and potential power in the international system. The first measure of regional dominance takes the most dominant power in its neighborhood and creates a measure of its power relative to the total share of power of the observed state's region ($\frac{Power_i}{Power_{Region}}$). The value for *regional dominance* theoretically ranges from 0 to 1 where lower values suggest relative parity within a region and higher values of the proportion represents a state that possess a

[3] I exclude states without a neighborhood from consideration in the analysis. Constructing an artificial measure of power parity to include such neighbor-less states would require further assumptions about dominance and parity that may not be tenable in the framework of this theoretical perspective.

larger share of all of the power within a region.

The second variable, *disparity*, examines the ratio of the most powerful state in the region as compared to the sum of its power and the second most powerful state in the region ($\frac{Power_i}{Power_i+Power_j}$). The previous metric could be a function of the number of states within a region and may suggest there is parity in a region when there may be one dominant state, but smaller ones that, in sum, rival the regional power's power. This metric examines whether the most powerful state has at least one other regional state that is at or near parity with the regional power. Since I calculated each measure on the observed state, it informs the model whether or not the state has at least two credible states that can exert influence over the observed state. The value of *disparity* ranges from .5 (complete parity) to 1 (complete disparity). Both measures capture different types of parity and act as a dual check on the hypothesis.

4.3 Control Variables

To begin with, I include the gravity model of trade as a standard prediction of bilateral trade between two countries (Anderson 1979, Isard 1954, Bergstrand 1985). Generally, trade between two states is a function of population multiplied by GDP divided by distance. Large populations and economies will trade more than small economies and populations while the distance between two states raises the costs of trade. However, gravity models do vary over whether population should have a positive or negative effect; some models suggest it is a representation of market size while others argue that it represents a higher likelihood of trading less due to self-sufficiency (Martínez-Zarzoso & Nowak-Lehmann 2003, Carrere 2006). Taking the log of both sides of the equation, we expect that the natural log of trade positively correlates with *ln(GDP)* while negatively correlating with *ln(Distance)*; though, given previous research, I have ambiguous expectations about the role of population within the model. When using the Gleditsch (2002) data on trade, I employ Gleditsch's (2002) data on GDP and population for consistency within the same dataset. For both sets of estimations, I use Gleditsch & Ward's (2008) on capitol-to-capitol distance; however, due to the

presence of dyadic fixed effects, the distance variables consistently drop out of the estimations as it is perfectly correlated with the fixed effects binary variables (Goldstein, Rivers & Tomz 2007).

As mentioned in the discussing the dependent variables, the temporal range of GDP covers the post-Cold War era. As a proxy for GDP when using the COW trade data, I employ the CINC score of both countries. While this is not a perfect measure of GDP or economic activity, the CINC scores are heavily correlated with GDP and scholars have traditionally used both metrics to measure state power and capacity (Organski & Kugler 1980, Kim 2010, Allen & DiGiuseppe 2013). Like with GDP, CINC-scores should positively correlate with trade.

Given the regional power hypothesis exists as a mediation variable for the polarity of the global system, it reasonable to include measures to correspond to that. I include two different variables that ascertain different components of global power. First, as is common with previous studies looking at trade patterns (Mansfield 1993*a*, Mansfield 1995), I measure the concentration (*CON*) of power among the major powers in a given year. I calculate system concentration as follows:

$$CON = \sqrt{\frac{\sum P_i^2 - \frac{1}{n}}{1 - \frac{1}{n}}}$$

Where P is the CINC scores of the major powers in a given year and n is the number of major powers in a given year (Singer & Small 1972, Ray & Singer 1973, Mansfield 1993*a*). Higher concentration values indicate that a smaller proportion of major powers hold a larger percentage of relative power for the observed year while lower values indicate a more uniform distribution of power among major powers. CON should correlate positively with trade activity. In addition to systemic concentration, I include the CINC score for the United States ($CINC_{US}$) for each observation as a means to measure the fluctuation in the United States' relative power with the rest of the world. Given that the US CINC score is a component of concentration value, this variable will act as a secondary, modifying variable to the overall effect of global concentration.

A final, necessary control variable is international conflict as derived from the COW interstate

war data (Sarkees & Schafer 2000, Sarkees, Wayman & Singer 2003). The state of the discipline suggests that there is a recursive relationship between trade and conflict as they are mutually causal; theoretical arguments suggest that both trade should effect conflict (Russett & Oneal 2001) and that conflict should cause disruptions in trade (Keshk, Pollins & Reuveny 2004). Given the evidence that conflict does decrease activity, I expect that a state at war is less likely to trade as the conflict consumes resources, land, and is potentially occurring with a major trade partner (as contiguity is a determinant of both factors). Consequently I include a binary variable for whether either state in the dyad is at *War* or, in the monadic data, if the observed state at war during that year; in the dyadic data, either country experiencing a war will be less capable to trade with its partner even if that partner is not at war.

In the Rose (2004) and Goldstein, Rivers & Tomz (2007) estimations, I employ the data used by the previous research that models the average value of real bilateral trade between countries as a function of the natural log of the product of both countries' GDP (*ln(GDP*$_{ij}$*)*), the log of the product of both countries' GDP per capita (*ln(GDPPC*$_{ij}$*))*, a binary variable for joint GATT/WTO membership (*WTO*$_{ij}$), a binary variable that takes the value of one if only one member of the dyad is party to the GATT or WTO (*WTO*$_{i\oplus j}$), a binary variable for if both countries are part of a mutual regional trade agreement (*RTA*$_{ij}$), a binary variable for if the countries belong to distinct RTAs (*RTA*$_{i\oplus j}$), a binvary variable for if both countries are part of a currency union (*Currency Union*$_{ij}$), a binary variable for if either country benefits from the Generalized System of Preferences (*GSP*$_{i\cup j}$), and a final binary variable measuring whether both countries are part of a common colonial relationship (*Colonial*$_{ij}$).[4]

[4]The full model from Rose (2004) also includes the log of distance, if both countries share a common language, if the countries share a land border, the number of countries in the dyad that are landlocked, the number of islands in the dyad, and the log of the product of the two countries' land area; however, due to dyadic fixed effects, these variables drop out of the estimation both in the work done by Goldstein, Rivers & Tomz (2007) and continue to do so in the analysis presented here.

5 Results

*** Table 1 about here ***

Table 1 offers the initial results with directed-dyad years as the unit of analysis.[5] Given that the nature of international trade regimes and theories of economic hierarchy are generally concerned about how actors can encourage other states to reduce or eliminate trade-barriers, examining the role of imports provides information whether or not we see a behavioral adjustment to a change in policy. That is, are people importing and exporting more when tariffs and other trade barriers are lower? Given that the unit of analysis contains directed-dyads, having information about both actors in the dyad is important for estimation purposes. Consequently, country-specific variables contain two entries: one for each member of the dyad.

The first model presents the basic estimation without the independent variables of interest. Across the majority of coefficients, these variables have the expected relationship with imports. CINC scores, replacing the role of GDP, positively correlate with trade for both states; previous imports positively predict trade in the observed period. The log of population is negative which is in line with previous gravity models that account for GDP as it proxies the resistance larger countries have to trade (an absorption effect). The concentration of the power between the major powers in the system positively correlates with trade in each dyad as well whether either country is engaged in a war. The only control variable that is inconsistent with prior expectations may be the CINC score for the United States. As mentioned in the research design, this value is a pseudo-interaction term as the CON value contains information about the United States' score for the majority of the study's time period and acts as a conditional effect upon the magnitude of the CON value. However, it is still worth investigating why the power of the United States associates with less trade. Figure 1 maps the historical values of both CON and the CINC score for the United States.

[5] I have suppressed the results of the temporal splines in this and subsequent tables.

*** Figure 1 about here ***

With Figure 1 plotting the change in the CON and US CINC scores overtime, it becomes evident as to why the two values have an inverted relationship. The US is a rising power when the concentration of power is declining from the end of the 19th century up through the inter-war period. As per the historical record, the end of British hegemony gave way to a brief period of multipolarity and shifting power, economic decline and depression, and a rapid reversal of liberalization. However, in the post-War era, the world remains at a non-War period high for consolidation of major power status. At the same time that the world is consolidating into two, followed by one, super powers, the United States appears to be declining in its power. This is a potential paradox; however, given that the number of states that count as major powers are static (persistently around five major powers in any given year) and the CINC scores are partly a function of the number of states in the international system, this dual effect of concentration and power is understandable. As the post-War era gives way to the rise of the US and the Soviet Union, it is also a period of dramatic decolonization. Thus, the US CINC score rise and decline is deceptive and a more direct measurement of power concentration is the CON score. Notably, this dual relationship between the concentration of power among the major powers and the CINC score of the United States is persistent across all models, unit of analyses, and model specifications.

The two independent variables of interest produce results that are consistent with the hypothesis. The *disparity* variables measuring the difference between the two most powerful states within a region is negative for both countries suggesting that, as disparity increase, the trade flows in the bilateral relationship decrease. *Regional Dominance*$_A$ also produces results consistent with the hypothesis: as a state becomes more dominant in a region relative to all other states in that region, the amount of trade activity by other states in those regions decreases. Figure 2 demonstrates the predicted level of logged imports over the range of *regional dominance* while holding all other variables at their respective in-sample means or modes.

*** Figure 2 about here ***

The mean for logged value of imports is 1.23 and a 1% change in the lagged dependent variable accounts for a 83-84% change in the estimated dependent variable in table 1. Consequently, the remaining variables are functionally capturing how they may affect the year-to-year changes in imports while also taking into account the dyadic fixed effects; this is a small amount of variance not captured by the fixed effects or the lagged trade value. In the case of regional dominance, a change from a competitive region to a dominant region would account for a 9.3% change in the dependent variable, when holding all else equal. While significant, this is potentially underwhelming when compared to the other variables that predict trade activity. This diminished result is likely a function of the larger sample accounting for 136 years of data with variable global trading patterns. Additionally, given the directed-dyadic nature, a stronger effect may be present, but limited as the coefficient accounts for the mean change in the dependent variable over nearly a million different observations. Thus, contextually, capturing a 9% change in trade is more impressive than it would otherwise seem. Given the initial results of both *disparity* and *regional dominance*, the results are promising, but far from conclusive from this initial set of estimations.

*** Table 2 about here ***

For table 2, I employ the Gleditsch (2002) data with the restricted sample space of 1951-2000. The control variables tell a similar story as they did for the previous data with some minor variation in the magnitude of each variable; the exception to this is the concentration variable which takes on a negative coefficient for each of the estimations. This compounds the explanation offered above about the interplay between US power and global power concentration, but it is seemingly only consistent with the Gleditsch trade data as the other two data sets provide a positive concentration coefficient and a negative US score. Beyond the control variables, the variables of interest are consistent in suggesting a negative relationship between power dominance in region and how much the observed country imports. The true range of *disparity* is half that of *dominance*. Thus, a change

from a region of parity to disparity results in approximately the same effect as the change in the value of regional dominance (regional dominance predicts a 1.5 percentage-point higher effect).

*** Table 3 about here ***

The estimations of table 3 ask a different question than the previous two tables as it uses undirected dyads rather than directed dyads. Given this formulation, instead of asking how parity affects imports, we can evaluate how regional parity and disparity impacts total trade. Of note, given that country-specific variables have less meaning in undirected analysis, I use the minimum value of each of the country-specific variables to get at the threshold value for a pair of countries. Therefore, the variables here and in the Gleditsch estimations look at the pair of countries from the perspective of the country that is the weakest (*CINC*), has the smallest population (*ln(pop)*), has the lowest GDP (*ln(Real GDP)*), and has the least dominant region. Thus, higher values on dominance means that both states are at a particular value for dominance or higher. As with table 1, our control variables are consistent.

The dominance variable in table 3 offers a statistically insignificant result for regional dominance that is at odds with the previous estimation and, even if it were significant, the expected effect is minute. Take in isolation, this could be a worrying result, though it may be a factor of looking at the minimal effect of dominance instead of the aggregate or join product of the value or may be that inevitable probability of a false negative in statistical hypothesis testing.

*** Table 4 about here ***

The restricted sample trade estimates are generally more pronounced than the expanded sample in table 3. While *Regional Dominance* in model 3 of table 4 suggests a modest 4.4% reduction in trade from regional dominance, the parity variable suggests a healthy 7.2% reduction in trade from having an asymmetrically dominant power within a region. In these estimates, as well as table 2, there is a consistent negative relationship between global power concentration and trade.

*** Table 5 about here ***

Table 5 offers a unique data set that is separate from tables 1-4 and 6 by examining the (Rose 2004) data originally used to judge the effects of GATT/WTO on bilateral trade patterns. Like tables 3-4, this employs undirected dyads. Here the disparity measure again has a pronounced effect on bilateral trade while regional dominance fails to attain statistical significance. The concentration and US CINC score continue to perform as they did in tables 1 and 3. The control variables do not entirely mirror the results of Goldstein, Rivers & Tomz (2007) as the unilateral WTO, nonreciprocal RTA, and GSP measures become positive when controlling for the three power variables. This suggests some level of mediation effect in regards to power and international organizations and, to some degree, those variables may be capturing the indirect effects of power and power concentration.

*** Table 6 about here ***

Table 6 presents the third unit of analysis: the country year. By eliminating the bilateral trading partners for each country, these estimations examine how being in a region of disparity affects a country's aggregate trade levels. For the full sample, the disparity measure offers a 2.5% reduction in trade while regional dominance predicts twice that effect. While there is a dramatic shift in the magnitudes of the variables, this is not surprising as we are losing pertinent information by collapsing our sample space from 1,000,000 observations to roughly 10,000. The monadic unit of analysis collapses the nuances of bilateral interactions into a single aggregate that ignores the makeup of actual and potential trading partners. Despite this information loss, the coefficients are consistent in their expectations for both imports and trade. Figure 3 illustrates the change in total trade for a single observed country.

*** Figure 3 about here ***

As before, I calculated the predicted total trade for a state that at the respective median and mode for each of the relevant variables. In figure 3, A country in a region of parity engages in over $600 million in trade and a country in a region of disparity loses over $60 million of activity. This mean is low, but it represents the mean case from 1870-2007. In the post-War era, such reductions more than triple that amount where the average trade activity for a country is closer to $2 billion.

6 Discussion and Further Work

The results from this research portray a consistent picture: regions of parity are more conducive to trade activity than regions of disparity. There are a few different ways in which a country may be dominant in its region; I offer two such calculations of dominance here: nearest rival parity and regional dominance. Across most specifications, it is clear that disparity is a more consistent predictor of how regional power structures and hierarchy affect trade. In terms of systemic and major power theories about power and liberalization, this research indicates that such processes are not uniform. If we expect liberalization to increase and decrease with the rise and decline of a single world power, this research indicates that such parabolic rise and declines will be globally bumpy based on local power distributions.

The insight of how regions of parity may assist the aims of a dominant power leads insight into questions of foreign policy. Historical US policy towards Iraq and Iran has, during the Cold War, included a series of balancing acts where the United States attempted to counter the ambitions and growth of one state by building up the opposing rival. In the post-Cold War era, with the collapse of the Soviet Union removing a significant rival to the United States, the policy shifted towards "dual containment" where instead of balance, US policy sought to make sure neither state became more powerful (Lake 1994). Dual containment is less feasible in a world where another global power can undermine your containment policies. Both strategies seek to prevent either state from becoming a significant challenger to the United States or its allies and, by balancing the states

against each other, the US is more capable of having a stronger influence throughout the region.

An additional area that this research speaks to, though not explicitly in theory, is the methodological use of regions. A significant finding of this study suggests that there is an interactive relationship between regions and the larger global political climate; fundamentally, the regional behavior and existence of states is not isolated from global trends and global trends interact differently with different regions. Consequently, this also means that regions are not reliable microcosms for global theories of international relations. In the case of hierarchy, dominant regional powers do not replicate the behavior of dominant global powers and pursue aggressive liberalization; instead, they react to such forces and attempt to free ride when they are capable of doing so. This stark difference suggests that some major power theories need additional context when applied to minor powers.

This research lends itself to multiple areas of future research. Two such implicit suggestions from the assumptions and empirical evidence include bringing in preferences and accounting for flexible hierarchy. The theoretical section of this paper assumes preferences to derive from regional power distributions and works from that assumption. While this is not an unreasonable assumption to make in international relations scholarship (Waltz 1979, Legro & Moravcsik 1999), it is one that is both challengeable and testable. Typically, preferences are difficult to measure and, even when countries publicly announce them, it is unclear whether stated intentions are genuine or a form of misrepresentation. Recent scholarship has dug deeper into some metrics of preference revelation, such as state voting in the United Nations, as a mechanism to identify countries along one or more axes (Reed, Clark, Nordstrom & Hwang 2008, Voeten 2013). Attempting to find the spatial-ideological difference between the United States and regional powers may reveal bumps in the bumps of liberalization—states aligned more with the United States may have less of a suppressing effect upon trade than states that do not align with the United States. Beyond the UN, since state preferences about trade arise domestically (Rogowski 1987), it is possible to derive ideological scores about liberalization from domestic characteristics as well.

Additionally, hierarchy in the global system is not uniform. Even when there is one dominant state, let alone when there is a bipolar system, the extent of that state's reach is going to be dependent upon its relationship with states in every region. According to Lake (2009), the US manages its hierarchical relationships with contractual bargaining and the extent of its influence is dependent upon these contracts. Regions in which the United States is well-entrenched are going to have more pressure for economic and security processes than areas where the United States is less well entrenched. Thus, the concentration of the system is a nuanced measure than a variable that accounts for variation in regional influence.

In both cases, there is a serious case of endogeneity: preferences and relationship with the United States is likely dependent, at least partially, upon the state's relations with other states in the region. Thus, disentangling the incentives derived from power versus those that come from other exogenous sources requires careful consideration.

References

Allen, Michael A & Matthew DiGiuseppe. 2013. "Tightening the Belt: Sovereign Debt and Alliance Formation." *International Studies Quarterly* 57(4):647–659.

Alt, James E, Randall L Calvert & Brian D Humes. 1988. "Reputation and hegemonic stability: A game-theoretic analysis." *American Political Science Review* 82(02):445–466.

Anderson, James E. 1979. "A theoretical foundation for the gravity equation." *American economic review* 69(1):106–116.

Barbieri, Katherine. 1996. "Economic interdependence: A path to peace or a source of interstate conflict?" *Journal of Peace Research* 33(1):29–49.

Barbieri, Katherine, Omar MG Keshk & Brian M Pollins. 2009. "Trading data evaluating our assumptions and coding rules." *Conflict Management and Peace Science* 26(5):471–491.

Bergstrand, Jeffrey H. 1985. "The gravity equation in international trade: some microeconomic foundations and empirical evidence." *The review of economics and statistics* 67(3):474–481.

Bremer, Stuart A. 1992. "Dangerous dyads: conditions affecting the likelihood of interstate war, 1816–1965." *The Journal of Conflict Resolution* 36(2):309–341.

Carrere, Céline. 2006. "Revisiting the effects of regional trade agreements on trade flows with proper specification of the gravity model." *European Economic Review* 50(2):223–247.

Chase-Dunn, Christopher, Yukio Kawano & Benjamin D Brewer. 2000. "Trade globalization since 1795: Waves of integration in the world-system." *American Sociological Review* 65(1):77–95.

Conybeare, John A. 1984. "Public goods, prisoners' dilemmas and the international political economy." *International Studies Quarterly* 28(1):5–22.

Frankel, Jeffrey A, David Romer et al. 1999. "Does trade cause growth?" *American economic review* 89(3):379–399.

Gallagher, J. & R. Robinson. 1953. "The imperialism of free trade." *The Economic History Review* 6(1):1–15.

Gilpin, Robert. 1983. *War and change in world politics*. Cambridge, UK: Cambridge University Press.

Gleditsch, Kristian Skrede & Michael D. Ward. 2008. *Spatial Regression Modes*. Thousand Oaks, CA: Sage.

Gleditsch, K.S. 2002. "Expanded trade and GDP data." *Journal of Conflict Resolution* 46(5):712.

Goldstein, Judith L, Douglas Rivers & Michael Tomz. 2007. "Institutions in International Relations: Understanding the Effects of the GATT and the WTO on World Trade." *International Organization* 61(1):37–67.

Gowa, Joanne. 1989*a*. "Bipolarity, Multipolarity, and Free Trade." *The American Political Science Review* 83(4):1245–1256.

Gowa, Joanne. 1989*b*. "Rational Hegemons, Excludable Goods, and Small Groups: An Epitaph for Hegemonic Stability Theory?" *World Politics: A Quarterly Journal of International Relations* 41(3):307–324.

Grossman, Sanford J & Oliver D Hart. 1983. "An analysis of the principal-agent problem." *Econometrica* 51(1):7–45.

Hirschman, Albert O. 1945. *National power and the structure of foreign trade*. Berkeley, CA: University of California Press.

Isard, Walter. 1954. "Location theory and trade theory: short-run analysis." *The Quarterly Journal of Economics* 68(2):305–320.

Keohane, Robert O. 2005. *After hegemony: Cooperation and discord in the world political economy*. Princeton, NJ: Princeton University Press.

Keohane, Robert O. & Joseph S. Nye. 2001. *Power and interdependence*. 3rd ed. New York, NY: Longman.

Keshk, O.M.G., B.M. Pollins & R. Reuveny. 2004. "Trade still follows the flag: The primacy of politics in a simultaneous model of interdependence and armed conflict." *Journal of Politics* 66(4):1155–1179.

Khalilzad, Zalmay M, Abram N Shulsky, Daniel L Byman, Roger Cliff & David T Orletsky. 1999. *The United States and a Rising China*. Santa Monica, CA: Rand Corporation.

Kim, Hyng Min. 2010. "Comparing Measures of National Power." *International Political Science Review* 31(4):405–427.

Kindleberger, Charles P. 1973. *The World in Depression 1929-39*. Revised and enlarged edition ed. Berkeley: University of California Press.

Krasner, Stephen D. 1976. "State Power and the Structure of International Trade." *World Politics: A Quarterly Journal of International Relations* 28(3):317–347.

Lake, Anthony. 1994. "Confronting backlash states." *Foreign Affairs* 73(2):45–55.

Lake, David A. 1993. "Leadership, hegemony, and the international economy: Naked emperor or tattered monarch with potential?" *International Studies Quarterly* 37(4):459–489.

Lake, David A. 2009. *Hierarchy in International Relations*. Ithaca, NY: Cornell University Press.

Legro, Jeffrey W & Andrew Moravcsik. 1999. "Is anybody still a realist?" *International Security* 24(2):5–55.

Lemke, Douglas. 2002. *Regions of War and Peace*. Cambridge, MA: Cambridge University Press.

Mansfield, Edward D. 1993*a*. "Concentration, Polarity, and the Distribution of Power." *International Studies Quarterly* 37(1):105–128.

Mansfield, Edward D. 1993*b*. "Effects of International Politics on Regionalism in International Trade." *Regional Integration and the Global Trading System* pp. 199–217.

Mansfield, Edward D. 1995. *Power, trade, and war*. Princeton, NJ: Princeton University Press.

Martínez-Zarzoso, Inmaculada & Felicitas Nowak-Lehmann. 2003. "Augmented gravity model: An empirical application to Mercosur-European Union trade flows." *Journal of applied economics* 6(2):291–316.

McKeown, Timothy J. 1983. "Hegemonic stability theory and 19th century tariff levels in Europe." *International Organization* 37(1):73–91.

Melitz, Marc J. 2003. "The impact of trade on intra-industry reallocations and aggregate industry productivity." *Econometrica* 71(6):1695–1725.

Midford, Paul. 1993. "International trade and domestic politics: improving on Rogowski's model of political alignments." *International Organization* 47(4):535–535.

Organski, A.F.K. 1958. *World Poltiics*. New York: Alfred A Knopf.

Organski, A.F.K. & Jacek Kugler. 1980. *The War Ledger*. Chicago: University of Chicago Press.

Ray, James Lee & J David Singer. 1973. "Measuring the concentration of power in the international system." *Sociological Methods & Research* 1(4):403–437.

Reed, William, David H. Clark, Timothy Nordstrom & Wonjae Hwang. 2008. "War, Power, and Bargaining." *Journal of Politics* 70(4):1203–1216.

Rogowski, Ronald. 1987. "Political cleavages and changing exposure to trade." *American Political Science Review* 81(4):1121–1137.

Rose, Andrew. 2004. "Do we really know that the WTO increases trade?" *American Economic Review* 94(1):98–114.

Ross, Stephen A. 1973. The economic theory of agency: The principal's problem. In *The theory of the firm: Critical perspectives on business and management*, ed. Nicolai J. Foss. pp. 81–88.

Russett, Bruce M. & John R. Oneal. 2001. *Triangulating Peace: Democracy, Interdependence, and International Organizations*. New York: Norton.

Sarkees, Meredith R. & Frank Wayman. 2010. *Resort to War, 1816-2007*. Washington: CQ Press.

Sarkees, Meredith Reid, Frank W. Wayman & J. David. Singer. 2003. "Inter-State, Intra-State, and Extra-State Wars: A Comprehensive Look at Their Distribution over Time, 1816-1997." *International Studies Quarterly* 47(1):49–70.

Sarkees, Meredith Reid & Phil Schafer. 2000. "The Correlates of War Data on War: An Update to 1997." *Conflict Management and Peace Science* 18(1):123–144.

Scherrer, Christoph. 1995. "The Commitment to a Liberal World Market Order as a Hegemonie Practice." *Journal of World-Systems Research* 1(4).

Singer, J. David & Melvin Small. 1972. *The Wages of War, 1816-1965: A Statistical Handbook*. New York: John Wiley.

Singer, J. David, Stuart Bremer & John Stuckey. 1972. Capability Distribution, Uncertainty, and Major Power War, 1820-1965. In *Peace, War, and Numbers*, ed. Bruce M. Russett. Beverly Hills, CA: Sage Publications pp. 19–48.

Snidal, Duncan. 1985. "The limits of hegemonic stability theory." *International Organization* 39(4):579–614.

Tullock, Gordon. 1967. "The welfare costs of tariffs, monopolies, and theft." *Economic Inquiry* 5(3):224–232.

Voeten, Erik. 2013. Data and Analyses of Voting in the United Nations General Assembly. In *Routledge Handbook of International Organization*. Routledge pp. 54–66.

Wallerstein, Immanuel M. 2000. The Rise and Future Demise of the World Capitalist System: Concepts for Comparative Analysis. In *The Essential Wallerstein*, ed. Immanuel M. Wallerstein. New York: The New Press pp. 71–105.

Waltz, Kenneth N. 1979. *Theory of international politics*. New York, NY: McGraw Hill.

Yarbrough, Beth V & Robert M Yarbrough. 1987. "Institutions for the governance of opportunism in international trade." *Journal of Economics & Organization* 3:129.

Table 1: Predicting Imports using Correlates of War Trade Data, 1871–2001

	(1) Imports AB	(2) Imports AB	(3) Imports AB
Disparity$_A$		-0.144***	
		(0.0175)	
Disparity$_B$		-0.149***	
		(0.0189)	
Regional Dominance$_A$			-0.0930***
			(0.0124)
Regional Dominance$_B$			-0.110***
			(0.0125)
CINC$_A$	1.083***	1.157***	1.170***
	(0.145)	(0.163)	(0.148)
CINC$_B$	1.248***	1.315***	1.344***
	(0.149)	(0.171)	(0.152)
CON	0.174***	0.168***	0.180***
	(0.0233)	(0.0276)	(0.0247)
CINC$_{US}$	-0.700***	-0.886***	-0.750***
	(0.0273)	(0.0325)	(0.0283)
ln(pop)$_A$	-0.0652***	-0.0687***	-0.0706***
	(0.00516)	(0.00578)	(0.00534)
ln(pop)$_B$	-0.115***	-0.125***	-0.122***
	(0.00556)	(0.00633)	(0.00573)
War	-0.0656***	-0.0710***	-0.0654***
	(0.00247)	(0.00277)	(0.00256)
ln(imports)$_{t-1}$	0.837***	0.831***	0.833***
	(0.00177)	(0.00202)	(0.00184)
Constant	-20.58***	-21.00***	-20.48***
	(0.347)	(0.394)	(0.354)
R^2	0.828	0.822	0.825
Observations	1027605	826422	976455

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; two-tailed significance tests for all variables.

Table 2: Predicting Imports using Gleditsch's Expanded Trade Data, 1951–2000

	(1) Imports AB	(2) Imports AB	(3) Imports AB
Disparity$_A$		-0.185***	
		(0.0168)	
Disparity$_B$		-0.183***	
		(0.0176)	
Regional Dominance$_A$			-0.108***
			(0.0115)
Regional Dominance$_B$			-0.0986***
			(0.0117)
CON	-0.0850***	-0.0966***	-0.0602**
	(0.0224)	(0.0278)	(0.0235)
CINC$_{US}$	-0.464***	-0.486***	-0.491***
	(0.0413)	(0.0503)	(0.0435)
ln(GDP)$_A$	0.0804***	0.0813***	0.0812***
	(0.00233)	(0.00262)	(0.00239)
ln(GDP)$_B$	0.0936***	0.0960***	0.0950***
	(0.00257)	(0.00297)	(0.00266)
ln(pop)$_A$	-0.0965***	-0.0955***	-0.101***
	(0.00521)	(0.00593)	(0.00541)
ln(pop)$_B$	-0.127***	-0.130***	-0.132***
	(0.00551)	(0.00636)	(0.00571)
War	-0.0497***	-0.0532***	-0.0492***
	(0.00214)	(0.00244)	(0.00220)
ln(imports)$_{t-1}$	0.810***	0.798***	0.806***
	(0.00196)	(0.00226)	(0.00203)
Constant	-9.126***	-11.84***	-8.829***
	(0.754)	(0.917)	(0.794)
R^2	0.772	0.760	0.769
Observations	1006160	783636	957572

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; two-tailed significance tests for all variables.

Table 3: Predicting Total Trade using Correlates of War Trade Data, 1871–2001

	(1) Total Trade	(2) Total Trade	(3) Total Trade
Disparity$_{min}$		-0.0514**	
		(0.0247)	
Regional Dominance$_{min}$			-0.000150
			(0.0208)
CINC$_{min}$	4.772***	4.653***	4.714***
	(1.047)	(1.167)	(1.043)
CON	0.181***	0.183***	0.165***
	(0.0357)	(0.0422)	(0.0378)
CINC$_{US}$	-0.898***	-1.042***	-0.985***
	(0.0411)	(0.0492)	(0.0427)
ln(pop)$_{min}$	-0.0534***	-0.0513***	-0.0603***
	(0.00750)	(0.00852)	(0.00780)
War	-0.0783***	-0.0853***	-0.0795***
	(0.00374)	(0.00417)	(0.00386)
ln(Total trade)$_{t-1}$	0.833***	0.829***	0.830***
	(0.00231)	(0.00264)	(0.00241)
Constant	-19.70***	-20.20***	-19.81***
	(0.485)	(0.561)	(0.493)
R^2	0.844	0.838	0.841
Observations	490646	395665	466019

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; two-tailed significance tests for all variables.

Table 4: Predicting Total Trade using Gleditsch's Expanded Trade Data, 1951–2000

	(1) Total Trade	(2) Total Trade	(3) Total Trade
Disparity$_{min}$		-0.144***	
		(0.0221)	
Regional Dominance$_{min}$			-0.0439**
			(0.0172)
CON	-0.167***	-0.184***	-0.168***
	(0.0330)	(0.0410)	(0.0347)
CINC$_{US}$	-0.606***	-0.661***	-0.648***
	(0.0634)	(0.0773)	(0.0667)
ln(Real GDP)$_{min}$	0.0972***	0.102***	0.101***
	(0.00383)	(0.00443)	(0.00396)
ln(pop)$_{min}$	-0.0815***	-0.0720***	-0.0881***
	(0.00786)	(0.00892)	(0.00820)
War	-0.0593***	-0.0624***	-0.0594***
	(0.00310)	(0.00354)	(0.00318)
ln(Total trade) $_{t-1}$	0.820***	0.808***	0.816***
	(0.00240)	(0.00280)	(0.00249)
Constant	-15.20***	-17.45***	-15.36***
	(1.061)	(1.295)	(1.119)
R^2	0.794	0.782	0.792
Observations	503080	391818	478786

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; two-tailed significance tests for all variables.

Table 5: Predicting Average Total Trade using Rose (2004) and Goldstein, Rivers, and Tomz (2007), 1948–1999

	(1) Total Trade	(2) Total Trade	(3) Total Trade
Disparity$_{min}$		-0.831***	
		(0.166)	
Regional Dominance$_{min}$			0.0453
			(0.144)
CON	0.746***	0.732**	0.826***
	(0.263)	(0.302)	(0.270)
CINC$_{US}$	-5.544***	-5.301***	-5.803***
	(0.462)	(0.539)	(0.484)
ln(GDP$_{ij}$)	0.482***	0.516***	0.495***
	(0.0507)	(0.0563)	(0.0520)
ln(GDPPC$_{ij}$)	0.176***	0.117**	0.154***
	(0.0489)	(0.0547)	(0.0503)
WTO$_{ij}$	0.209***	0.227***	0.242***
	(0.0494)	(0.0563)	(0.0499)
WTO$_{i\oplus j}$	0.103**	0.116**	0.135***
	(0.0446)	(0.0510)	(0.0449)
RTA$_{ij}$	0.767***	0.452***	0.723***
	(0.102)	(0.119)	(0.104)
RTA$_{i\oplus j}$	0.00494	0.0723**	0.0184
	(0.0224)	(0.0304)	(0.0248)
Currency Union$_{ij}$	0.723***	0.478***	0.536***
	(0.138)	(0.156)	(0.136)
GSP$_{i\cup j}$	0.154***	0.138***	0.120***
	(0.0281)	(0.0313)	(0.0285)
Colonial$_{ij}$	-3.081***	-3.361***	-3.069***
	(0.0285)	(0.0265)	(0.0281)
Constant	52.05***	40.53***	51.23***
	(8.043)	(9.334)	(8.532)
R^2	0.110	0.107	0.112
Observations	206358	161781	194380

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; two-tailed significance tests for all variables.

Table 6: Predicting Monadic Trade Activity

	(1) Imports COW	(2) Imports COW	(3) Total Trade	(4) Total Trade
Disparity	-0.498***		-0.521***	
	(0.170)		(0.184)	
Regional Dominance		-0.496***		-0.504***
		(0.132)		(0.138)
CINC_A	0.423	0.588	0.116	0.279
	(1.094)	(1.055)	(1.219)	(1.173)
CON	2.995***	3.035***	3.368***	3.407***
	(0.281)	(0.282)	(0.302)	(0.303)
CINC_{US}	-1.240***	-1.272***	-1.068**	-1.098***
	(0.387)	(0.386)	(0.426)	(0.420)
ln(pop)	0.107***	0.0812**	0.123***	0.0973**
	(0.0379)	(0.0385)	(0.0388)	(0.0401)
War	-0.383***	-0.380***	-0.410***	-0.407***
	(0.0843)	(0.0846)	(0.0899)	(0.0903)
$\ln(\text{imports})_{t-1}$	0.751***	0.749***		
	(0.0153)	(0.0151)		
$\ln(\text{total trade})_{t-1}$			0.767***	0.765***
			(0.0155)	(0.0152)
Constant	4.180	3.191	7.788**	6.776**
	(2.917)	(2.869)	(3.047)	(2.982)
R^2	0.905	0.905	0.899	0.899
Observations	10515	10515	10515	10515

Standard errors in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$; two-tailed significance tests for all variables.

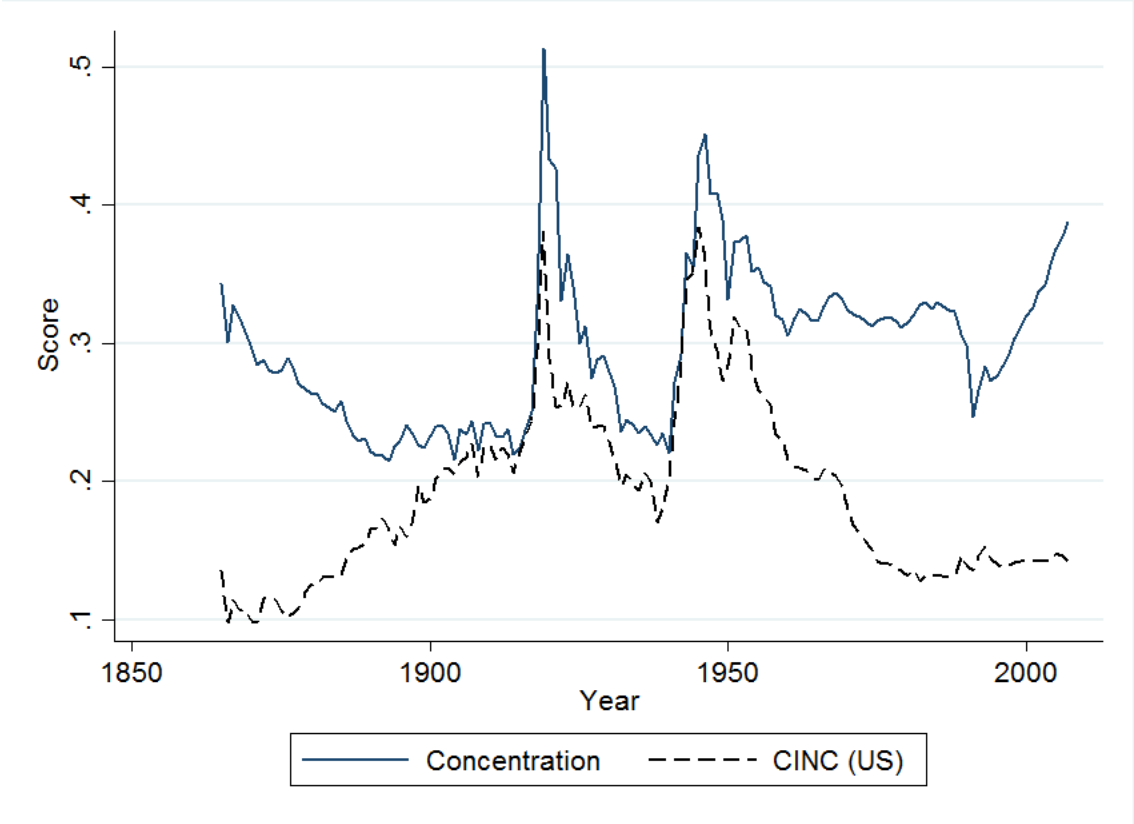

Figure 1: The Change in US CINC and Major Power Concentration Scores

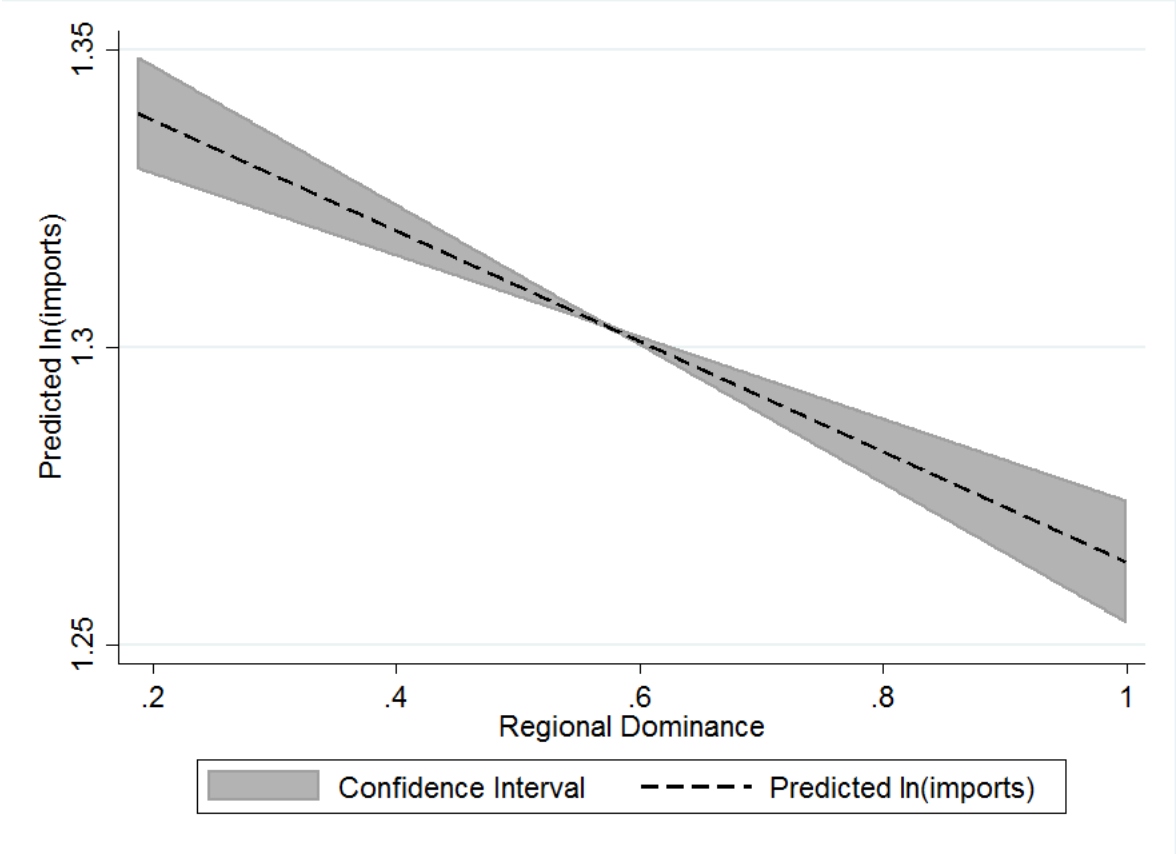

Figure 2: The effect changes in regional dominance values have on the change in imports

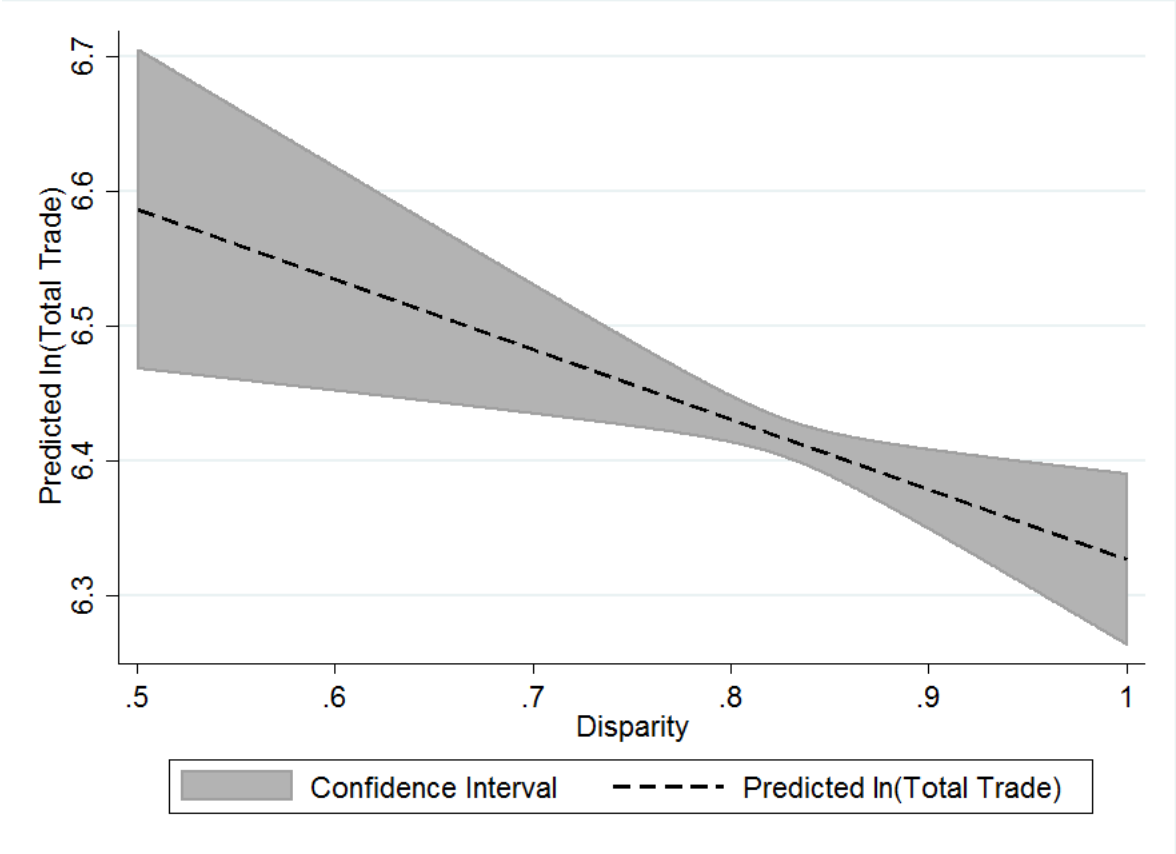

Figure 3: The effect changes in regional dominance values have on the change in total trade