

Global Economic Expansion and the Prevalence of Militarized Interstate Disputes

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Table of Contents

Abstract	3
Introduction	4
Literature Review	4
“The Golden Arches Theory of Conflict Prevention”	4
The Kantian Triangle	5
Steven Pinker’s Decline of Violence and the “New Peace”	7
Why States Fail and Conflict Occurs	8
Economic Factors Leading to Decreased Militarized Interstate Disputes	9
Economic Factors Leading to Increased Militarized Interstate Disputes.....	14
Specific Findings of Related Studies	17
Closing Remarks on the Literature Review	21
Analysis Part # 1 & 2	22
Analysis Part # 1	22
Analysis Part # 2	24
Research Design.....	28
Dependent Variables (cwmid or cwhostd).....	30
Independent Variables.....	31
Hypotheses	35
Results - Analysis Part # 3	36
<i>cwmid</i> Logit Analysis.....	36
<i>cwhostd</i> Regression Analysis.....	39
Other General Results	40
Limitations and Further Research	40
Conclusion	41
Endnotes.....	46
Appendices.....	47
References	50

ABSTRACT

Over the past several decades the entire world has experienced both the positive and negative effects of globalization. The question that this report will address is whether or not global economic expansion has led to a decline in the prevalence of militarized interstate disputes (MIDs) and what factors influence the prevalence of MIDs. This report will take an in-depth look at Thomas Friedman's "Golden Arches Theory of Conflict Prevention". It also includes a quantitative analysis in which regression techniques were used to see how different economic factors influence the prevalence of MIDs, while also introducing a previously unused independent variable that reflects how the presence of multinational corporations within a nation's economy influences the prevalence of violent conflicts. Results indicate that variables representing contiguity, the lower trade share, and FDI have significant effects on the prevalence of conflict. Furthermore, while the theoretical underpinnings behind Friedman's theory appear to be partially correct, empirical analysis of the influence of multinational corporations on the prevalence of conflict yielded no significant conclusions.

INTRODUCTION

Over the course of the last century, the spread of globalization throughout the world has created a more complex global economic system along with increasingly complicated geopolitics. The benefits and the costs of globalization are thus debated constantly in nations throughout the world. One such argument about globalization deals with whether or not increasing global interconnectedness and interdependence has led to what is now being called the New Liberal Peace. At its most fundamental level, the New Liberal Peace suggests that the economic benefits of globalization are decreasing violent militarized interstate disputes (MIDs) throughout the modern world.

As will be demonstrated in the literature review, there are many studies that examine multiple factors and their influence on the prevalence of conflict. One unique lens through which to look at this field of study is through Thomas Friedman's "Golden Arches Theory of Conflict Prevention". This theory will be analyzed extensively throughout this report and is introduced in the following literature review. The literature reviewed is followed by an empirical analysis based on both previous studies and Friedman's theory.

LITERATURE REVIEW

"The Golden Arches Theory of Conflict Prevention"

There is a vast body of literature that debates the existence of the New Liberal Peace and what economic factors may or may not be causing a decline in MIDs. One such argument is highlighted in Thomas Friedman's book, *The Lexus and the Olive Tree*. In this book, Friedman proposes a theory equivalent to the New Liberal Peace hypothesis which he calls the "Golden Arches Theory of Conflict Prevention". This theory is based on his observation that; "no two countries that both had McDonald's had fought a war against each other since each got its McDonald's" (Friedman 1999, 248). Surprisingly, this observation has held for a number of years with only a few exceptions. Furthermore, this observation led him to theorize that once a nation's economy has grown enough to support a middle-class and to be integrated into global markets and industries that, that nation would be more conflict adverse and thus, avoid engaging in interstate disputes with another nation. In essence, economic integration as symbolized by the presence of a McDonalds, raised the cost of warfare for both nation-states. As he puts it; "today's

version of globalization significantly raises the costs of countries using war as a means to pursue honor, react to fears or advance their interests” (Friedman 1999, 250).

Basically, as a nation becomes more economically interconnected and interdependent¹, the effects of going to war have substantial negative consequences on a nation’s economy. Going to war creates lost welfare for the citizens of that nation and it is this lost welfare that discourages a nation from engaging in warfare. Furthermore, the amount of lost welfare has grown substantially over the years as globalization has created economic ties between nations that promotes a great deal of economic development, growth, and increased standards of living. Friedman also pointed out that he was not the first to come up with this basic theory. While discussing the expansion of international trade, eighteenth century philosopher Montesquieu, stated; “happy it is for men that they are in a situation in which, though their passions prompt them to be wicked, it is, nevertheless, to their interest to be humane and virtuous” (Friedman 1999, 249). Just like Friedman, Montesquieu suggests that there is a significant cost in engaging in “wicked” or violent behavior. Thus, it is this cost that inherently forces individuals or states to foster good relationships with others.

Friedman’s theory has been widely debated since it was first proposed in 1999. As will be discussed throughout this literature review, there are many intellectuals that support his hypothesis. However, there are also many that argue instead that increased interconnectedness and interdependence, as brought about by globalization, actually creates more violent conflicts between states. Friedman did not completely ignore this possibility. He claimed that there will always be states that will engage in wars for seemingly bad or irrational reasons. However, he seemed to believe that the economic benefits of globalization would ultimately decrease the likelihood of this occurring in the future (Friedman 1999).

The Kantian Triangle

Friedman’s hypothesis of declines in violent interstate conflict primarily takes into account economic factors. However, it has been suggested that this proposed decline in violence could be due to a number of different factors. Oneal and Russett (1997) suggest that Immanuel Kant’s essay, *Perpetual Peace: A Philosophical Sketch*, highlights three broad factors that have created a less conflict prone world. They summarize Kant’s writings by claiming that the prevalence of

peace is dependent on the three complementary “points” of the Kantian Triangle. These three points include (1) representative democracy, (2) international law and organization, and (3) economic interdependence. This clearly suggests that there may not be any single factor that has led to the possible declines in violence throughout the world. Rather, it is a combination of many different factors that work in conjunction with one another and that are greatly influenced by the prevalence of globalization².

Russett (2014) claims that the representative democracy factor and the economic interdependence factor are of particular interest when discussing potential declines in violence between states. His studies have attempted to show that a greater proportion of democracies as a system of governance along with the expansion of free markets and international trade has had a “strong pacifying effect”. He uses Europe and the Middle East as an example for these claims. Europe for example, has seen a decline in warfare since the end of the World Wars as democratic systems of governance have been put into place and the principles of capitalism and free markets have spread. On the other hand, during this same period of time, the Middle East has remained one of the most violent places in the world. He suggests that this may be partly because of the lack of democracies and strong free market capitalism³ (30-31).

On a related note, Pinker (2014, 311) suggests that countries that have an excess of easily monopolized, nonrenewable natural resources will be more prone to violence as they generally have poor government institutions and slow economic growth rates. This clearly demonstrates how all of these factors are interconnected. Bad governments lead to poor economic systems and economic qualities can potentially lead to more corruption within government. Both of which can result in more violence.

There has been a number of studies that have looked at each point of the Kantian Triangle as well as their influence on the prevalence of conflict as a whole. Oneal et al. (2003) found that by increasing the level of democracy within a nation’s system of governance, the chance of a fatal dispute can be reduced by up to 86%. They also found that increasing economic trade can reduce conflict by up to 32%. Furthermore, their study showed that by increasing a nation’s involvement in intergovernmental organizations (IGOs) from the tenth to ninetieth percentile, the potential for a fatal dispute is reduced by 43%. According to this study, when all three points of the triangle are taken together, the potential for a fatal dispute between nations can be reduced by up to 95%.

In another similar study, Russett et al. (1998) found that together, all the points of the Kantian Triangle could reduce the possibility of violent conflict by 72%. Either way, it seems clear that these three factors play a significant role in helping to reduce conflict.

Before going any further it is necessary to first establish whether or not the world has actually seen a decline in violence associated with warfare over the last century. Once this has been established one can then begin to take a closer look into the causes of increasing or decreasing violence.

Steven Pinker's Decline of Violence and the "New Peace"

Steven Pinker's book, *The Better Angels of our Nature*, analyzes many reasons why different kinds of violence have declined throughout the world over the last several decades. Furthermore, he has created the term the "New Peace" to describe these declines.

Pinker begins by breaking down "mass violence" into three main categories: (1) state-based conflicts; (2) non-state or inter-communal conflict; (3) and one-side violence. For the purposes of this report we will only be concerned with the prevalence of state-based conflicts and the broader concept of militarized interstate disputes.

Pinker then breaks the state-based conflict category down into sub-categories including: (1) interstate wars in which two separate nations or governments fight against one another; (2) extrastate wars in which a government fights against an entity that is not a recognized state or government; and (3) intrastate wars in which a government fights against an internal rebellion (this includes civil wars). Furthermore, Pinker defines a "war" according to the definition used by the Correlates of War Project which states that a war is a conflict that has 1,000 or more direct battle deaths in one year (Pinker 2011, 298-299).

With the different types of conflict and wars defined, Pinker highlights several important findings that clearly show that in most cases, warfare throughout the world is on the decline. His data shows that annual battle deaths have declined in number from around 500,000 per year in the late 1940s to roughly 30,000 per year in the 2000s. In other words, annual battle deaths have declined over this sixty-year span by roughly 90% (Pinker 2011, 302). Furthermore, he shows that these declines are a direct result of a significant decrease in both the number and more

importantly, the intensity of interstate wars. He also shows that extrastate wars have all but vanished. The one type of warfare that has remained and become more prevalent, is the intrastate or civil war. Pinker's research also shows that the "average armed conflict" in the 1950s was responsible for the deaths of roughly 33,000 people. However by 2007, the "average armed conflict" was responsible for the deaths of less than 1,000 people (Pinker 2011, 305). Again this shows that the intensity of warfare has declined precipitously.

Another key point that Pinker's data and research shows is that the wars that do take place today are primarily in undeveloped countries. Intrastate civil wars are particularly prevalent in these countries. He argues that it is extremely difficult to tell whether or not poverty causes violent warfare or if warfare causes poverty. This takes us back to the concepts of the Kantian Triangle. What most poor and undeveloped nations lack is a sound system of governance and capitalist markets that function efficiently. Hence, there is more violence. Many poor countries actually have an abundance of natural resources that they could use to build up their economies and nations. However, with corrupt governments (often led by dictators) and markets that are subject to the inefficiencies of this corruption, progress is scarce and violence prevails (Pinker 2011, 305).

Overall, Pinker's book demonstrates that; "a world less invigorated by honor, glory, and ideology and more tempted by the pleasures of the bourgeois life is a world in which fewer people are killed" (Pinker 2011, 309). This quote not only highlights the concept that violence is on the decline but also, goes back to Friedman's point about the increasing costs of warfare. People will do more and more today to preserve their current state of welfare or the "pleasures of the bourgeois life". Actions taken which lead to violence, decrease this state of welfare and thus, because of this increased cost, people are choosing to avoid warfare as much as possible.

Why States Fail and Conflict Occurs

Before going into a detailed discussion of the economic factors that may decrease MIDs, it is worthwhile to note some of the more general factors that lead to state failure and violent conflict. Shearer et al. (2010) highlight the work of the State Failure Task Force created in 1994 by the Central Intelligence Agency. This group came up with thirteen "macro-structural indicators" to recognize instability within a nation and thus, the potential for violent conflict to occur. These

thirteen indicators can be broken down into four broad categories of factors which include political, military, economic, and social factors. More specifically, the thirteen identified factors are; civil liberties, democracy, political rights, conflict history, male unemployment, GDP per capita, trade openness, adult male literacy, caloric intake, ethnic diversity, infant mortality, life expectancy and religious diversity (19). Many of these indicators are not all that surprising. Furthermore, it is important to realize that anyone of these indicators alone may not be enough to cause violent conflict. However, when multiple of these factors are taken together, conflict may ensue.

Aside from these internal sources that may cause state failure there are two primary external reasons why one state may engage another state in a MID. These external reasons include potential gains or rewards and national security. The potential to “reap the spoils of war” has been a catalyst for conflict for hundreds of years as the desire to acquire wealth through violence can be seen in wars from the Medieval Ages all the way up to modern imperialism. However, as has been pointed out already, these potential gains have decreased significantly in comparison to the relative cost of warfare over the last century (Gat 2009).

The second external reason why states may engage in conflict has to do with national security. If a state feels threatened, it may engage in conflict in order to simply pre-empt an attack that they see as being highly probable in their future. The Cold War and the United States’ response to the September 11th, 2001 terrorist attacks are perfect examples of a nation responding to national security concerns. Furthermore, as Gat (2009) points out, nations will respond with force to small infringements simply because the lack of a response may demonstrate weakness. In this case, perceptions are everything and certain violations cannot be tolerated simply because they may encourage escalating violations in the future (590).

Economic Factors Leading to Decreased Militarized Interstate Disputes

The following section will highlight six different economic factors that are potentially leading to a decline in MIDs. These six factors include: (1) The increased costs of war and lost welfare, (2) the presence of democracy⁴, (3) strength of international trade, (4) improved interstate connections and increased foreign direct investment (5) free trade agreements and globalization, and (6) the spread of multinational corporations.

1. The Increased Costs of War and Lost Welfare

As discussed earlier, nations are increasingly avoiding MIDs for the simple reason that this kind of violent conflict has more costs than benefits. In essence, engaging in conflict results in a net loss in national welfare and decreased standards of living for individual citizens. As Gat (2009) points out, this cost has risen substantially over time:

Cultivation greatly increased the material costs of fighting....resources ravaged by and invested in war thus constituted a new, massive addition to the cost of fighting. Whereas among hunter-gathers the struggle for resources approximated a zero-sum game, wherein resource quantity remained generally unaffected, fighting now invariably decreased the sum total of resources, at least so long as the fighting went on (GAT 2009, 585).

This concept can be extended even further as agricultural based economies transformed into manufacturing economies and as manufacturing economies transformed into service economies. Each progressive step incorporated the new and old economies together and this development brought about higher standards of living. Thus, conflict that could potentially set back this economic development now comes at a much higher cost. The principles of rationality suggest that no nation would engage in a conflict if the costs to the nation exceeded the benefits. It is thus argued that greater economic interconnectedness has led to a decline in MIDs.

2. The Presence of Democracy

Building off the cost concept as outlined above, nations with a democratic system of governance engage in less MIDs because of the choices of rational voters. Many studies have shown that there is in fact a relationship between the presence of democracies and the occurrence of less violent conflict. This may be because democracies are an extremely effective form of governance that provides strong infrastructures and financial and legal institutions. All of these things together help to create an environment where markets can theoretically operate efficiently. However, this is not to say that democracies are all peaceful. There has also been a number of studies that have shown that certain democracies can engage in just as many violent conflicts as a country with a system of governance controlled by a dictator.

It is also important to note that the presence of a democracy alone does not necessarily mean less conflict. Regression analyses done by Mousseau et al. (2003) show that when democracy exists

but economic development is absent, there is no significant decline in conflict. Similarly, when economic development is present but there is no democratic system of governance, there is also no significant decline in conflict. These results clearly suggest that the effects of the economic and political spheres are intrinsically related.

Mousseau et al. (2003) go on to state that overall, constituencies force elected leaders to implement foreign policies that promote peace, international law, and an “equitable global order”. These concepts in combination with providing the institutional foundations for economic development have led democracies to play an important role in the decline of violence throughout the world.

3. Strength of International Trade

One of the most widely debated conflict reducing factors is the role of international trade. There are four general views on the role of international trade and all of them are backed, to some extent, with empirical evidence. These four views are: (1) that trade promotes peace, (2) trade promotes peace in certain situations and stimulates conflict in other situations, (3) that trade promotes conflict, and (4) that there is no relationship between trade and conflict (Barbieri, 1996). This section will address the first view while the second and third view will be discussed later on. The fourth view was mentioned for the reader’s benefit but, will not be discussed as it has the least theoretical and empirical support.

The concept that trade promotes peace combines the concepts of welfare costs and democracies as discussed in the previous two subsections. In general, states will do everything in their power to avoid engaging in a MID with a trading partner. Such a dispute would likely result in the complete halt of trade between the two nations and thus, lost welfare for both nations.

Furthermore, it has been argued that democracy and trade have a special relationship in that the presence of one supports the other. It has also been argued that trade helps to create stronger friendships between nations and to foster a greater sense of community. This in and of itself helps to prevent conflict (Barbieri and Schneider 1999).

Studies thus show that the greater the imports, exports, and total trade between two nations, the lower the chance that those two countries will engage in a MID. As Oneal and Russett (1997) point out, militarized conflict would cause importers to suffer as they would not be able to

acquire the supplies and products they need to do business. Similarly, exporters would lose a substantial amount of revenue as they would not be able to sell their products. Furthermore, the nations involved in the conflict may be forced to switch to higher-cost suppliers in different nations. These higher costs not only result in lost welfare but, could be easily avoided by refraining from conflict (270). Studies have also suggested the balance of trade between two nations is just as important as the absolute amount of trade. As will be discussed later, if there is an asymmetrical trade relationship between two nations, the possibility of conflict actually increases.

4. Improved Interstate Connections and Increased Foreign Direct Investment

Tast (2014) points out that today's system of international trade is intrinsically dependent on Foreign Direct Investment (FDI) and the presence of Transnational Corporations (TNCs). His research claims that FDI is now growing at a faster rate than world trade. His research also shows that the growth of large transnational corporations is driving both international capital flows and international trade (122). Thus, it can be argued that (in a similar manner to trade in general) increased FDI and the number of TNCs between and within any two given nations can lead to a decline in MIDs.

Along with expansions in international trade, FDI, and the number of TNCs, many countries have benefited from improved political and economic ties between each other. As Barbieri (1996, 31) points out, interstate relations help to mediate conflicts between nations by reducing cultural misunderstandings and improving communication. TNCs play a very significant role in all of this. As production becomes spread out over more and more nations, management has to learn how to both sell their products in different cultures and incorporate foreign workers into the business. Greater understanding of different cultures and the increased welfare of all nations involved helps to decrease violence between states.

5. Free Trade Agreements and Globalization

All of the previous subsections are interrelated with the increase in the number of Free Trade Agreements (FTAs) and the overall presence of globalization. As Urata (2002, 20) highlights, globalization has spread rapidly as a direct result of liberalized trade, deregulation, privatization, cheaper and more efficient forms of transportation and communication, and trade agreements

such as GATT. Many of these factors, which were brought about by globalization, have decreased the prevalence of militarized disputes. Many argue that the greatest risk for violent conflict comes from nations, such as Iran and North Korea, who have completely resisted the changes brought about by globalization. At this point it should be abundantly clear that all of the previously discussed factors are inherently interrelated and all linked to the rise and spread of globalization throughout the world.

6. The Spread of Multinational Corporations

As discussed earlier, Thomas Friedman suggests that corporations, such as McDonalds symbolize economic expansion, the growth of the middle class, and a rise in standards of living. It is these positive economic benefits, set off by the presence and success of large multinational corporations, that he suggests leads to a decline in interstate warfare. While many authors have looked at economic factors such as trade and GDP and their influence on the prevalence of violence or MIDs, few have looked specifically at how the presence of corporations within a nation influences violence or MIDs involving that particular nation. Indeed, there is no empirical evidence to show specifically that the presence of large multinational corporations leads to a decrease in violence as Friedman suggests.

However, there is a great deal of theoretical support for Friedman's hypothesis. As Orts (2002) points out, there are many multinational corporations throughout the world that are now larger and more powerful than certain nation-states. This absolute size and sheer power leads to a great deal of corporate influence in both the social and political realms. It is this influence that allows large multinational corporations to steer nations into or away from violent conflict and ultimately war. Thus, it has become very important in this era of globalization for corporations to develop their own foreign policies.

Another key point that Orts (2002) raises is that while trade is often argued to have an influence on the prevalence of violent conflict, it is important to note trade is really between corporate entities and not specifically nation-states. Furthermore, corporations will almost always do what will maximize profit for their shareholders. Thus, unless the corporation is in the defense industry, corporations maximize their profits in times of peace and thus, maintaining peace is critical.

Fort and Schipani (2002) claim that there are three primary ways by which the presence of corporations can lead to greater peace. The first thing that corporations do that could lead to greater peace is stimulating communication. Enhanced communication between both corporate and political leaders can lead to more conflict resolution. Second, as already discussed extensively, corporations encourage peace by stimulating economic development. Finally, corporations play a key role in stimulating peace by modeling effective governance structures that allow things to get done with the least amount of conflict. In general, corporations need and thus support things such as governance, stability, and ethical values. All of these, in turn, also help to promote peace between different nations.

One final point made by Fort and Schipani (2002) has to do with large corporation's ability to "humanize adversaries". Corporations that do business in multiple nations must get to know and try to understand the people and cultures of the nations that they hope to conduct business in successfully. By taking the time to do this, boundaries and misunderstandings between different nations and peoples have the potential to be worked out and thus, violent conflict may be avoided.

While there is not really any direct empirical evidence that suggests that the presence of large multinational corporations within a nation reduces MIDs, there is empirical evidence that suggests that the presence of large, successful corporations leads to improved macroeconomic indicators/factors. There is also empirical evidence suggesting that strong macroeconomic indicators/factors leads to reduced violent conflict or MIDs. Thus, if Friedman is correct in his hypothesis, there should be a transitive relationship here in which the presence of large transnational corporations does in fact lead to a decrease in violent conflict. While this is a theoretical speculation, the empirical analysis later in this paper will attempt to see if Friedman's hypothesis is indeed correct.

Economic Factors Leading to Increased Militarized Interstate Disputes

Running counter to the arguments that global economic expansion has led to a decline in MIDs throughout the world, there is a large body of literature that claims the exact opposite. In particular, some authors argue that the recent declines that have been observed are a direct result of a decline in conflict after major spikes during the World Wars and the Cold War. The

following section will highlight four different economic factors that are potentially leading to an increase in MIDs. These four factors include: (1) imperialism and resources, (2) the “War-Chest Proposition”, (3) Neo-Marxist views on asymmetrical trade, and (4) interdependence versus interconnectedness.

1. Imperialism and Resources

The presence of imperialism between the 17th and early 20th centuries was, in a way, a precursor to globalization today. During this period of time the most developed nations worked to expand their empires and in doing so, began to connect the people of the world for the first time.

However, while there were many positive benefits of this expansion, there were also many negative happenings that led to violent conflict. As Arquilla (2009, 73) frames it imperialism involved commercial practices (often supported by military force) that took advantage of the colonized people and ultimately destroyed their way of life. Thus, the increased economic expansion that was brought about in order to build the empire, often led to violent encounters.

More specifically, imperialism and the conquest of particular regions was often done in an effort to gain access to that region’s natural resources. Authors such as Schneider (2014) state that undeveloped nations or regions are often subject to what he refers to as the “domestic resource curse”. Basically, during the times of imperialism, the more powerful nations would go to undeveloped areas and take whatever they wanted or needed from areas that were rich with resources⁵. This often involved a great deal of conflict and the native people were often exploited. In modern times, the presence of significant caches of national resources, particularly in Africa, has been shown to lead to violence as corrupt governments and warlords take advantage of those native to the area. Additionally, as Barbieri (1996) points out, conflict over resources may not be limited to an imperialist nation’s encounter with the undeveloped region. Violent conflict can also exist between the multiple nations that are competing to gain access or control over natural resources in a given area.

2. The “War Chest Proposition”

Building on the previous discussion, Boehmer (2010) proposes something that he calls the “War-Chest Proposition”. He states that economic growth can lead to increased military/defense spending and that this buildup of a nation’s “war chest” may be used to pay for new or continuing military engagements (251). In other words, increased economic power often leads to

greater capabilities of the nation-state as a whole. This is particularly true in terms of military capabilities and in this way, nations may thus be able to engage in more conflict. Furthermore, he argues that positive economic expansion builds up the confidence of the nation to a point where they may feel invincible and thus, engage in violent conflict that will help them to continue to expand.

3. Neo-Marxist Views on Asymmetrical Trade

One of the most supported arguments against the notion that economic expansion promotes peace is that trade, brought about by economic expansion, actually increases MIDs. Many authors have in fact argued that increased economic interdependence and increased trade may have, in some ways, “cheapened war”, and thus made it easier to wage war more frequently (Harrison and Nikolaus 2012).

Neo-Marxists and Dependency Theorists argue that the notion that trade promotes peace often depends on the balance of trade between two nations with a trading relationship. If the two nations have a symmetrical trading relationship, then both nations benefit from trade equally and may thus, engage in less conflict just as proposed by many liberal theorists. However, more often than not, the trading relationship between two nations may be asymmetrical. In this case, one nation benefits more than the other. Furthermore, one nation is often more dependent on trade with its partner than the partner is with it. These circumstances can breed violent conflicts (Barbieri and Schneider 1999). Barbieri’s (1996, 40) regression analyses have supported these claims. She found that when dyads (pairs of nation-states) are highly interdependent, they are nearly 25 times more likely to engage in armed conflict than when the dyads are not interdependent. Ultimately, she came to the conclusion that there seems to be a “hurdle effect”. Up to a point trade does seem to promote peace. However, after that point, the balance of trade often becomes disproportionate between two nations and as a result trade promotes conflict.

4. Interdependence Versus Interconnectedness

The previous subsection alludes to the fact that there is a fundamental difference between economic interconnectedness and economic interdependence. Basically, interconnectedness involves a mutual and equal benefit between two economically connected nations.

Interdependence involves an unequal benefit between two economically connected nations where one nation more extensively relies on the other. Gasiorowski (2007) argues, that growing

interconnectedness brought about by globalization decreases MIDs. However, growing interdependence, also largely brought about by globalization, increases MIDs. In this case, when one nation is intrinsically dependent on another, they will be more sensitive and vulnerable to any changes in the economic policy of their major trading partner. Thus, depending on the relationships between different nations violent conflicts may either be increased or decreased by economic expansion.

Specific Findings of Related Studies

As demonstrated above, there are a great deal of theoretical conjectures about whether or not certain economic variables lead to an increase or decrease in MIDs or violent conflict in general. This final section of the literature review, will now highlight the specific findings of some of the most commonly cited authors mentioned earlier along with findings noted by several additional researchers. It is also important to note that many of the current quantitative analyses that exist focus on trade's impact on the prevalence of conflict. Trade is one of the easiest economic factors to obtain data on and thus, many authors often use a trade-to-GDP ratio to represent the economic interdependence of nations. Another commonly used economic factor is the absolute size or growth rate in GDP or GDP per capita. Such a variable is often used either as a control variable or to represent economic interconnectedness, as larger and more rapidly growing economies often entail important global relationships and expansion.

Oneal and Russett's (1997) study is one that shows that trade and thus, economic interdependence between nations, plays an important role in reducing conflict between any two nation-states. Their study begins by establishing a baseline rate or likelihood that two states will engage in conflict against each other. They then test to see what factors increase or decrease the likelihood of conflict. Using the trade-to-GDP ratio as a measure of economic interdependence, they show that by increasing the trade-to-GDP ratio by one standard deviation above the baseline level, the likelihood of conflict falls by 40%. This clearly implies that countries that have high levels of trade are less likely to engage in violent conflict. Their study then goes on to test how economic openness influences the prevalence of conflict when controlling for trade/interdependence. Here, they found that a one standard deviation increase in economic openness above the baseline level lowered the likelihood of conflict by 10%.

This study also highlighted the importance of democracy's influence on the prevalence of conflict. Analysis showed that as the level of democracy increases by one standard deviation, the likelihood of conflict falls by 27%. This is significant to note because a nation's system of governance has a substantial influence on its economic system and the extent to which economic expansion occurs. Again, the fact that many of these variables are highly interrelated is highlighted. Overall, this study demonstrates that higher levels of trade and interdependence help to reduce conflict between any two given nations. Their findings also imply that the balance of trade between any two states has no bearing on the prevalence of conflict. Simply put, trade relationships deter conflict (Oneal and Russett 1997). However, such findings directly contradict the empirical findings of many other researchers such as Barbieri (1996) who found that trade and interdependence increase the likelihood of violence, particularly when there is an imbalance of trade between any two given nations.

Barbieri's (1996) empirical analysis focused primarily on interdependence's influence on the prevalence of MIDs and used various trade measures as independent variables to represent interdependence between dyads or pairs of states. One of her major findings was that dyads that had significant trading relationships were 1.4 times as likely to engage in an MID. This implies that as the absolute value of trade increases between two nations, the countries comprising this dyad are more likely to engage in violent conflict. Again, as mentioned above, this is exactly the opposite of what Oneal and Russett's (1997) study found.

However, Barbieri's (1996) study also showed that the balance of trade between the countries comprising the dyad had a greater impact on the prevalence of conflict than the absolute value of trade. Her study demonstrates that as one country becomes increasingly dependent on its trading partner, the two countries become 25 times more likely to engage in a MID. Theoretically, this finding makes a great deal of sense. If Nation A is highly dependent on Nation B for food or oil imports, Nation A will have a strong incentive to engage in violent conflict if its trading relationship with Nation B suddenly deteriorates. Such a finding supports claims about the effects of asymmetrical trade made by the Neo-Marxists and Dependency Theorists as discussed earlier. However, it is again important to note that Barbieri's findings also suggest that symmetrical trade increases the prevalence of conflict. Again this contradicts the findings of the "trade promotes peace" supporters.

Boehmer (2010) is another researcher who has found that economic variables actually increase the prevalence of MIDs. However, he approaches his empirical analysis differently than researchers such as Barbieri (1996). His empirical analysis looked at how the rate of GDP growth, an economic interconnectedness factor, influenced conflict. The study showed that as the rate of GDP growth increased by one standard deviation, the likelihood that a nation would engage in a Fatal MID rose by 34.6%. While his study only looked at the prevalence of “Fatal MIDs” (MIDs in which there are a significant number of direct battle deaths), it is reasonable to assume that his findings could be extrapolated to the prevalence of less extreme forms of conflict. Thus, his study implies that as a nation’s economy grows and becomes more interconnected, it is more likely to engage in violent conflict. The study supports this finding by also showing that nations who are considered to be “Major Powers” (which usually entails a large and highly interconnected economy) are 60% more likely to engage in a Fatal MID than non-major powers. Furthermore, “Major Powers” are 248% more likely to engage in a Fatal MID in any given year (Boehmer 2010).

Another widely cited researcher in this field is Solomon Polachek. He has specifically studied a number of economic variables to better understand their influence on the prevalence of MIDs. Like others, he has found substantial empirical evidence that trade between nations helps to reduce conflict. Polachek’s (1980) paper on trade and its influence on conflict showed that a 1% increase in trade leads to 0.15% to 0.19% decrease in conflict. Furthermore, his study shows that doubling trade between two nations can reduce hostility between the two by 20% (Polachek, 1980). In another study, Gasiorowski and Polachek (1982) went on to show that a 1% increase in trade causes a proportional decline in conflict when looking at nations during the Cold War.

Polachek also studied how a nation’s system of governance influences the prevalence of conflict. It has been widely believed that nations with a democratic system of governance are less prone to violent conflict. However, Polachek argues that the reason why democratic nations may experience less conflict has less to do with the fact that the nation is a democracy and more to do with related economic factors. In other words, democracies often trade more, and as discussed previously, the higher the level of trade between nations, the less conflict. Polachek’s (1997) study again shows a doubling of trade between two nations leads to a 15% to 16% decline in conflict frequency. He also shows that a 10% rise in exports alone can cause a 4% decrease in

conflict. Whether democratic systems of governance predicate economies that can support more and more trade or strong economic systems predicate the success of a democracy is debatable. However, Polachek's findings clearly suggest that these two factors not only go hand-in-hand but are instrumental in reducing the prevalence of conflict.

Just as democracy and trade are intrinsically related, Polachek also found that geographic distance and trade are related. Chang et al. (2004) shows that the geographic distance between two nations has a direct and indirect effect on conflict depending on the level of trade between the two nations. They show that doubling the distance between two nations leads to a 56% reduction in conflict. This implies that nations that are closer together will be more likely to engage each other in violent conflict. However, this article points out that the preceding assumption is not always the case. If two neighboring countries have a high level of trade between each other, they may be no more likely to engage in violent conflict than nations that are separated by large geographic distances. The greatest risk for violent conflict is between contiguous states that do not have a high level of trade with their neighbor.

Polachek also has done a study on how the level of Foreign Direct Investment (FDI) influences the prevalence of conflict. In today's global economy FDI is now growing faster than ever and faster than trade in general. Polachek et al. (2007) note that FDI does a better job of reflecting the long-term. They claim that if two countries engage in a conflict, it is easy for them to change trading partners in a relatively short period of time. However, in the case of FDI, it is far more difficult to pull money out of investments if a conflict occurs. This implies that the higher the level of FDI between two nations, the higher the potential cost of conflict and thus, the greater the incentive to avoid conflict. They went on to show that a 1% increase in FDI will lead to a 0.31% increase in net co-operation or a 0.31% decrease in net conflict.

Not every researcher has reached such a definitive conclusion in relation to this field of interest. For example, while Gasiorowski's (2007) study found a significant direct relationship between interdependence and the prevalence of violent conflict, he was not ready to make any major conclusions. Rather, he suggests that both sides of the argument as to whether or not economic factors increase or decrease MIDs may be right. His study implied that costly forms of trade increased conflict while more beneficial trade does the exact opposite. Similarly, Mousseau et al.'s (2003) study presents conflicting findings. They found that an increase in trade

interdependence by one standard deviation reduced the likelihood of dispute by 29%. However, they also found that the likelihood of an MID increased by 4% if both nations comprising a dyad had large and developed economies. As a result of such findings, they suggest that different economic factors, when studied separately may have no impact or an increased impact on the prevalence of violent conflict. Nevertheless, when these same factors are analyzed together, the results often indicate a decline in the prevalence of violent conflict. Such findings once again highlight just how interconnected all of the aforementioned economic (and sometimes non-economic) factors are.

Finally, it is again worth noting that many of these studies use the same independent variables to reflect different economic factors. No researchers have empirically analyzed how economic factors such as the prevalence of major multinational corporations may influence the prevalence of conflict. New factors could potentially help to unravel this age-old debate.

Closing Remarks on the Literature Review

What this literature review should make abundantly clear is that there is no solid consensus about whether or not global economic expansion actually increases or decreases militarized interstate disputes. Furthermore, many of the aforementioned economic factors that may or may not lead to violent conflict are all highly interrelated.

This report will flow from the literature review through a series of three main parts. First, the report will begin by taking an in-depth look at Thomas Friedman's "Golden Arches Theory of Conflict Prevention" hypothesis. Analyses Parts 1 and 2 will attempt to see if his theory still holds and if his theory can be extended to other multinational corporations. Finally, Analysis Part # 3 will involve a quantitative review. A series of regression analyses will be run to see how various economic factors influence the prevalence of militarized interstate disputes (this is described in greater detail later). Furthermore, the analysis will include several independent variables that represent both economic interconnectedness and interdependence within the regression analyses. Additionally, this empirical analysis will include a new type of independent variable that has not been run in previous regressions. This independent variable will test to see whether or not the presence of major multinational corporations influences the prevalence of

MIDs. The creation of this variable is based on the concepts proposed by Thomas Friedman and will thus, tie the entire analysis together.

ANALYSIS PART # 1 & 2

As discussed previously, Thomas Friedman's "Golden Arches Theory of Conflict Prevention" essentially states that any two countries will not go to war against each other after each gets its own McDonald's. This theory is based on the notion that once a nation's economy has grown enough to support a middle-class and to be integrated into global markets and industries that, that nation will be more conflict adverse and thus, avoid engaging in interstate disputes with another nation.

Analysis Parts 1 and 2 attempt to explore Friedman's theory in greater detail. In Analysis Part # 1, Friedman's theory will be tested to see if his hypothesis/observation, which was first published in 1999, has held through 2014. In Analysis Part # 2, Friedman's theory will be extrapolated to see if Friedman's theory holds for other major multinational corporations as it does for McDonald's. These three other corporations will include Burger King, Ford Motor Company, and Honda Motor Company. Given the fact that McDonald's is meant to symbolize global economic expansion and the resulting rise in standards of living throughout the world, it will be particularly interesting to see if interstate conflict subsides when other major corporations expand their businesses into different nations throughout the world.

Analysis Part # 1

Before beginning it is important to note that Friedman's theory looks at conflicts that would be categorized as interstate wars. Thus, his theory excludes conflicts such as intrastate wars (civil wars) which are now far more prevalent than other types of wars. With that said, most online war records indicate that there have been five interstate wars between the period of 1999 and 2014. These wars include the 1999 War for Kosovo, the 1999 Kargil War, the 2001 Invasion of Afghanistan, the 2003 Invasion of Iraq, and the 2014 Donbass War.

The analysis began by noting when each war began and which nations were involved. The war dates and involved nations that committed troops were then compared to data that showed when McDonald's opened its first restaurant in each of the nations involved in the conflict. The results indicated that nations on both sides of the conflict in the War for Kosovo, the Kargil War, and

the Donbass War, had McDonald's restaurants operating within their borders during the war. These three wars directly contradict Friedman's hypothesis and thus, it is clear that at least on some level, Friedman's Golden Arches Theory" no longer holds.

However, it is important to note that while all three of the aforementioned wars seemingly violate Friedman's theory, it could be argued that each conflict in its own right would not necessarily qualify as a conflict that Friedman would have considered a violation within his own analysis. In later editions of his book, Friedman points out that while the war in Kosovo may violate his theory, it was not a typical interstate war. He defends his theory by claiming that it was more of an intervention by NATO into what could be considered a civil war between Albanians and Kosovo Serbians. Friedman goes on to say that even if one were to consider it to be a violation of his theory, what happened during the war actually supports the theoretical thinking behind his theory. In this case, he mentions that the war was very short not because the Serbian army suffered huge losses but, because the Serbian people suffered greatly economically and thus called for their government to end the war against NATO. In other words, the Serbian people's standards of living declined while they were fighting the war and ultimately, they decided that the economic costs were far greater than the benefits of claiming Kosovo as their own. In this light, economic pressures helped to shorten what could have been a longer conflict (Friedman, 1999).

The Kargil War could also be considered a conflict that would not necessarily qualify as a conflict that Friedman would have considered a violation within his own analysis. The Kargil War was fought between Pakistan and India between May and July of 1999. This conflict was really a border dispute involving land within the Kashmir region. This particular area has been a source of conflict between these two nations ever since the United Kingdom gave up its colonial rule of this area. Since then, several different wars have actually been fought over the lands in question. Given that this conflict has roots going back several decades and only lasted a few months, it is not really the most clear-cut interstate war. Thus, it could be argued that this war does not really violate Friedman's theory.

Finally, the Donbass War is also questionable. This war is technically still an ongoing conflict and has not officially been declared an "interstate war". Some would argue that this conflict is

really a civil war between Ukrainian rebels and the Ukrainian government and thus, Friedman's theory would not be violated. However, Russia's involvement has been significant as they have supported the Ukrainian rebels. The level of support and direct aggression shown by Russia indicate that this conflict could eventually be classified as more than just a civil war. If this does indeed become officially classified as an interstate conflict it could be considered a violation of Friedman's theory as both nations had McDonald's restaurants operating within their borders when the conflict began.

Taking the above into account, it is clear that at least to some degree, Friedman's "Golden Arches Theory of Conflict Prevention" no longer holds. Even in his book Friedman states; "the theory was offered with a limited shelf life, because ... sooner or later virtually every country would have McDonald's, and sooner or later two of them would go to war" (Friedman 1999, 252). However, as the Kosovo War highlights, even though the theory itself might not necessarily hold, the theoretical underpinnings of the theory do. The fact that the theory/observation held for longer than most would have anticipated suggests that the growth of economies, as symbolized by McDonald's, does have at least some impact on how conflict adverse most nations are.

Analysis Part # 2

Given Friedman's theory and what McDonald's symbolizes within the theory the question arises: Would the "Golden Arches Theory of Conflict Prevention" hold for a similar duration for other major transnational corporations as it did for McDonald's? If the theoretical underpinnings of Friedman's theory are correct as suggested above, the theory should hold in a manner that is comparable to that of McDonald's. To test this, Friedman's theory was extrapolated to three other multinational corporations which included Burger King, Ford and Honda.

Burger King was chosen because it is the most similar restaurant to McDonald's. Each corporation is structured as a franchise, sells the same products, and is spread out throughout the world. Thus, if McDonald's can symbolize growth of a nation's economy to the point where there is a middle-class and the economy is integrated into global markets, Burger King should be able to symbolize the same thing.

The analysis was conducted by first noting each war between 1947 and 2014, when each war began, and which nations were involved. The war dates and involved nations that committed troops were then compared to data that showed when Burger King opened its first franchise restaurant in each of the nations involved in the conflict. In most cases, the data on when Burger King began operating a franchise location was available through Burger King's global websites. If the year of entry could not be obtained from their global sites, the data in question was searched for by performing a Google search. If the Burger King global sites indicated that the company operated in a nation but, the year of entry could not be found, the data was coded as 2014 to simply indicate that by at least 2014, the company had a franchise location in the country. This turned out to be a rather crude way to obtain the needed data but, was really the only way to obtain it as the corporation did not have all the required information for each country readily available for the general public. This may in fact have skewed the results to some extent however, obtaining the required data was less of a problem for Burger King than it was for Ford and Honda.

With that said, only two interstate wars between 1947 and 2014 were found to be in direct violation with Friedman's theory as it would theoretically apply to Burger King. The Cenepa Valley War of 1995 and the Donbass War (assuming it is considered to be an interstate war). Just like McDonald's, Friedman's theory seemed to hold for several decades before encountering its first violation in the 1990s. There have been approximately 41 interstate wars between 1947 and 2014. The vast majority of these wars involved nations where either both sides lacked a Burger King or where only one side had a Burger King. In only two cases did nations that each had an established Burger King franchise enter into a war against each other. This clearly suggests that the theoretical underpinnings behind the "Golden Arches Theory" are correct. While the theory itself is sometimes violated, it appears that nations that have economies that support a middle-class and have economies that are integrated into global markets tend to be more conflict adverse. This is particularly true when both sides have this kind of economy.

Ford and Honda were chosen to be part of the analysis because the ability of a nation's economy to include new automotive sales and related businesses requires that the economy also be able to support a middle-class. In this way, the presence of Ford and Honda should be able to symbolize the same kind of economic growth and integration as McDonald's and Burger King.

Furthermore, these companies were chosen because they represent a completely different industry and kind of business than the two from the fast-food restaurant industry. This helps to further extrapolate Friedman's theories.

For example, aside from product differences, the presence of Ford or Honda within a nation can involve different kinds of labor. These companies employ manufacturing laborers to build the automobiles in some countries and/or service laborers to sell the automobiles in other countries. This is fundamentally different from McDonald's and Burger King which employ service laborers. The kind of labor that different types of companies employ is yet another way to look at how developed a nation's economy may be and whether or not this economy includes/creates a middle class. The impact of the existence of different types of labor or labor intensity on the prevalence of conflict will not be specifically explored in this paper but rather, is offered as an example of how Ford and Honda are fundamentally different companies when compared to McDonald's and Burger King.

Just as before, the analysis was conducted by first noting each war between 1947 and 2014, when each war began, and which nations were involved. The war dates and involved nations that committed troops were then compared to data that showed when Ford or Honda opened their first locations in each of the nations involved in the conflict. More specifically, in Ford's case, the first year the company began selling automobiles in different nations via subsidiary dealers was noted. In Honda's case, the first year the company began selling automobiles, motorcycles, or power products in different nations via subsidiary dealers was noted.

However, the years of entry for each of these companies was much more difficult to obtain than it was for McDonald's and Burger King. Like before, most of the data on when Ford or Honda began operating a franchise location was available through each company's global websites. If the year of entry could not be obtained from their global sites, the data in question was searched for by performing a Google search. If the Ford or Honda global sites indicated that the company operated in a nation but, the year of entry could not be found, the data was coded as 2014 to simply indicate that by at least 2014, the company had a franchise location in the country. Because the dates of entry were so difficult to find, nearly 50% of nations that were noted as having the company "present" were coded as 2014. Again, this was a very crude way to obtain

the needed data but, was really the only way to obtain it as the corporations did not have the required information for each country readily available. In the case of these two companies, this may in fact have skewed the results to some extent and thus, the results should be interpreted with caution.

Ford was found to violate Friedman's theory on many different occasions. In this case, Ford potentially violated (given the absence of some year of entry dates) the theory on 14 different occasions including six Arab-Israeli Wars, the Soviet Invasion of Hungary, the Ifni War, the War in Assam, the Turco-Cypriot War, the Falklands War, the War of Bosnian Independence, the War for Kosovo, and the Donbass War. The fact that there is a significant increase in the number of violations compared to the study of McDonald's and Burger King could have to do with the fact that Ford was founded nearly 50 years before either of the restaurant chains. This means that Ford began spreading out globally far before McDonald's and Burger King which increases the number of potential conflicts were it might violate an extrapolated "Golden Arches Theory". This makes one wonder if what was observed for McDonalds and Burger King had more to do with the timing of their expansion than it had to do with the economic implications of their expansion. Even though the ability of an individual to buy an automobile should indicate a growing and globally integrated economy, the findings here suggest that Friedman's theory and its theoretical underpinnings are not correct. Again, it is important to note that this interpretation should be made with caution for reasons noted above.

Honda was found to violate Friedman's theory on three different occasions including the Kargil War, the War for Kosovo, and the Donbass War. However, it must be noted that due to the inaccessibility of the dates of entry for many different Middle Eastern nations, this number could potentially increase by the five Arab-Israeli conflicts that took place between 1947 and 2014. If one were to assume that the total number of violations was only three, this would again support the theoretical underpinnings behind Friedman's theory. However, if this number were increased to eight violations, it would suggest that the theoretical underpinnings behind the theory are more questionable.

The results that Ford and Honda indicate call into question whether or not automotive companies function as the same kind of economic symbol as McDonald's does within Friedman's theory.

Theoretically they should but, in actuality, Ford and Honda are very different kinds of companies compared to McDonald's and Burger King. Ford's case also calls into question whether Friedman's theory is more a function of time or a function of economic theories. If Ford had been founded in the 1950s as were McDonald's and Burger King, its expansion into global markets would have begun far later and thus, the number of conflicts where both nations had Ford subsidiary dealers would likely drop by a significant number. This suggests that the timing of global expansion is critical to Friedman's theory.

With all the results taken together from Analysis Part # 1 and Part # 2, it is clear that the "Golden Arches of Conflict Prevention" has been violated on a number of different occasions and at least to some extent does not hold either in its original form or in the extrapolated form as presented here. However, the results do indicate that to some extent, the theoretical economic underpinnings behind Friedman's theory are accurate. If nothing else can be taken away from his theory, it is that economics does have at least some influence on the prevalence of global conflicts, that economic growth raises the cost of war, and this may in fact decrease war's occurrence or severity. With this in mind, we will now proceed to Analysis Part # 3 which will attempt to show with regression analysis, what kind of economic factors influence the occurrence of conflict in the form of MIDs.

RESEARCH DESIGN

Analysis Part # 3 consists of an empirical analysis which attempts to establish which economic factors have an influence on the prevalence of conflict and whether their effect increases or decreases the prevalence of conflict. This section will not only attempt to corroborate the findings of other researchers but will also attempt to add to knowledge in this area of interest by applying concepts based on Friedman's "Golden Arches Theory". As was stated previously, no researchers have specifically tested to see if the presence of major multinational corporations plays a role in helping to decrease violent conflict. If the theoretical underpinnings of Friedman's theory are correct, empirical analysis should reflect a decline in the prevalence of conflict as a result of the presence of these companies.

However, it is important to stress that the following empirical analysis does depart from the "Golden Arches Theory" in a fundamental way. It is important to note that Friedman's theory

only applied to the prevalence of interstate wars. The empirical analysis presented in this report will focus on the prevalence of Militarized Interstate Disputes (MIDs) which are a much broader measure of conflict (MIDs will be defined in greater detail below). While this is a fundamental difference, it is highly probable that the same theoretical underpinnings and concepts behind the “Golden Arches Theory” should apply to MIDs in a similar manner as interstate conflicts. Furthermore, this empirical analysis will attempt not only to look at McDonald’s influence on the prevalence of conflict but also, will attempt to quantitatively evaluate the influence of other multinational’s influence on the prevalence of conflict by extrapolating the “Golden Arches Theory” as in Analysis Part # 2.

The dataset necessary to conduct this empirical analysis was created using the EUGene (Expected Utility Generation and Data Management Program) software package, data from the Correlates of War Project, and data from the World Bank. This software program has the ability to generate datasets in both monadic and dyadic form using data taken from the Correlates of War Project. The dyadic-level format creates pairs of nation-states and identifies which pairs are engaged in conflict or are peaceful with one another. Because this is the most widely accepted and used format in this particular area of research the dyadic-level format was selected for use in this empirical analysis. More specifically, in creating the dataset through the EUGene software package, the dataset was setup using the non-directed dyad-year format and includes dyads in the form of “all major power vs. any state dyads”. EUGene provided a quick and efficient way to begin building a usable dataset which included the necessary dependent variable along with a number of relevant independent variables. The original dataset that was pulled from EUGene consisted of a random sample of 5,481 dyadic-level observations that occurred between 1990 and 2000.

From this dataset a 1,500 observation random sample was pulled using the STATA software package. This data was then downloaded into Microsoft Excel where additional data from the World Bank and data regarding the “year of entry” of different multinational corporations was manually added. The 1,500 observations were then re-uploaded to STATA where the regression analysis was performed.

Two different dependent variables and independent variables that represented both economic interconnectedness and interdependence were analyzed using logit and regression analyses. For each dependent variable, independent variables were tested on three different levels. First, all independent variables were tested on an individual level to see their effect on the dependent variable. Next, “minor groupings” of related independent variables were created to test their joint effects on the dependent variables. Finally, the independent variables were tested altogether as a “major grouping” to establish their joint effect on the prevalence of MIDs. Equation One highlights the independent variables that were tested at the “major grouping” level:

$$cwmid \text{ or } cwhostd = \beta_0 + \beta_1 cont - \beta_2 polity + \beta_3 capabilities - \beta_4 ally - \beta_5 mcdonalds - \beta_6 bk - \beta_7 ford - \beta_8 honda + \beta_9 lowts - \beta_{10} hights - \beta_{11} avg_trade_gdp - \beta_{12} avg_fdi_gdp + u$$

Dependent Variables (cwmid or cwhostd)

As defined on the Correlates of War Project website, a Militarized Interstate Dispute (MID) is defined as; “united historical cases of conflict in which the threat, display or use of military force short of war by one member state is explicitly directed towards that government, official representatives, official forces, property, or territory of another state” (Correlates of War 2015). This includes conflicts ranging from threats to use force and threats to declare war to conflicts such as nuclear alerts, mobilization of forces, border violations, blockades, seizures, attacks, and clashes. Thus, it should be clear that MIDs are a very broad measure of conflict.

The primary dependent variable that was used for this empirical study was the *cwmid* variable. This dichotomous variable was coded as one if a MID occurred and zero if no conflict occurred between a given dyadic pair consisting of Country A and Country B in a given year. Furthermore, the MID was only coded as one in the year of the onset of the conflict or the first year that a Country C joined the conflict. Logit regression analysis was employed when using this dependent variable in order to establish which independent variable effected the prevalence of MIDs.

A second dependent variable was also used for this empirical study in order to provide support to go along with the aforementioned variable. The *cwhostd* variable reflects the prevalence of MIDs

while also reflecting the relative level of hostility on a zero to five scale. Zero indicates no hostility, one indicated no militarized action, two indicated a threat to use force, three indicated a display of force, four indicated a use of force, and a level five conflict reflected the onset of war. Regression analysis was employed when using this dependent variable.

Independent Variables

Contiguity (*cont*)

Contiguity (*cont*) was used as a control variable in this empirical analysis. This dichotomous variable was coded as one if Country A was contiguous by land or separated by no more than 400 miles of water from Country B. All other cases were coded as zero. In theory countries that are contiguous are more likely to engage in an MID than those that are not. This variable was included in the Control Group for the minor group level testing.

Democracy (*polity*)

The *polity* variable was created to reflect the system of governance for each state within the dyad. As discussed in the literature review a number of studies have been conducted with regards to whether or not having a democratic system of governance leads to less conflict. While the results are not always a simply yes or no, more often than not, researchers have found that democracies are generally more peaceful than countries with other forms of governance. This is something that needs to be controlled for in this kind of empirical analysis but is difficult to reflect given the dyadic format.

To do this, the Polity IV dataset was employed. In this case, individual states are given a score ranging from negative ten to positive ten, where negative ten to zero generally indicate an autocratic system of governance and one to positive ten generally indicate a democratic system of governance. More specifically, the Polity IV scale can be broken down in the following way: a score of -10 to -6 is considered to be a clear autocracy, a score of -5 to 0 is considered to be a closed anocracy, a score of 1 to 5 is considered to be an open anocracy, a score of 6 to 9 is a democracy, and a score of 10 is considered to be a full democracy. The Polity IV dataset refers to an anocracy as a system of governance that exhibits both autocratic and democratic characteristics. These are states that are often transitioning in their system of governance and thus, are states where there is a great deal of political instability. A closed anocracy is one that

has more autocratic characteristics whereas, an open anocracy is one that has more democratic characteristics.

For purposes of this analysis, this score was obtained for each state making up each of the 1,500 dyadic observations. An average score was then calculated for each dyadic pair. While other researchers have reflected this in different ways, this method should be effective enough to control for the relative level of democracy (or lack thereof) shared between the states. This variable was included in the Control Group for the minor group level testing and should have a negative effect on the prevalence of MIDs.

Capabilities (*capabilities*)

The *capabilities* variable was used to reflect the relative level of power of the states making up the dyad. Research suggests that states that are more powerful will have the resources to engage in more conflicts/MIDs. In this case the benefit of conflict exceeds the cost. To reflect the relative power of each state within the dyad, the Correlates of War CINC (Composite Index of National Capability) score was employed. The CINC score compiles a number of different economic and noneconomic factors in reestablishing each nation's relative power. Once these scores were obtained, Katherine Barbieri's (1996) technique of using the ratio of the stronger state's CINC score to the weaker state's CINC score was employed to reflect the relative power of the dyad. This variable was also included in the control group for the minor group level testing.

Allies (*ally*)

The ally variable was used to control for instances in which the two countries making up the dyad were members of a common alliance/treaty. This dichotomous variable was coded as one if both countries shared membership in a defense pact, neutrality agreement, or ententes in a given year. Zero was coded otherwise. In theory, members of an alliance or treaty should be less likely to engage in an MID. This variable was included in the Control Group for the minor group level testing.

Multinational Corporation Variables (*mcdonalds, bk, ford, honda*)

In order to attempt to reflect the concepts proposed in Thomas Friedman's "Golden Arches Theory", four independent variables were created to reflect the presence of the multinational

corporation in a given country in a specific year. The “presence” of the major multinational corporations will be defined slightly differently based on which corporation is being analyzed. In the case of McDonald’s and Burger King, the date (year) when the first franchise opened and began selling to the public will be used. That year and all years following it will be defined as a year when the corporation was “present”. The “presence” of Ford and Honda will be defined slightly differently. In Ford’s case, the first year the company began selling automobiles in different nations via subsidiary dealers will be used. In Honda’s case, the first year the company began selling automobiles, motorcycles, or power products in different nations via subsidiary dealers will be used. For both Ford and Honda, their first year and all years following it will be defined as a year when the corporation was “present”. In essence, this process is attempting to establish the first time that the companies had a physical presence in the given nation and were selling their products to the consumers of that particular nation.

It should be noted that it was very difficult to obtain the “year of entry data” for each company and each country that they have operated in. In all four cases, the corporate websites had some of this data but it was incomplete. Thus, as much data as possible was gathered from these sites and Google searches of global news was used in an attempt to fill in the gaps. However, in many instances the “year of entry” data either could not be found or the data that was found contradicted other dates that were previously found. Thus, any results based on these variables should be interpreted with extreme caution. Variables such as these have never been analyzed in this manner before. It is hoped that at the very least, they may suggest whether or not the presence of large multinationals has any effect on the prevalence on MIDs as the “Golden Aches Theory” suggests.

Each of the four variables, each representing a different multinational corporation, was coded in the same manner. For example, *mcdonalds* was coded as one if both countries in the dyad had the company operating within their borders in a given dyad-year. All other cases were coded as zero. Furthermore, in cases in which the necessary “year of entry” data could not be found, the company was assumed not to be present in that given year and thus, coded as zero. While this will likely skew the results it is theoretically the most conservative approach given the available data. These four variables were included in the Multinational Corporation Group for the minor group level testing.

Interdependence Variables (*lowts, hights, avgts*)

As discussed in the literature review, it is widely debated whether or not trade between states actually increases or decreases the prevalence of conflict. Based on Barbieri (1996) and Oneal and Russett's (1997) works, this empirical analysis employed trade shares as a methodology to reflect the relative level of interdependence in a trading relationship between two nations making up a dyad in a given year.

First, each state's trade share was calculated within each dyadic pair and this was done for all 1,500 dyadic pairs. To calculate the trade share for Country A, the exports and imports between only Countries A and B were added together and then divided by Country A's total global trade as shown below:

$$\text{Country A's Trade Share} = \frac{\text{Dyadic Trade}_{AB}}{\text{Total Trade}_A}$$

In theory, the trade share indicates the size/extent or importance of this trading relationship to Country A. The trade share for Country A indicates what percentage the particular trading relationship accounts for out of Country A's total global trade. The higher this percentage, the greater the extent or importance of the trading relationship for Country A *specifically*. In other words, the variable represents the size or extent of the trading relationship *specifically* for Country A and *not* the overall size/extent of the trading relationship between Countries A and B.

Based on this methodology, three variables were created and tested (*lowts, hights, avgts*). The *lowts* variable reflects the lower trade share state of the dyadic pair. In theory, the lower trade share indicates that the state is less constrained by this trading relationship and would thus, be more likely to enter into an MID with its trading partner (the other state making up the dyadic pair). In other words, this is the state where the percentage of dyadic trade over total global trade is smaller and thus, the dyadic trading relationship is less important to that particular nation which, allows them to act more freely.

For purposes of this analysis, it is assumed that the low trade share and the concept of the less constrained state are one in the same. It is noted that the lower trade share state may not always technically be the less-constrained state in a relationship. This is evident when one considers

political factors in combination with economic factors. However, as mentioned earlier, the dataset was set up using the dyads in the form of “all major power vs. any state dyads”. Because of this setup, the vast majority of states with a lower trade share are indeed the less constrained state. Again, it is noted that there may be exceptions but, for the purposes of this report, this assumption is reasonable given the data setup.

The *lights* variable reflects the opposite of what was described above. In this case the higher trade share reflects the more constrained state and thus, this state would be less likely to enter into an MID with its trading partner because such an action would come at too high of an economic cost. Finally, the *avgts* variable reflects the average trade share between the two states making up the dyad. All three variables were run separately to see their individual effect on the prevalence of MIDS, and then they were grouped together in the Trade Group for the minor group level testing.

Interconnectedness Variables (*avg_trade_gdp*, *avg_exports_gdp*, *avg_imports_gdp*, *avg_FDI_gdp*)

The Average Trade-to-GDP Ratio, the Average Exports-to-GDP Ratio, the Average Imports-to-GDP Ratio, and the Average FDI-to-GDP Ratio were used in an attempt to reflect how globally interconnected each dyadic pair was. In theory, the prevalence of MIDS should decline the more a nation is economically interconnected with other nations throughout the world. *Avg_trade_gdp* represents the average dyadic total trade to total dyadic GDP ratio. Note this is total trade overall and not just dyadic trade as was used in the trade share calculations above. *Avg_exports_gdp*, *avg_imports_gdp*, and *avg_FDI_gdp* were all applied in the same manner with the exception of *avg_FDI_gdp* which more specifically represents the average dyadic total FDI inflows to total dyadic GDP. All four variables were run separately to see their individual effect on the prevalence of MIDS, and then they were grouped together in the General Economic Group for the minor group level testing.

HYPOTHESES

Two general hypotheses are proposed based on the literature review and the aforementioned research design:

1. Factors that represent economic interconnectedness (*avg_trade_gdp*, *avg_exports_gdp*, *avg_imports_gdp*, *avg_FDI_gdp*) will be related to declines in militarized interstate disputes while, factors that represent economic interdependence (*lowts*, *hights*, *avgts*) will represent increases in militarized interstate disputes.
2. Variables representing the presence of major multinational corporations within a nation's economy (based on Friedman's "Golden Arches Theory") and the total ratio of trade-to-GDP (an economic interconnectedness factor) will have the strongest influence on declines in militarized interstate disputes.

RESULTS - ANALYSIS PART # 3

Tables Two and Three (shown in the appendix below) present the results from the logit analysis and regression analysis for the *cwmid* and *cwhostd* dependent variables respectively. The same general process was followed for each. The process started with running each independent variable individually to determine its effect on the dependent variable. Next, the independent variables were grouped into the following categories: the Control Group, the Multinational Corporation Group, the Trade Group, and the General Economic Group. These groups were then run and analyzed at what will be referred to as the minor group level. Finally, all of the minor groups were run together to determine the independent variables' joint effect on the given dependent variable.

cwmid Logit Analysis

As mentioned earlier, the *cwmid* dependent variable was the primary dependent variable that was analyzed. Beginning with the independent variables that make up the Control Group, *cont*, *polity*, and *capabilities* were all found to be statistically significant at both the individual and minor group levels of testing. The results at the individual level for the independent variable representing contiguity suggests that dyadic pairs that are contiguous are roughly 8.6 times more likely to engage in a MID than dyadic pairs that are not contiguous⁶. Furthermore, at the minor group level of testing, the dyadic pairs were 6.91 times more likely to engage in MIDs with all else held constant. The results for the independent variable representing the average level of democracy within a dyad suggests that dyadic pairs that have a higher average polity score (i.e. are more democratic) are roughly 0.889 times less likely to engage in a MID than dyadic pairs

that have lower average polity scores. Additionally, at the minor group level of testing, the dyadic pairs were 4.3 times less likely to engage in MIDs with all else held constant. Finally, the independent variable that represents the capabilities of the states making up the dyad suggests that dyadic pairs that have a higher capabilities ratio are roughly 0.993 times less likely to engage in a MID than dyadic pairs that have a lower capabilities ratio. At the minor group level of testing, the dyadic pairs were .022 times less likely to engage in MIDs with all else held constant. The results related to these three independent variables all conform to other researchers' findings and general theory.

In the Multinational Corporation Group *mcdonalds*, *bk*, *ford*, and *honda* were all found to be statistically insignificant at both the individual and minor group levels of testing. This raises questions as to whether the presence of multinational corporations has any impact on the prevalence of conflict between nations making up a dyad.

In the Trade Group, only the *lowts* variable was found to be statistically significant. It demonstrated a strong positive relationship at the individual level of testing and suggests that as the less constrained state's trade share grows, the dyadic pair becomes more likely to engage in an MID. Furthermore, at the minor group level of testing, the results again indicated a strong positive relationship with all else held constant. These results directly contradict various "Liberal Peace" hypotheses. Implications of which will be discussed in greater detail later on.

Finally, in the General Economic Group, *avg_trade_gdp* was found to have a statistically significant inverse relationship with the prevalence of MIDs at the individual level of testing. This suggests that dyadic pairs that have a higher average trade to GDP ratio are roughly 0.965 times less likely to engage in an MID than dyadic pairs with lower average trade to GDP ratios. However, *avg_trade_gdp* was found to be statistically insignificant at both the minor and major group levels of testing. As is implied by the theoretical underpinnings of Friedman's "Golden Arches Theory" and other general theories relating to this area of research, one would be led to think that this independent variable would have a much stronger influence on the prevalence of MIDs. This raises questions about how strong trade's influence on the prevalence of conflict actually is and the correctness relating to how this variable was set up and applied in the analysis.

Interestingly, while statistically insignificant at the individual level of testing, the *avg_fdi_gdp* variable was found to be statistically significant at both minor and major group levels of testing. At the minor group level of testing, the results demonstrated a strong positive relationship that suggests that dyadic pairs that have a higher average FDI to GDP ratio are more likely to engage in a MID than dyadic pairs with lower FDI to GDP ratios, with all else held constant. The strength of this relationship is noteworthy and suggests that FDI may have more of an influence on the prevalence of conflict than general levels of trade.

As indicated by Equation One, many of the aforementioned independent variables were run together in what will be referred to as the “major group level” of testing. In this case, both *cont* and *ally* were found to be statistically significant. Both *polity* and *capabilities* were found to be statistically insignificant at this level even though they were statistically significant at the individual and minor group levels of testing. Furthermore, while not being statistically significant at the two lower levels of testing, *ally* was found to be statistically significant only at the major group level of testing. Results at this level suggest that states making up dyadic pairs that have a shared alliance or treaty are 0.01543 times less likely to engage in a MID than dyadic pairs that do not share membership in a shared alliance/treaty, with all else held constant. This makes sense from a theoretical viewpoint but, it is noteworthy that this relationship can only be seen at this level of testing.

Similarly, while not significant at the individual or minor group levels of testing, *mcdonalds* was found to be statistically significant at the major group level of testing. Results at this level suggest that dyadic pairs that consist of countries that both have McDonalds operating in them are 0.176 times less likely to engage in a MID than dyadic pairs that consist of countries that do not both have McDonalds operating within their border, with all else held constant. While the relationship appears to be rather weak, it does lend some support to Friedman’s theory. However, it is also noteworthy that none of the other multinational corporations came up as statistically significant at any level of testing.

Finally, as mentioned previously, both the *lowts* and *avg_fdi_gdp* variables were found to be statistically significant at the major group level of testing. At this level the *lowts* and *avg_fdi_gdp* variables demonstrated strong positive relationships and thus indicated that these variables led to

dyadic pairs that were more likely to engage in a conflict, holding all else constant. These results again suggest that both of these independent variables have a very strong influence on the prevalence of MIDs.

cwhostd Regression Analysis

The same general process was run again for the *cwhostd* dependent variable. This method of testing yielded results that were very similar to those found in relation the *cwmid* dependent variable. In fact, all of the independent variables that were found to be statistically significant at each level of testing with the *cwmid* dependent variable were found to be statistically significant at the same level with the *cwhostd* dependent variable with only three major exceptions.

First, while previously found to be statistically significant at the individual and minor group levels of testing, the *capabilities* variable was not found to be statistically significant at any level of testing with the *cwhostd* dependent variable. Theory suggests that the relative power of a state does indeed have an influence on the prevalence of conflict. This raises questions about the methodological approach used to represent this factor within this empirical analysis.

The second major difference between the results found for each dependent variable involves the *mcdonalds* independent variable. Previously, it was discovered that this variable was only significant at the major group level of testing. However, when running regression analyses with the *cwhostd* dependent variable, *mcdonalds* was found to be statistically significant at both the minor and major group levels of testing. This suggests that the presence of McDonalds within the dyadic pair may perhaps have more of an influence on MIDs than was previously thought.

The third major difference between the results found for each dependent variable involved the *avg_trade_gdp* independent variable. In the previous analysis, this variable was found to only be statistically significant at the individual level of testing. However, when performing regression analysis with the *cwhostd* dependent variable, *avg_trade_gdp* was found to be statistically significant at the individual level and the major group level but not statistically significant at the minor group level of testing. This again suggests that the methodological application of this variable may be flawed. However, the fact that this variable was significant in two out of three tests is more in line with theory than the results from testing with the *cwmid* variable.

Other General Results

It is also worth mentioning that the *bk*, *ford*, *honda*, *hights*, *avgts*, *avg_exports_gdp*, and *avg_imports_gdp* variables were never found to be statistically significant. This was true for all three levels of testing as well as for both of the dependent variables that were tested. These results suggest that these variables simply do not have a significant impact on the prevalence of MIDs. However, these results could also be the result of improper methodological application of these independent variables within this empirical analysis.

LIMITATIONS AND FURTHER RESEARCH

As mentioned previously in different sections, there were several limitations to this study. This was particularly true in terms of the multinational corporation independent variables. First, it was very difficult to find the “year of entry” data. This data was often available for the largest and most powerful nations but was scarce for smaller, emerging nations. While several different methods were used to obtain this data, often it simply was not out there. In these cases, one of two things was assumed for the dichotomous coding for the empirical analysis. If it was obvious that the nation definitely had the multinational corporation operating within its borders but, a specific “year of entry” date could not be found, the corporation was coded as present for 2014 and not present for all other years. Secondly, if no information on the “year of entry” could be found on a nation, it was coded as not present. This process was followed as it was believed to be the most conservative approach. It would have been ideal to find all of the “year of entry” dates but, this data was simply not available in some instances.

Another major limitation of the empirical analysis involves the complexities of using dyadic level data. Because of the nature of this data format, the size of the data sample was limited to 1,500 dyadic observations. The vast majority of researchers in this field use this data format. However, these researchers have more time and resources to code in all of the necessary data. Many of the studies that this analysis was based on involved the use of 20,000⁺ dyadic observations. It is possible that some of the results could change if a larger random sample was used.

A final limitation involves another complexity of using dyadic level data. In this case, the construction of the independent variable is often difficult because a dyad represents a pair of

states. Thus, if one wants to study the effect of an economic measure on the prevalence of conflict, this economic measure must reflect the economic reality of the pair as opposed to one particular nation. This fact often makes it difficult to construct independent variables. Research for the literature review made it very obvious that different researchers take different methodological approaches in the construction of these variables. This empirical analysis pulled this construction of different independent variables from previous studies while also creating new independent variables or independent variables in different ways. Thus, it is always possible that some of these variables may have been incorrectly applied in the regression analysis which would have a subsequent effect on the results that were obtained.

There are many different ways that research can be continued within this field of study. This is particularly true in terms of multinational corporations' influence on the prevalence of conflict. Given that many multinationals are larger economically than some nations, it is clear that they can definitely influence the decisions made by different nations. This empirical analysis attempted to determine the effect of different corporation's presence on the prevalence of conflict and as far as is known, this is the first time that such a study has been conducted. The results indicated that there may either be no significant influence on the prevalence of MIDs for the majority of the multinationals tested. However, it is possible that these independent variables were improperly created or applied. Further research could be conducted to test different forms of these variables. For example, one multinational corporation may not have a statistically significant effect on the prevalence of conflict, but it is possible that the joint effect of the presence of several of these large corporations may have a significant effect. This would involve the creation of one multinational corporation variable as opposed to the individual variables that were used in this analysis. If further studies fail to establish a significant relationship, only then could one conclude that the presence of multinational corporations has no effect on the prevalence of conflict.

CONCLUSION

Several conclusions can be drawn from Analyses Parts One, Two, and Three. In Analysis Part One, the fundamental question was whether or not Friedman's "Golden Arches Theory" still held through 2014. Analysis suggests that this theory may have been violated on at least three

separate occasions since 1999. These wars include the War for Kosovo, the Kargil War, and the Donbass War. However, it could be argued (for reasons discussed earlier) that all three of these conflicts may not have technically been considered to be violations of the “Golden Arches Theory” for various different reasons that simply do not conform to the qualifications of the theory as originally proposed.

Even if these are true exceptions to the theory, the fact that this observation held for so long suggests that the theoretical underpinnings behind Friedman’s theory may be partially true. It seems safe to conclude that having more global economic ties would indeed raise the cost of any conflict and as Friedman puts it, make the states in question “think twice” before engaging in such a conflict. Indeed, many of the interstate conflicts going on today are conflicts that involve ideological struggles that have been waged for decades and even centuries. In these cases, the concepts of economic rationalization are simply cast aside when these nations consider going to war.

The extrapolation of Friedman’s theory in Analysis Part Two also yielded several significant findings. The fundamental question here was whether or not what Friedman observed to be true for McDonald’s would hold for other major multinational corporations. Between 1947 and 2014, Burger King, Ford, and Honda were found to violate the revised theory twice, fourteen times, and three to eight times respectively. Given the fact that Ford was founded roughly 50 years before McDonald’s and Burger King, these results raise the question of whether or not Friedman’s observation was a timing coincidence. In other words, the results for Ford may be biased. By the 1950s Ford would have been much further along in the global expansion of its business. This means that more nations would have Ford operating within their borders and thus, there would be a greater chance of a violation of the theory occurring. McDonalds and Burger King were founded in 1955 and 1954 respectively. Because of this, their global expansion was well behind Ford’s. Thus, with less countries out there with a McDonald’s or Burger King operating within the nation’s borders, there would be a smaller chance of the theory being violated. In this way, Friedman’s theory/observation could be based more on a timing coincidence than on economic factors.

Analysis Part Three involved two hypotheses which are shown again below for the reader's convenience.

1. Factors that represent economic interconnectedness (*avg_trade_gdp*, *avg_exports_gdp*, *avg_imports_gdp*, *avg_FDI_gdp*) will be related to declines in militarized interstate disputes while, factors that represent economic interdependence (*lowts*, *hights*, *avgts*) will represent increases in militarized interstate disputes.
2. Variables representing the presence of major multinational corporations within a nation's economy (based on Friedman's "Golden Arches Theory") and the total ratio of trade-to-GDP (an economic interconnectedness factor) will have the strongest influence on declines in militarized interstate disputes.

Hypothesis One was partially correct. While *avg_exports_gdp* and *avg_imports_gdp* were statistically insignificant at all levels of testing, *avg_trade_gdp* was found to be statistically significant at the individual level with the *cwmid* dependent variable and statistically significant at the individual and major group level for the *cwhostd* dependent variable. This variable was designed to represent the dyad's level of global economic interconnectedness and the results indicate that this does play at least some role in decreasing the prevalence of MIDs. However, the results are not nearly as strong as originally predicted.

Furthermore, *hights* and *avgts* (measures of interdependence) were found to be statistically insignificant at all levels of testing. However, the *lowts* variable was significant at all three levels of testing and led to increases in the prevalence of MIDS. The relationship between this independent variable and both dependent variables was particularly strong and will be discussed shortly.

Hypothesis Two was completely incorrect. Neither the total average trade-to-GDP ratio nor the multinational corporation variables had as strong of influences on the decline in the prevalence of MIDs as predicted. In fact the multinational corporation variables were almost always found to be statistically insignificant. The *mcdonalds* variable was the only multinational corporation variable that was statistically significant at the major group level of testing. This suggests that the presence of McDonald's within both countries making up a dyad may have a negative influence on the prevalence of conflict based on what McDonald's symbolically represents in Friedman's

theory. However, given that all the other multinational corporation variables turned out to be insignificant it may just be a coincidence that the *mcdonalds* variable turned out the way that it did. It is possible that the applications of these variables within the methodology of this empirical analysis could be incorrect. For example, one multinational corporation may not have a statistically significant effect on the prevalence of conflict, but it is possible that the joint effect (this would involve the creation of one multinational corporation variable) of the presence of several of these large corporations may have a significant effect. Thus, trying to analyze Friedman's "Golden Arches Theory" with numbers is a much more complex task than originally thought but one that should be looked into by future researchers.

While the *avg_trade_gdp* and the multinational corporation variables did not have as strong of an effect on the prevalence of conflict as proposed in Hypothesis Two, contiguity, the variable representing the lower trade share, and the average total FDI-to-GDP ratio did have a strong influence on the prevalence of MIDs. All three of these variables were found to play very strong roles in increasing the prevalence of MIDs.

The findings involving the low trade share variable were particularly surprising. Theory suggests that the state that is less dependent on a given trading relationship (i.e. the less constrained state) will be more likely to engage in an MID because such an engagement would come at a lower relative cost. With this in mind, it stands to reason that as the less constrained state's trade share grows, they would become less likely to engage in an MID because the cost of doing so becomes significantly higher.

However, the results indicate that as the less constrained state's trade share grows, they become more likely to engage in an MID. Such results directly contradict the above theory and various other "Liberal Peace" hypotheses. What could be happening may be that the less constrained state, despite the growth in the relative size of the trading relationship, still remains less constrained than its trading partner. Thus, the cost of engaging in an MID is still relatively lower for them. Furthermore, the increased importance of this particular trading relationship gives them an even greater incentive to engage in an MID if they were to come to experience unfavorable trade terms. In this way, they have multiple factors that allow or pressure them into being more aggressive and thus, they are more likely to engage in an MID. These findings in combination

with the findings related to FDI draw into question the impact of economic relationships on the prevalence of conflict.

Interestingly, no independent variables were found that had an overwhelming influence on decreasing the prevalence of MIDs. If anything, what this empirical analysis has found is that economic variables that represent growing levels of global economic integration may not have as much of an influence on declines in conflict as originally thought. As the literature review demonstrated, global conflict has declined in many areas. However, the reasons for these declines are not solely economic in nature. Rather, it is becoming more and more apparent that while economic factors do play a major role in the prevalence of conflict, various political and cultural factors play just as important of a role in determining the prevalence of conflict. All said, this is a very complex topic as there are so many different factors that could lead to conflict. Furthermore, all of these factors are highly interrelated. While no one factor may lead to greater peace, the combination of many different economic, political and cultural factors might. Interestingly, Immanuel Kant recognized these very relationships when he first proposed the Kantian Triangle in 1795.

Thomas Friedman's "Golden Arches Theory of Conflict Prevention" is a unique lens through which to study this field of research. While his theory may not hold anymore, the theoretical underpinnings do seem to be accurate in that global economic expansion does raise the cost of war. It is this increased cost that has likely prevented many wars over the years. Furthermore, continued economic expansion and continued research in this field has the potential to reduce the prevalence of violent conflicts in the future.

ENDNOTES

1. As will be explained later in the report, there is a fundamental difference between economic interconnectedness and economic interdependence. Basically, the former involves a mutual and equal benefit between two economically connected nations. The latter involves an unequal benefit between two economically connected nations where one nation more extensively relies on the other.
2. The Kantian Triangle is used to briefly introduce some of the factors that may be causing a decline in MIDs and thus violence throughout the world. More details will be provided on the democracy and economic aspects of the triangle later in this literature review.
3. However, it is also noteworthy to mention that the majority of the violent conflict in the Middle East has to do with religious wars.
4. It is noted that the presence of a democracy is really a political factor. However, because political systems (democracies in particular) are so important to the functioning of markets, a brief discussion will be included in this section.
5. Imperialistic wars are classified under the extrastate war category by Steven Pinker. He argues that this type of war has vanished from the face of the earth.
6. In order to figure out how many times more or less likely a conflict will occur between the nations making up a dyadic-pair, the antilog of the coefficient was taken. For example, “8.6 times” was calculated as follows $e^{2.155587}$. This basic calculation was used throughout the analysis in this report.

APPENDICES

Table 1: Definition of Variables		
Variable	Variable Abbreviation	Description
MID Occurrence	cwmid	Dependent Variable - Equals 1 if MID occurred; 0 otherwise
MID Occurrence/Hostility Level	cwhostd	Dependent Variable - Reflects level of hostility on a scale of 0 to 5, with 5 being the most severe level
Control Group		
Contiguity	cont	Equals 1 if contiguous by land or less than 400 miles of water; 0 otherwise
Democracy	polity	Average Polity IV score for dyadic pair
Capabilities	capabilities	Ratio of stronger state's CINC score to the weaker state's CINC score
Allies	ally	Equals 1 if both countries shared membership in a defense pact, neutrality agreement, or ententes; 0 otherwise
Multinational Corporation Group		
McDonalds	mcdonalds	Equals 1 if corporation is present in each country making up the dyadic pair in a given dyad-year; 0 otherwise
Burger King	bk	Equals 1 if corporation is present in each country making up the dyadic pair in a given dyad-year; 0 otherwise
Ford	ford	Equals 1 if corporation is present in each country making up the dyadic pair in a given dyad-year; 0 otherwise
Honda	honda	Equals 1 if corporation is present in each country making up the dyadic pair in a given dyad-year; 0 otherwise
Trade Group		
Lower Trade Share	lowts	Reflecting the less constrained state
Higher Trade Share	hights	Reflecting the more constrained state
Average Trade Share	avgts	Reflecting the average trade share between the two states
General Economic Group		
Average Trade-to-GPD Ratio	avg_trade_gdp	Represents the average dyadic total trade to total dyadic GDP ratio
Average Exports-to-GDP Ratio	avg_exports_gdp	Represents the average dyadic total exports to total dyadic GDP ratio
Average Imports-to-GDP Ratio	avg_imports_gdp	Represents the average dyadic total imports to total dyadic GDP ratio
Average FDI-to-GDP Ratio	avg_FDI_gdp	Represents the average dyadic total FDI inflows to total dyadic GDP

Table 2: *cwmid* logit analysis

Variable	Individual Level	Minor Group Level	Major Group Level
Control Group			
<u>cont</u>	2.155587 (0.000)*	1.932985 (0.000)	1.685807 (0.024)
polity	-0.1167286 (0.002)	-0.1459739 (0.000)	-0.0607925 (0.328)
capabilities	-0.00688 (0.038)	-0.0082446 (0.019)	-0.0038967 (0.175)
ally	0.1090739 (0.86)	-0.3536439 (0.615)	-4.171351 (0.050)
Multinational Corporation Group			
<u>mcdonalds</u>	-0.6137903 (0.163)*	-0.9361873 (0.125)	-1.737125 (0.039)
<u>bk</u>	-0.3760393 (0.541)	0.023418 (0.974)	0.4706456 (0.616)
ford	-0.0571581 (0.897)	0.711164 (0.249)	1.116026 (0.146)
<u>honda</u>	-0.3737436 (0.492)	-0.3147438 (0.638)	-0.9279327 (0.267)

* $P > |z|$

Table 3: *cwhostd* regression analysis

Variable	Individual Level	Minor Group Level	Major Group Level
Control Group			
<u>cont</u>	0.3172409 (0.000)*	0.3250533 (0.000)	0.1480155 (0.016)
polity	-0.0108755 (0.001)	-0.122854 (0.000)	-0.0037611 (0.262)
capabilities	-1.79E-06 (0.181)	-0.0000367 (0.169)	-0.0000268 (0.2)
ally	0.0164606 (0.703)	-0.0007724 (0.989)	-0.1363168 (0.008)
Multinational Corporation Group			
<u>mcdonalds</u>	-0.0403645 (0.126)*	-0.0584239 (0.096)	-0.0625829 (0.097)
<u>bk</u>	-0.020873 (0.563)	0.0038689 (0.926)	-0.0013017 (0.976)
ford	-0.0045916 (0.875)	0.0433702 (0.278)	0.0398302 (0.348)
<u>honda</u>	-0.0238503 (0.461)	-0.0197326 (0.625)	-0.0481404 (0.237)


* $P > |z|$

Table 2: *cwmid* logit analysis

Variable	Individual Level	Minor Group Level	Major Group Level
Trade Group			
<u>lowts</u>	29.14662 (0.000)*	29.78618 (0.000)	45.80659 (0.003)
<u>hights</u>	0.0342742 (0.879)	-0.1743454 (0.812)	-0.0812503 (0.824)
<u>avgts</u>	0.0981532 (0.804)		
General Economic Group			
<u>avg_trade_gdp</u>	-0.0354605 (0.001)*	-0.0453156 (0.192)	-0.0178734 (0.24)
<u>avg_exports_gdp</u>	-2.882226 (0.211)		
<u>avg_imports_gdp</u>	-2.674726 (0.224)		
<u>avg_fdi_gdp</u>	3.382263 (0.236)	11.1348 (0.023)	15.95659 (0.004)

* P > |z|

Table 3: *cwhostd* regression analysis

Variable	Individual Level	Minor Group Level	Major Group Level
Trade Group			
<u>lowts</u>	5.794017 (0.000)	5.905095 (0.000)	6.495276 (0.000)
<u>hights</u>	0.0017343 (0.907)	-0.0118742 (0.424)	-0.0081438 (0.614)
<u>avgts</u>	0.0062797 (0.833)		
General Economic Group			
<u>avg_trade_gdp</u>	-0.0012636 (0.006)*	-0.0015933 (0.275)	-0.0011908 (0.050)
<u>avg_exports_gdp</u>	-0.0798689 (0.35)		
<u>avg_imports_gdp</u>	-0.059502 (0.427)		
<u>avg_fdi_gdp</u>	0.2789473 (0.328)	0.6144122 (0.097)	0.8616484 (0.034)

* P > |z|

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