

**GLOBAL INTERDEPENDENCE AND ELIMINATING WAR
IN THE
TWENTY FIRST CENTURY**

by

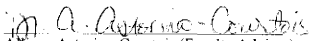
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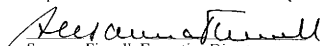
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Abstract

Global Interdependence and Eliminating War in the Twenty First Century.

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The logic is intuitive: as nations' interests become more global, as international trade and world economies become more complexly linked, the costs of war to nations should increase as well. Moreover, as this increasing inter-connectedness shifts the sources of conflict and of interstate power, warfare should be limited as well. Indeed, the increasing interdependence of nation-states has been discussed by scholars and observers as a potential limiting factor on interstate war. However compelling, this notion has yet to be well tested quantitatively. In addition, it is not clear what the combined effect of several individual indicators of global interdependence would have on war. The underlying concern of this research is the possibility of eliminating war by studying the relationship between war propensity and global interdependence. For the purposes of this study, two indicators of interdependence are used: annual international trade (an indicator of economic interdependence) and political alliances (to measure political interdependence). Using these two measures of the interdependence of nation-states, this study examines whether the dependence of a state's wealth on the international market and its level of political interconnectedness are associated with its likelihood to engage in interstate conflict.

Global Interdependence and Eliminating War in the Twenty First Century

There has been virtually no war among the forty-four wealthiest nations since 1945 (Mueller 1989: 4-5). This does not mean that there has been absolutely no war since 1945, rather that the wars that have taken place have not involved more developed countries on both sides. The logic is intuitive: as nations' interests become more global, as international trade and world economies become more complexly linked, the costs of war should increase as well. Moreover, as this increasing interconnectedness shifts the sources of conflict and of interstate power, warfare should be limited as well. Indeed, increasing interdependence of nation-states has been discussed by scholars and observers as a potential limiting factor on interstate war. However compelling, this notion has yet to be well tested quantitatively. In addition, it is not clear what the combined effect of several individual indicators of global interdependence (political, economic, etc.) on war might be.

The underlying concern of this research is the possibility of eliminating war. Its focus is the relationship between conflict propensity and global interdependence. For the purposes of this study, two indicators of interdependence are used: annual international trade (an indicator of economic interdependence) and political alliances (to measure political interdependence). Using these two measures of the interdependence of nation-states, this study examines whether the dependence of a state's wealth on the international market and its level of political interdependence are associated with its likelihood to engage in interstate conflict.

This paper is organized as follows: the next section reviews relevant literature concerning interdependence, trade, alliances, and conflict. Section three presents the analytic

method. This is succeeded by a discussion of the empirical results and conclusions. The final section discusses the implications of this study and suggests some areas for future research.

Literature Review

Interdependence and Democratic Peace

There is now a considerable body of literature documenting what has been called the closest thing to a law that exists in the field of political science - the robust finding that democracies do not fight each other (Singer and Small 1976; Rummel 1983, 1985, 1996; Chan 1984; Ray 1987, 1995; Maoz and Abdolali 1989; Maoz and Russett 1992; Russett 1993; Weart 1997). However, it is also known that democracies are not less war prone than other types of governments; they simply do not fight *each other* (Maoz and Abdolali 1989: 31-32). In a much debated essay, Francis Fukuyama (1989) suggests that economic liberalization within a state inevitably promotes political liberalization and democratic reforms. Since the dominant actors in the global system are democratic capitalist states, it is not unreasonable to suggest that other nation-states should increasingly turn toward economic and political liberalization in order to benefit from the system. Integrating Fukuyama's argument with the findings of the democratic peace literature suggests that the spread of economic and political interdependence, by way of economic liberalization and global democratization, should minimize the incidence of war.

Although the relationship between democracy and war has received careful attention, students of international affairs have done remarkably little research concerning the relationship between global interdependence and interstate conflict. This is despite the fact that the worth of interdependence as a means of minimizing conflict has been espoused by philosophers since the

early 17th century (e.g., Hume, Kant, Montesquieu, the Physiocrats). Since the 17th century and indeed since the end of World War II, political and economic affairs have become increasingly linked. Interstate transactions and flows of money, goods, people, and information have increased dramatically; overall world trade has grown more than seven percent since 1945 and levels of direct foreign investment has grown even faster (Keohane and Nye 1989).

Robert Keohane and Joseph Nye were among the first contemporary scholars to hypothesize that nations who are complexly linked will not engage in militarized conflict. In *Power and Interdependence*, Keohane and Nye (1989: 8) clarified the definition of interdependence by first defining dependence as a state of being affected by external forces; interdependence, therefore, means mutual dependence. Thus, interdependence refers to a situation in which two or more states are dependent on one another in order to meet certain needs and/or desires, whether those needs are security, economic, or politically-related. Consequently, those states are restrained from making certain decisions that may affect the states that rely on them, or on which they rely. In other words, interdependence refers to independent actors who wish to preserve their identity, but who are structurally affected by others' behavior (de Wilde 1991: 17).

Keohane and Nye (1989: 25) propose that one feature of interstate relations characterized by interdependence is that "military force is not used" and that "the more complex the network of relationships in which countries are involved, the stronger the constraints on all-out war." Complexity in reference to interdependence refers to the depth of the connections between two or more states, the number of states that are linked, as well as the breadth of linkages between those states. Again, interdependent states are less likely to make conflict decisions based on

narrow understandings (single-dimension) of the implications of their actions. Rather, the more dependent they are on their allies and international trade relations, the greater the constraint on all-out war. However, as compelling as this proposition may sound, it has yet to be verified quantitatively.

The growth of interdependence that has occurred since the end of World War II has also been accompanied by a new focus on prosperity and democracy. John Mueller (1989: 221) states that developing nations are coming to the conclusion that the most important goal is economic growth. Mueller (1989: 223) goes even further by predicting that “there will be no war [as long as humans] hold prosperity to be their overriding goal.” It seems logical that as more firms engage in the global economy in order to expand their markets and increase profits, this limitation on conflict will continue; wars involve significant costs to firms and governments. Likewise, as countries increasingly adopt democratic ideals and political processes, conflict will become more costly to political leaders dependent on popular support in order to stay in power. Although a few wars have turned short term economic and/or political profits, the risk of loss (even in victory) associated with military conflict is great enough that political leaders generally require a high probability of very substantial gain in order to compensate for that risk. With the expansion in scope and depth of interstate interdependence, the sources of the costs of war have risen as well.

In short, interdependence limits war because it increases the costs (economic and political) of war to intolerable levels. In the economic sphere, public expectations of prosperity inhibit governments from using force that would disrupt economic growth. Politically, it should be increasingly difficult for allied states to make decisions based solely on their own countries;

decision makers must increasingly take into account the affect their decisions will have on their own position regarding benefits (security or otherwise) that they can derive from the alliance in the future. Since prosperity is enhanced by political and economic interdependence, and “because the conviction has become wide-spread that whatever value war might conceivably still have for obtaining some goals, it is particularly counterproductive in the quest for prosperity” (Mueller 1989: 222), it can be argued that interdependence encourages a reluctance to go to war due to the fear that a conflict will disrupt beneficial trade routes and/or involve other nation-states by way of networks of alliances

Trade

General agreement on the notion that war is inconsistent with economic progress has given strength to the belief that increased international trade limits war (Mueller 1989; Keohane and Nye 1989). William K. Domke (1988: 43) states the following:

The growth of international commerce marks a most dramatic change in global relations, one that has generated many notions of transformation, not only in economic exchange, but also in social and political relations. If modernization facilitates international commercial exchanges, then economic interests may grow to challenge government’s preoccupation with security.

This means that a government’s interests in security alone will be undermined by the desire to maintain profitable trade relations. Thus, economic interdependence poses both an external and an internal constraint on decisions for war (Domke 1988: 46). “The external constraint is the increased vulnerability that comes from economic interdependence, which raises the costs of breaking profitable trading relations and directing resources away from commerce and toward war” (Domke 1988: 46). The internal constraint [which would apply most specifically to

democratic or other regimes whose leaders take into account popular opinion] arises from the growing public expectations of prosperity that typically accompany increased trade (Domke 1988: 46). Together, these constraints pressure governments to cooperate with one another in order to satisfy their own desires to maintain profitable relations with other countries and also to satisfy public demands for economic growth.

There have been relatively few empirical assessments of the direct effect of trade on conflict involvement. Moreover, the results of studies on trade and war and/or disputes short of war, have been conflicting, and often times confusing. In one of the earliest studies concerning trade and war, Russett (1967) found that states linked by trade during the years 1945-67 were more than twice as likely to fight as nations without strong economic ties. Barbieri (1995, 1996a) also found that increased trade increases the likelihood of a militarized dispute, both before and after World War II. In direct opposition to Russett's and Barbieri's results, Wallenstein's (1973) study of the period from 1920-68 found a negative relationship between trade and conflict when the entire period was considered; the results were not consistent, however, when he divided the time into three sub-periods.

More recent studies have provided more support for the notion that trade does have a limiting effect on conflict involvement. For example, Domke (1988) found that countries that export more are less likely to initiate wars. In addition, Mansfield (1994) found that high levels of trade reduce the numbers of wars initiated over five years. Mansfield, like Polachek (1992), concluded that trade has a significant negative effect on the level of conflict a country is likely to be involved in. Finally, Gasiorowski (1986) as well as Oneal and Russett (1997a) have found that importance of trade (measured as a percentage of GDP) is inversely associated with a state's

likelihood of involvement in conflict. That is, the more a state's wealth was dependent on trade, the less it became involved in international conflict.

Although recent research has generally found that trade relations are negatively associated with conflict between states, these findings do not necessarily provide robust support for the notion that trade has a limiting effect on war. Clearly more research is needed to support the hypothesis that economic interdependence does indeed limit interstate conflict. Furthermore, other forms of interdependence (such as political interdependence as measured by alliances) should be considered as well.

Alliances

In the first empirical analysis of the relationship between alliances and war, Singer and Small (1968) found that alliances were "positively correlated with years of war, number of wars, and number of battle deaths. However, Ray (1989) and Weede (1983) hypothesize that alliances may prevent democracies from becoming involved in militarized disputes. According to Gochman and Sabransky (1991: 94), "alliances can prevent war through deterrence or, if deterrence fails, help nations win whatever war comes along." Indeed, one study has shown that alliances increase the chances for victory by 7 percent for the initiating side and 14 percent for the target side of war (Buono de Mesquita 1981). In addition, it been found that aligned nations are no more likely than non-aligned nations to initiate a conflict (Buono de Mesquita 1981). Conversely, it has also been found that allies are far more likely than expected to engage in conflict with one another (Buono de Mesquita 1981; Weede 1983; Maoz and Russett 1992).

Therefore, scholars disagree about the direct effects alliances have on conflict

involvement. The findings so far have been conflicting, and thus inconclusive. Hence, in addition to providing insight into whether interdependence has a limiting effect on conflict, this research will also shed light on the question of whether alliances specifically do or do not have a limiting effect on conflict.

Analytic Method

Research Design

The data used in this study covers all independent states (for which trade data were available) using the Small and Singer (1982) list of interstate system members during the 1951-1985 period. This study focuses on the post-World War II era for both theoretical and practical reasons. It is in this era when a dramatic increase in the number of states occurred. As the number of states increased, the number of interstate interactions increased as well. Likewise, the opportunities for interstate conflict increased. This is also an era that observed a dramatic growth in interdependence. A key practical reason for focusing on this era is the availability of data for most of the states during this period. Whereas data on alliance participation is readily available for the 1816-1986 period, trade data frequently is unavailable for years prior to World War II.

Three datasets were utilized for this study. Data on militarized disputes came from the Militarized Interstate Dispute (MID) dataset, which is a subset of the Correlates of War project at the University of Michigan. Data on trade came from 1993 International Monetary Fund (IMF) figures compiled by Oneal and Russett (1997a). Finally, data on alliance membership was taken from Singer and Small (1968).

Measures of Variables

1. *Interstate Conflict.* The Militarized Interstate Dispute (MID) dataset divides annual conflict data into five categories, in order of conflict escalation: *no conflict*; a *threat to use military force* by at least one member of a nation-state dyad; a *display of military force* by at least one member of a dyad; *actual use of force* by at least one member of the dyad; and *warfare*.

2. *Economic Interdependence.* Trade figures are used as the basis for measure of the economic interdependence measure. Following Oneal and Russett (1997a), importance of trade to a state's economy (i.e., its dependence on foreign trade) is calculated as total imports and exports divided by income (GDP).

3. *Political Interdependence.* Data regarding alliance membership was used to measure a state's political linkages. Two countries were considered allies if they are formally allied, following Singer and Small (1968), or if both are allied with the United States.

The following hypotheses are tested empirically:

Hypothesis 1: Nation-state dyads characterized by high levels of trade dependence are less likely to engage in serious (*display of military force, use of military force, war*) conflicts than less dependent dyads.

Hypothesis 2: Allies are less likely to become involved in serious conflict than are non-allied states.

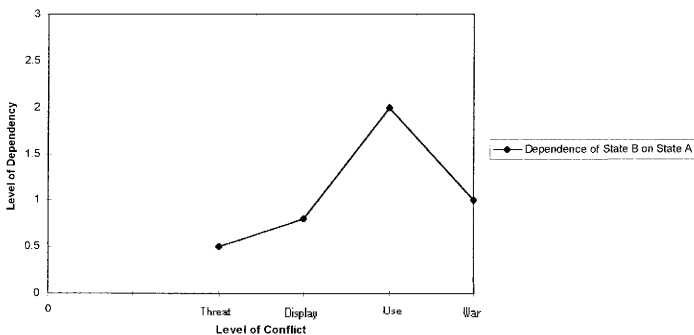
The first analysis conducted tests the effect of economic interdependence on conflict participation. The second analysis examines the relationship between political interdependence and conflict participation. The analytic measures used in both are discussed below.

Results

Economic Interdependence and Level of Conflict

A 2x2 ANOVA was conducted to test whether trade dependence does indeed have a significant impact on the level of conflict participation [F (1, 12, 126) = 19.20, $p < .000$]. The ANOVA results show a significant main effect. Taking a closer look (as shown below in Figure 1), there appears to be a mitigating effect on war involvement associated with trade dependence. While increasing levels of dependence are associated with increasingly serious conflict, there appears to be a threshold at war participation. In the case of warfare, the majority of wars involve states that are less economically dependent. While indirect, this indicates that close and mutually dependent relationships (interdependence of states), while allowing more possibility for serious disputes, also limit resort to warfare.

Figure 2: Political and Economic Interdependence and Level of Conflict



Political Interdependence and Level of Conflict

Crosstabulation was used to test the impact of an allied relationship on conflict behavior. As hypothesized, the presence of an alliance relationship has a significant mediating effect on the incidence of war involvement. As Table 1 (shown below) suggests, only 3.7 percent of wars involved allies. However, the degree to which alliances did not restrict lower levels of conflict is extremely surprising. Fully one third of the conflicts involving *displays of military force* and *uses of military force* were between allies, whereas over one half of the conflicts involving only *threats to use military force* were between allies. Thus, as is the case with economic interdependence, political interdependence also appears to have a significant limiting effect on warfare, but not on conflicts short of war.

Table 1: Political Interdependence and Conflict Crosstabulation, n = 16,383

Conflict Type	% of States	
	Allied	Not Allied
Threat to Use Military Force	60%	40%
Display of Military Force	36.5%	63.5%
Use of Military Force	33.2%	66.8%
Warfare	3.7%	96.3%

What might explain this interdependence-related barrier to warfare, but not other forms of conflict? Although answering this question will require further analysis, it may be that states

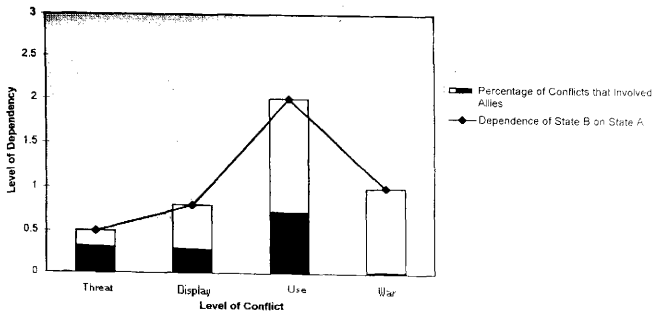
who are allied may need only make a threat to demonstrate that they are serious in a conflict situation. In other words, the credibility and seriousness of a threat once made, and the multiple risks of it being carried out is more assured between allies. This may also explain why alliances actually seem to encourage conflicts that involve *threats to use military force* as well. Perhaps interdependence limits war (but not conflicts short of war) because it does indeed raise the costs of warfare to an intolerable level, while lesser levels of conflict remain tolerable. Or perhaps there is some kind of institutional understanding that allies do not go to war with one another.

Combined Effects of Economic and Political Interdependence on Level of Conflict

Since only 3.7 percent of wars occur between allies, it appears that alliances are a strong predictor of the likelihood that a state will be involved in a full-scale war. This is despite the degree to which that state is economically dependent on other states. However, at lower levels of conflict, political and economic interdependence both affect the likelihood of conflict. Looking at Figure 2 (shown below), it seems that there is some interaction between levels of political and economic interdependence. For example, conflicts that involve a *threat to use military force* are more common among allies, yet also more common among states that are barely dependent on each other. Moving up the escalatory ladder, conflicts that involve a *display of military force* are less common among allies, but more common among somewhat dependent states. Moving up the ladder again, conflicts that involve an actual *use of military force* are less common among allies, but more common on highly dependent states. Therefore, there appears to be a more active response to conflict among non-allied, interdependent states. Finally, in the case of actual warfare, frequency of conflict is extremely low among allies, and it

seems that there may be some effect of level of dependency as well; however, it appears that alliances have the greater limiting effect on warfare. Thus, while economic interdependence appears to have a mediating effect on war, political interdependence has the more profound effect.

Figure 2: Political and Economic Interdependence



Conclusion

For many years, political scientists, historians, and philosophers have argued that interdependence has a pacifying effect on interstate conflict involvement. The preceding analyses investigate the relationship between interdependence and conflict propensity. Specifically, the effects of trade-related economic and political interdependence on conflict behavior were examined. In general, the results suggest that there may be some merit to the notion that mutual dependence among states has a mediating effect on war.

Interestingly, the analysis of economic interdependence indicated that while the hypothesized inhibiting effect appeared where conflicts escalated to warfare, the reverse was true of less serious conflicts, especially those that involve *uses of military force*. While increasing levels of economic dependence are associated with increasingly serious conflict, this does not hold true for conflicts involving full-scale war. In the event of war, the majority of these conflicts involve states that are less economically dependent on each other. This indirectly indicates that interdependent relationships, while allowing for the possibility of more serious disputes, also limit resort to warfare.

As is the case with economic interdependence, the data also suggests that political interdependence has a significant limiting effect on war. This is evidenced by the fairly strong relationship between alliances and lack of war. However, it is also important to note that alliances do not have a limiting effect on lower levels of conflict. Thus, alliances do have a mediating effect on war, but not on conflicts short of war.

Finally, although interdependence does appear to have a limiting effect on warfare, it is obvious that interdependent relationships are not inherently peaceful. Some scholars (Brown

1987; Keohane and Nye 1989) have hypothesized that the likelihood of war depends on the nature of the interdependent relationship. For example, cases where one nation is highly dependent on another, either for its economic livelihood or national security, could produce intolerable circumstances in which the more dependent country may decide that it is 'worth a war' to alleviate the situation (Brown 1987: 64). Indeed, if the issue is a matter of 'life and death,' as some thought oil was during Desert Storm, then the resort to conflict may be desirable.

Implications and Realms of Future Research

War is so destructive that any insight into how it can be limited, or even eliminated has profound academic as well as international political implications. Academically, this study of interdependence and its effect on conflict adds to the existing body of knowledge concerning conflict and/or war. In addition, studying interdependence and its effect on conflict should further develop and affect the way scholars study war in the post-Cold War era. In the realm of politics, a deeper understanding of the connection between interdependence and conflict will affect the way governments make decisions about economics, conflicts, and cannot be discounted when making decisions about security. Specifically, this research clarifies the previously conflicting answers to the question of whether or not alliances have a positive or negative effect on conflict propensity by finding that alliances are strongly associated with lack of war, but not necessarily with conflicts short of war. Therefore, this research is important both academically and politically in that it provides important knowledge about interdependence and the likelihood of conflict in our world today.

The possibilities for future research concerning interdependence and conflict are vast; clearly this research is only a piece of the puzzle. There are many indicators of interdependence other than trade and alliances that would provide valuable insight into the connection between interdependence and conflict. For instance, in addition to international trade, other indicators of economic interdependence such as indirect and direct foreign investment should be assessed for their impact on conflict. Furthermore, improved data on international trade, foreign investment, and other such indicators of interdependence would be of considerable use to researchers engaged in this issue. As far as political interdependence is concerned, measures such as diplomatic exchanges should also be investigated to discover their effects on interstate conflict. Clearly, scholars still have much to do to investigate the effects of different political and economic indicators of interdependence on war, as well as the effects of other categories of interdependence, such as technological or resource interdependence.

Given that this research (due to data constraints) focuses solely on the Cold War era, it would also be extremely valuable to look at the effects of interdependence on conflict in the post-Cold War years. The world has changed so much since the end of the East-West conflict; an analysis of the effects of interdependence on conflict in the post Cold War era is essential to understanding and perhaps improving relations between peoples and states in the next century and beyond.

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