

Bilateral Trade and the Third Party Effect of US Sanctions

Dursun Peksen

**Department of Political Science
University of Missouri-Columbia
113 Professional Building
Columbia, Missouri 65201**

Email: dp248@mizzou.edu

Presented at the Annual Meeting of International Studies Association-Midwest, 2006, St Louis, MO. I would like to thank A. Cooper Drury for his helpful comments.

ABSTRACT

The economic sanctions literature focuses mostly on the strategic interaction between the target and sender countries, while neglecting the possible economic consequences sanctions have on non-sanctioning countries. This article investigates the impact unilateral US sanctions have on trade flows between the target and third countries by examining two competing views –“sanctions-busting” and “negative spillover effects.” Using panel gravity estimates of bilateral trade between the target and their non-US trading partners for the 1975-2000 period, the overall findings suggest that US sanctions reduce the trade flows between the target and third-party countries. The results also point to considerable differences between OECD and non-OECD third-party countries: trade disruption for the OECD countries is modest, while the negative impact of sanctions on non-OECD countries appears to be substantial, especially for those neighboring the targets of US sanctions.

Introduction

The economic sanctions literature focuses largely on sanction efficacy by examining the strategic interaction between sender and target countries, while neglecting the possible, inadvertent effects economic sanctions have on non-sanctioning, third countries.¹ *Multilateral* sanctions, especially the UN sanctions, are expected to cause significant disruption in the target's economic exchange with other countries because of the target's reducing ability to locate alternative markets to divert its trade and financial relations (e.g. Becker 1986; Canes 2000; Slavov 2005). Yet, the literature remains agnostic as to whether and to what extent *unilateral* sanctions disrupt or improve economic ties between the target and third countries. According to the "sanctions-busting" argument, unilateral sanctions will improve the economic ties between the target and third countries. On the contrary, the "negative spillover effects" perspective maintains that unilateral sanctions will disrupt the target's relations with third countries. Thus, the cumulative knowledge on how unilateral sanctions affect third countries is still very limited due to the lack of adequate empirical, cross-national inquiry to examine the strength of the alternative explanations.

Taking into account these two competing views, this article contributes to a neglected research area, "the third-party effects of sanctions," by addressing the following questions: (1) What are the global implications of the US sanctions on trade

¹ Throughout the paper, sender or sender country refers to the country that imposes economic sanctions and the target or target country refers to the country that is subjected to economic sanctions. Third parties or third countries refers to non-sanctioning countries which engage in bilateral trade with the targets of unilateral sanctions.

flows between the target and their non-US trading partners?; (2) What are the differences in the overall effect unilateral sanctions have on developed versus developing countries?; (3) What spillover effects do sanctions have on neighboring countries - geographically contiguous neighbors and nearby regional countries?

Using panel gravity estimates of bilateral trade between the target and third countries for the 1975-2000 period, the paper suggests that US sanctions reduce the trade flows between the target and all third parties and, although modest, OECD countries have higher trade disruptions with the target countries than non-OECD countries. The findings also show that economic cost of unilateral sanctions is more substantial for neighboring countries –especially for non-OECD neighbors- than geographically distant third parties.

The rest of the paper proceeds as follows. The following section briefly discusses the literature’s understanding of economic sanctions. Next, I outline the alternative views on the effect sanctions have third countries and maintain that US sanctions have a negative impact on bilateral trade between the target and third countries. The next two sections present the research design and report the findings, respectively. Possible policy implications of the findings are discussed in the conclusion with suggestions for future research on “the third-party effects” of economic sanctions.

The Relevant Literature

The question “do economic sanctions work?” has been the most fundamental inquiry in the sanctions literature. The conventional wisdom has been that sanctions are ineffective and failed policy instruments (Galtung 1967; Wallenstein 1968; Barber 1979; Hufbauer, Schott, and Elliot [hereafter HSE] 1990; Drury 1998; Pape 1997, 1998; Elliot

1998). Recent studies, however, show that sanctions succeed more often than suggested once the cases in which sanctions are threatened but not imposed are also considered in the analysis (Smith 1996; Morgan and Miers 1999; Drezner 2003; Lacy and Niou 2004; Li and Drury 2004; Drury and Li 2006). Instead of focusing on the question of *whether* sanctions work, some others shifted the focus to the issue of *when or under what circumstances* economic coercion is more likely to succeed (e.g. HSE 1990; Martin 1992; Morgan and Schwebach 1995, 1997; Kirshner 1997; Dashti-Gibson et al. 1997; Drezner 1998, 1999; Drury 1998; Kaempfer and Lowenberg 2000).

A growing body of literature also investigates the possible economic and political consequences sanctions have on the target and sender countries (e.g. Hass 1997; Hufbauer et al. 1997; Hufbauer and Oegg 2003; Weiss et al. 1997; Weiss 1999; Letkzian 2003; Marinov 2005). Some find evidence on the current and lingering impact of sanctions on trade flows between the US and the target countries (Hufbauer et al. 1997; Hufbauer and Oegg 2003). Letkzian and Souva (2001) show that democratic dyads return faster to presanctions levels of trade than non-democratic dyads after the end of sanctions episodes. Some scholars also raised doubts about the utility of sanctions by highlighting possible negative humanitarian consequences of economic sanctions on civilians such as on public health and education in the target countries (e.g. Haas 1997; Weiss et al. 1997; Weiss 1999). In addressing the influence of sanctions on the target's domestic political dynamics, Marinov (2005) shows that economic sanctions will likely destabilize the political leadership in the target.

Although the extant literature has been useful in understanding the utility of economic coercion as a foreign policy tool, the center of attention has been target and

sender countries, while overlooking the impact sanctions have on third countries. Few studies partially address the impact US sanctions have on trade flows between the target and third parties (Hufbauer et al. 1997; Caruso 2003; Yang et al. 2004). Examining only three years (1985, 1990, and 1995), Hufbauer et al. (1997) suggest that comprehensive sanctions, such as the unilateral sanctions against Iran, led to more trade opportunities in the target states for “competitors” of the US such as Australia, Canada, and France. For the years between 1980 and 1999, Yang et al. (2004) also shows that comprehensive US sanctions against target countries might increase their bilateral trade relations with the European Union (EU) countries and Japan. Contrary to Hufbauer et al. (1997) and Yang et al. (2004), Caruso’s (2003) examination of six developed countries (Canada, Japan, France, Germany, Italy, United Kingdom) with a broader time span of 1960-2000, found that unilateral extensive sanctions have a large negative impact on trade, while limited and moderate sanctions induce a weak positive effect on bilateral trade.

The findings from these studies are mixed, largely resulting from the selection of a few developed countries and in most cases, a limited time span. Thus, there is no consensus among these studies on whether unilateral sanctions improve or disrupt the bilateral trade between the target and the developed countries. Furthermore, the studies on third countries only focus on a few major developed countries without questioning the global implications of US sanctions. Therefore, due to the limitations of the earlier research, we are still far from understanding the third-party effects of US sanctions. This paper complements and adds to existing research by providing a global examination of third-party effects and highlighting the overlooked differences between developed vs. developing countries and neighboring vs. non-neighboring third countries.

Third-party Effects of Unilateral Sanctions; A Theoretical Overview

There are two competing views on how unilateral sanctions might affect third countries' relations with the target including "sanctions-busting" and "negative spillover." Following paragraphs outline these views and conclude that unilateral sanctions will likely hurt the economic ties between targets and their non-sanctioning trade partners. According to the "sanctions-busting" view, third parties –governments and private actors– will likely attempt to capture the economic opportunities created by the sender's decision to limit its economic ties with the target. One type of sanctions-busting is identified as the "black knight effect" which refers to third party actions aim at overturning the negative impact sanctions have on the target (Hufbauer, Schott, and Elliot 1990, 12; Green 1983, 82-83; Drury 1998; Nourridin 2001). That is, thirdcountries with political motivations seek to spoil unilateral sanctions by opening their markets for the target's boycotted goods and/or by supplying the sanctioned goods. The case of the Soviet Russia's improving economic relations with Cuba during the Cold War is a well-known example of the black-knight effect. In the Cuban case, in response to the US sanctions imposed with the goal of destabilizing Castro's regime, the Soviet Russia increased its trade ties and provided aid to the Cuban communist regime to undermine the unilateral US sanctions. The motivation behind the Russian support was to prevent Castro's regime from weakening due to economic burden of sanctions.

Another type of sanctions-busting, which is more commonly observed, is the economically motivated and opportunistic third party attempts. Specifically, most third countries might seek merely to capture new trade opportunities in target countries to

make profit as a sender country restricts its economic ties with the target. The motivation under these circumstances by third countries is to expand their economic influence to gain more profit in target countries. Therefore, whether a sanctions-busting motivated with the black-knight effect or merely opportunistic goal, the expected result of busting should be an increase in the trade volumes between the targets of unilateral sanctions and trading third countries.

Although, in principle, third countries are expected to engage in more trade relations with the target, there is no clear-cut evidence supporting this expectation. On the contrary, the research on the efficacy of economic sanctions shows that sanction busting attempts, especially in the form of the “black knight effect,” does not have any substantial impact on the target’s resistance to or compliance with the sender’s demands (Drury 1998; Noouriddin 2001). In other words, it is suggested that third countries tend to intentionally avoid undermining economic coercion by not engaging in new trade relations with the targets or may largely fail in their efforts to spoil unilateral sanctions.

The failure in sanctions-busting could be explained by the “negative spillover” argument. According to the “negative spillover” perspective, third parties will not bust economic sanctions; on the contrary, they will suffer from unilateral sanctions for two particular reasons. First, sanctions are used by sender countries as a means of communicating disapproval and signaling resolve to targets and other countries (Galtung 1967, 411-412; Barber 1979; Lindsay 1986; Drezner 2000; Schwebach 2000; Fisk 2000; Ang and Peksen 2007). In other words, unilateral sanctions are a good indicator of the high salience that the sender state attributes to the issue under dispute. More specifically, initiation of sanctions by a sender demonstrates the sender’s decisiveness and also signals

to other countries the disapproval of the target country. Therefore, third countries are largely aware of the possible repercussions from sanction busting and thus will better judge the risks of opening their markets to the target. Consequently, because any sanction-busting attempt will result in harming the economic ties with the sanctioning country, third countries will likely avoid developing any economic relations with the targets undergoing unilateral sanctions.

In practice, the sanction-busting by third countries appears to be a serious concern for the US especially under the cases where the US completely cuts the economic interaction with the targets. The Helms-Burton Act and the Iran/Libya Sanctions Act are two examples of how the US tried to enforce third party loyalty and reduce sanction busting. In both acts, the US government threatened private and public actors of third countries with economic restrictions on the US or with the US companies abroad, if they developed economic ties with hostile targets like Cuba, Iran, and Libya (Drezner 2000; Fisk 2000; Caruso 2003). Although the US or other countries may not take official steps as in the cases of Cuba, Iran, and Libya during less salient sanction cases, it is likely that sender countries will closely watch how the third countries react in response to the imposition of unilateral sanctions and use diplomatic channels to convey their displeasure of sanction-busting attempts.² To sum up, unilateral US economic sanctions will likely

² Morgan and Bapat (2003) make a similar point in their game theoretical model that addresses the sender countries' efforts to create and enforce laws as part of the sanctions process to effectively interrupt the economic transactions between their national firms and the target countries. They do not, however, consider the efforts by the sender countries that are specifically directed at the economic agents of third countries.

deter risk-free third party private and public actors from expanding economic ties with the sanctioned countries in order to avoid harming their economic and diplomatic relations with the sender.

The second reason of why third countries will have less economic interactions with the targets following sanctions is related to the economic damage of sanctions on the targets. Economic sanctions are imposed to weaken target states economically so as to make them comply with the sender's demands (Barber 1979; Hufbauer, Schott, and Elliott 1990). Because the US is a global economic power and a major trading country, the domestic economy of target states will suffer considerably from US sanctions due to the embargoes, boycotts, and financial restrictions imposed on them (Gibbons 1999; Weiss et al. 1997; Weiss 1999; Lektzian 2003). The immediate economic impact of sanctions such as imposing an embargo on the target's products or withholding its financial assets will, in turn, reduce the target's economic and financial ability to pay for imports from third countries. Therefore, since the target's economic capacity is diminished by the sanctions, a negative spillover on the target's economic transactions with third countries is likely. Thus, the general hypothesis resulting from the above discussion is that *US sanctions will likely disrupt economic relations and thus lead to lower trade volumes between the target and third countries.*

Research Design

To test the hypothesis that US sanctions lead to lower bilateral trade between the target and non-sanctioning countries, the data utilized in the analysis are arrayed as a time-series cross-section. The time-series component is delineated by year and runs from

1975 to 2000, inclusive. The cross-sections are all non-directed dyads that include a pair of two countries. Since the US is the sender for all the unilateral sanction cases under consideration, all the dyads that include the US are excluded in the analysis. Similarly, the dyads in which both countries face US sanctions were also excluded since both of the countries are the targets of unilateral sanctions and thus are not third parties.

The data on economic sanctions were compiled from several sources including Hufbauer, Schott, and Elliot (1990), Hufbauer et al. (1997), Hufbauer and Oegg (2003), Cox and Drury (2006) and the website of Institute of International Economics.³ The data for bilateral trade flows, population and GDP rates are from the Gleditsch (2002) trade database. The Polity IV dataset is utilized to measure political regime types of dyad members (Marshall and Jaggers 2000). The minimum distance dataset collected by Gleditsch and Ward (2001) is used to determine the land neighbors and regional nearby countries. The data on civil wars are from the Armed Conflict Dataset (Strand et al. 2005) of the International Peace Research Institute (PRIO). The Correlates of War (COW) database is used for alliances and interstate wars between dyad members.

Dependent Variable

The dependent variable is total trade flow between dyad members. Total trade flow is measured as the sum of exports and imports between the two countries in a dyad. Since third countries might react to economic sanctions both by opening their markets for the target's boycotted goods and/or by exporting the embargoed products to the target, total trade volume – imports plus exports – is the dependent variable in this analysis.

³ The full list of the sanction cases is available at:

<http://www.iie.com/research/topics/sanctions/sanctions-timeline.htm>.

Because we are particularly interested in the impact of US sanctions on trading partners, only the dyads that have total trade volume greater than zero is included in the analysis. For estimation purposes, log-linear expression for the dependent variable is used and it takes the form **logTrade**.

Independent Variables

Unilateral **US sanctions** variable is coded as an ordinal variable (0-2), which includes the categories of no sanctions (0), limited sanctions (1), and extensive sanctions (2). Instead of using a mere dummy variable for economic sanctions, the three-category ordinal measure better captures the economic impact of sanctions on the targets. Specifically, because extensive unilateral sanctions place comprehensive economic and financial restrictions on the target countries, they should have greater substantial impact than limited or moderate economic sanctions such as partial investment bans, asset freezes, or export restrictions that aim at certain sectors of economic relations. Limited/moderate sanctions include reduction or suspension of economic restrictions on arms exports or limited dual-use technologies, reduction or suspension of military aid, travel restrictions, diplomatic rebuff, broad trade and financial sanctions such as investment bans or asset freezes and export restrictions. The extensive sanctions category includes the comprehensive sanctions that extensively cut any economic and financial transactions between the sender and target countries such as those sanctions in place against Cuba, Iran, and North Korea (see also Hufbauer et al. 1997; Hufbauer and Oegg 2003). Both financial and trade sanctions are included in the analysis. The reason for the inclusion of financial sanctions in the analysis is that financial sanctions will also have an

impact on the bilateral trade by disrupting the target's economy through denying foreign investment, exchange or credit to the target countries (Hufbauer et al .1997).

[Table 1- About here]

Although the overall expectation for the impact unilateral US sanctions have on third countries is expected to be negative, further specifications regarding the economic capacity and type of third countries require additional emphasis. Specifically, because economically developed countries –referred to here as OECD member countries – have greater bilateral trade volumes and thus are the “competitors” of the US, they should be more vulnerable to the negative effects of unilateral sanctions. Table 1 provides evidence on the differences in trade flows between the dyads that include at least one OECD country and the dyads without OECD countries. From the table, it is evident that bilateral trade flows on average is higher for the dyads including OECD countries (about \$ 605 million) than the dyads which only include non-OECD countries (about \$ 116 million). Consequently, because of their higher bilateral trade flows, OECD countries should be more susceptible to experience the possible negative spillover effects of unilateral sanctions. On the contrary, due to their lower levels of international trade volumes, the impact of sanctions will likely be less for non-OECD countries. Based on this conjecture, it is expected that US sanctions will likely have a larger negative impact for OECD countries than non-OECD countries on their bilateral trade with the target countries.

To determine the differences in the impact sanctions have on OECD and non-OECD countries, I estimate three different models. The first model offers the

examination of the research question on a global basis by including all third countries in the analysis. In the second and third models, in light of the theoretical discussion above, I estimate partial models for economically developed (OECD) and developing countries (non-OECD) to compare the impact of sanctions on bilateral trade between the target and these two different groups of countries. For the economically developed countries, 23 OECD countries, excluding the US, are included, which share high income levels and international trade volumes.⁴ Others prefer focusing on a smaller sample size for developed countries such as Japan and the EU (Yang et al. 2004) or G-7 countries (Caruso 2003) excluding the US. However, I choose to keep the sample size for developed countries large to better represent that group and to minimize a possible selection bias. The OECD model only includes the dyads in which at least one of the countries is an OECD member. For the group of less developed countries, all other third countries are included for which the data are available. Thus, the non-OECD model contains the dyads in which both of the dyad members are not OECD countries.

⁴ The 23 OECD countries include Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Turkey, United Kingdom. Four of the OECD members –Czech Republic, Hungary, Poland, and Slovak Republic– are excluded since during the more than half of the time period covered, these ex-Communist bloc countries were economically less active and became members of the OECD sometime after 1995.

Although non-OECD third countries should be less affected from unilateral sanctions, an exception exists: geographic neighbors of target countries. An essential finding of the research in international trade is that geographically proximate countries will have a greater likelihood of being involved in trade relations with one another than with geographically distant countries (see e.g., Helpman and Krugman 1985; Helpman 1987). In other words, neighboring countries – states that share a common border or are in the same region– are economically more dependent on one another. Indeed, as reported in Table 1, average bilateral trade between two neighboring countries with a boundary distance of less than 950 kilometers is more than three times higher (about \$1575 million) than the global average of trade volume between any two countries (\$373 million) and twice more than the bilateral volume that includes at least one OECD member country (\$605 million). Therefore, the overall negative impact of sanctions on the neighboring countries of the target will likely be higher in comparison to the non-neighboring countries.

To specify the impact of sanctions on neighboring countries of the target, I create **SanctionedNeighbor** by interacting the **MinimumDistance** with US Sanctions variables. **MinimumDistance** accounts for a country's land and regional neighbors within 950 kilometers distance from the country. It is coded 1 for the neighboring countries, 0 otherwise. Because distance is accepted as one of the most important elements in facilitating international trade, this measure for location allows incorporating all possible nearby countries –immediate land neighbors and countries less than 950 kilometers

away— that will likely have some trade links due to geographic proximity.⁵

SanctionedNeighbor (MinimumDistance* USSanctions) takes the value of 1 if a dyad includes two neighboring countries and one of the neighbors is under US sanctions and 0 otherwise.

Gravity Model Variables

To construct the baseline model, I include the elements of a common gravity model to control for the flow of trade that would exist in an orthodox free market. Specifically, the variables of the gravity model estimate how much bilateral trade would exist in the absence of political trade barriers (see for example, Timbergen, 1962; Anderson, 1979; Helpman and Krugman, 1985; Helpman 1987; Deardorff, 1995; Eichengreen and Irwin, 1995; Wei 1996; Feenstra, Markusen, and Rose, 1998; Mansfield and Bronson, 1997; Frankel 1997). The gravity model is the prediction that trade flows between two countries is directly related to the product of their economic masses (measured by GDP) as well as the distance between them (Helpman 1987). $\text{Log}(\text{GDP}*\text{GDP})$ is the logged product of the two countries' per capita GDP in a dyad.

⁵ In especially interstate and intrastate conflict literatures, several other scholars use the minimum distance or similar distance data to capture spatial spillover effects of violence on regional countries in the same manner proposed in this paper (see for example Murdoch and Sandler 2002, 2004; Gleditsch and Ward 2000).

To control for the population sizes of the two countries, $\text{Log}(\text{Pop} * \text{Pop})$ is added, which is the logged product of the two countries' populations.⁶

Other Independent Variables

To control for the impact of multilateral sanctions on bilateral flows the **MultilateralSanction** variable takes the value of 1 if at least one of the dyad members is facing a multilateral sanction such as UN sanctions or the sanctions involved by regional multinational organizations and/or multiple countries and 0 otherwise.⁷ The expectation is that the overall trade flows for the targets of multilateral sanctions should be lower with their trading partners. Various studies have noted that political and military alliances promote trade (Gowa, 1994; Mansfield and Bronson, 1997). To control for this assertion the **Alliance** variable is used in the models, which controls for whether the members of a dyad belong to the same military alliance or not. International trade should be more extensive in the post-Cold War given that the tensions and rivalries of the Cold War have fallen by the wayside. To account for that the **ColdWar** variable is included and takes

⁶ I am not able to include a continuous distance variable to account for the geographic distance between the two countries' capitals due to its high correlation (0.72) with the minimum distance variable.

⁷ It is important to note that the multilateral sanctions variable only accounts for bilateral trade between two non-US countries, since the US is not included in the analysis.

Alternatively, however, once we remove all the dyads that involve countries under multilateral sanctions, the findings of the main independent variables produce similar results. It appears to be appropriate to keep the targets of multilateral sanctions in the analysis to avoid any selection bias.

the value of 1 for the post-1990 years. Previous research also suggests that democratic dyads that include only democratic regimes trade more than the dyads including the authoritarian regimes (Mansfield et al. 2000; Ang et al. 2006). For democratic dyads, a **DyadDem** dummy variable is created and coded 1 if both dyad countries are democracy (Polity 4 > 5) and 0 otherwise.

CivilWar is a dummy variable to control for whether one or both of the dyad members are experiencing a civil war. **War** controls for the involvement of one of the dyad countries in an interstate war. Since bilateral trade tends to be linked from year-to-year, that is the amount of trade between two countries in the past year is a good predictor of the following year's trade volumes, an autoregressive process exists. To compensate for this temporal process, following the earlier trade models (e.g. Mansfield et al. 2000; Li and Sacko 2002; Bayer and Rupert 2004), **LagTrade** is utilized that is a 1 year lag of the dependent variable to capture the dynamic process as well as to control for autocorrelation in the models (Keele and Kelly 2005).

The following equation presents the full models with the addition of all control variables:

$$\log\text{TRADE} = \beta_0 + \beta_1\text{USSanctions} + \beta_2\text{MinimumDistance} + \beta_3\text{SanctionedNeighbor} + \beta_4\text{MultilateralSanction} + \beta_5\text{Log(GDP*GDP)} + \beta_6\text{Log(Pop*Pop)} + \beta_7\text{Alliance} + \beta_8\text{ColdWar} + \beta_9\text{DyadDem} + \beta_{10}\text{CivilWar} + \beta_{11}\text{War} + \beta_{12}\text{LagTrade} + \varepsilon \quad (2)$$

[Table 2- about here]

Findings

Table 2 presents the findings from the random effects models. According to the global model in which all third-party countries are included, unilateral US sanctions significantly reduce the bilateral trade between the target and non-neighboring third countries. In the same model, as hypothesized above, neighbors of the target countries appear to be negatively affected from unilateral sanctions. Overall the global model supports the hypothesis regarding the negative effects of sanctions in general and points to the higher negative spillover effects of unilateral sanctions on neighbors of target countries.

How substantial is the impact sanctions have on the predicted value of bilateral trade between the target and its trade partners? Table 3 provides the substantive effects of the main independent variables on the predicted value of bilateral trade. Holding the other variables at their mean values and US sanctions, sanctioned neighbor and minimum distance variables at zero, the substantive effect of adding limited sanctions decreases trade by 1 percent in the global model. Similarly, shifting from a non-sanctioned pair to a pair that includes a target of extensive sanctions causes a reduction of 2 percent between the targets of extensive sanctions and non-neighboring third countries. For neighboring states, the substantive effect of limited sanctions is much greater: a 7 percent decrease is estimated. The impact of extensive US sanctions on bilateral trade between targets of extensive sanctions and their neighbors is about 14 percent. Overall, the predicted trade volumes for the global model suggests that while non-neighboring countries suffer a modest amount of trade disruption from unilateral sanctions, the negative impact of limited and extensive sanctions appear to be quite substantial for neighboring countries.

[Table 3-about here]

In the partial models, however, the impact of US sanctions is considerably different. In the OECD model, the US sanctions variable is significant, but in the non-OECD model, it fails to reach statistical significance. Therefore, it appears that the negative impact US sanctions have on the third countries is more substantial and significant, especially for non-neighboring OECD countries. In the same partial models, neighbors of sanctioned countries also have differential effects for the two groups. The impact of US sanctions on neighboring OECD countries does not seem to produce any significant impact, while the neighboring effect appears to be significant for the non-OECD countries. Thus, the non-OECD neighboring countries have lower trade flows with the target countries, while being the neighbor of a sanctioned country does not cause any substantial trade disruption for the OECD neighbor countries.

According to Table 3, for non-neighboring OECD countries, the predicted trade loss with the targets of limited sanctions is 2 percent and the amount of trade loss is 5 percent for the targets of extensive sanctions. The findings in the OECD model suggest that the negative impact of sanctions for non-neighboring OECD countries is higher than the global average of the trade loss for non-neighboring countries. Therefore, for the non-neighboring countries, I find support for the hypothesis that, in general, the impact of extensive and limited US sanctions appears to be more substantial for the OECD members than the non-OECD countries. Regarding the hypothesis on the neighboring effect, the negative impact of limited sanctions for the non-OECD neighbors is 5 percent, while the trade disruption becomes much more substantial, 14 percent, for the bilateral

between the targets of extensive sanctions and their neighbors. Overall, it appears that trading with the targets of limited and extensive sanctions seem to cause a substantially significant damage in neighboring non-OECD countries' bilateral with the target.

To sum up, overall US sanctions cause a modest damage on the non-neighboring OECD countries' trade flows with targets. Geographically distant non-OECD countries, however, appear to experience no damage from US sanctions. The negative impact of both limited and extensive sanctions, on the other hand, becomes quite detrimental for neighboring non-OECD countries. Surprisingly, however, OECD neighbors of the target do not seem to experience any substantial trade disruption. What could be the reason that non-OECD neighbors suffer more from US sanctions than OECD neighbors? This could be because sanctions are a more effective signaling tool for developing countries than developed countries. Since developing states are more economically dependent on the US for foreign aid and loans, they should more likely refrain from busting sanctions for fear of hurting their relations with the US. This finding is also likely the result of developing country's less robust economies being more closely integrated with their neighbors. Developed countries trade on a more global level and should thus be less tied to their physical neighbors. Furthermore, because non-OECD countries will have lower trade volumes in general and majority of their bilateral trade will be with nearby countries, it will allow the US to more closely monitor their relations with the target countries.

Before concluding, the impact of the control variables should be discussed. Multilateral sanctions produce a significant negative impact, as expected. The gravity model variables –GDP per capita, population, and distance – also act as expected. The war variable to control for the effect of interstate variables also shows a significant

relationship with the dependent variable across all three models. Although dyads including only democracies seem to trade more in the global model, in the partial models democratic dyads do not produce significance. While presence of civil wars in a dyad seems to have a significant effect on the global and OECD models (at .01 level), it fails to show any significant effect for the non-OECD model. The alliance variable, on the other hand, is significant across the models but the direction of the relationship with the total trade levels is negative, which is contrary to the expectation. The Cold War variable does not seem to matter in predicting bilateral trade in the global model. The same variable, on the other hand, produces mixed results for the partial models, which is statistically significant for non-OECD-model with a negative sign and shows a positive significant relationship for the OECD model.

Conclusion

The overall findings of this paper suggest that non-sanctioning countries' bilateral trade with the target, especially for OECD countries and non-OECD neighbors, will likely suffer from the negative spillover effects, contrary to the sanctions-busting view. Furthermore, extensive unilateral sanctions will likely cause higher trade disruption than limited sanctions. Therefore, from third countries' perspective, US sanctions appear to pose considerable damage to their economic ties with the targets as well as their economic welfare, although they are not directly involved in the imposition of sanctions.

The differences in the impact sanctions have on third countries also suggests that the type of third countries that engage in economic exchange with the target is crucial to gauge the impact unilateral sanctions have on third countries. As opposed to incomplete

focus of earlier research on developed countries (Hufbauer et al 1997; Caruso 2003; Yang et al. 2004), this paper suggests that US sanctions appear to be extremely harmful especially for the neighboring non-OECD countries, while OECD members suffer a lesser negative impact. This is an essential finding to understand the possible side-effects of US sanctions on “innocent bystanders” such as less developed regional countries. It is more likely that developed countries recover from trade disruption with target countries by finding new markets for their traded goods. Yet, non-OECD neighbors do not have too much influence or capacity in the world trade relations to mitigate the negative effects of trade disruption. Furthermore, most of the developing countries follow a co-developmental approach due to cultural and geographical reasons rather than adopting a fierce modernization competition between each other that makes those countries more economically interdependent.

The presence of the negative spillover effects of sanctions suggests that future policy making decisions by the US should seriously consider the possible third-party effects of economic sanctions on regional developing countries and seek remedies through foreign aid and other measures. It is likely that unilateral sanctions will inadvertently hurt the US’ relations with third-party countries due to the negative spillover effects. Therefore, US sanctions could lead to new tensions with third countries in addition to antagonizing the relations with the targets, unless the US finds diplomatic and economic channels to mitigate the negative impact sanctions have on third-party countries.

Some assert that unilateral sanctions are doomed to fail as a result of target’s likely diversion of its economic relations to third countries (e.g. Green 1983; Martin

1992). Although this paper particularly focuses on bilateral trade relations between the target and third countries, the findings provide empirical evidence suggesting that the “sanctions-busting” effect may not always be in place to undermine the effectiveness of unilateral sanctions. On the contrary, the risk-free third party agencies appear to cut their economic ties with the target states not to harm their economic interests with the sender countries. Therefore, future studies focusing on the effectiveness question should also take into account the possible negative effects unilateral sanctions have on third-party countries in assessing the utility and success of unilateral economic coercion.

A growing body of literature has been devoted to understanding the unintended consequences of sanctions on target countries focusing only on the direct cost of sanctions. The findings of this article suggest that scholarship on the economic, humanitarian, and political consequences of economic sanctions on the target should also take into account the possible negative effects unilateral sanctions have on the target’s economic ties with third-party countries for a more thorough assessment of the damage inflicted on the target.

REFERENCES:

- Anderson, J. E. 1979. "A Theoretical Foundation for the Gravity Equation." *American Economic Review*. 69: 106-116.
- Ang, Adrian and Dursun Peksen. 2007. "When do Economic Sanctions Work? Assymmetric Perceptions, Issue Saliency, and Outcomes." *Political Research Quarterly* 60(1): 135-145.
- Baldwin, David A. 1985. *Economic Statecraft*. Princeton: Princeton University Press.
- Barber, James. 1979. "Economic Sanctions as a Policy Instrument." *International Affairs* 5:3: 367-384.
- Bayer, Reşat; Rupert, Matthew C. (2004) 'Effects of Civil Wars on International Trade, 1950- 92', *Journal of Peace Research* 41: 6: 699-713.
- Becker, Charles M. 1988. "The Impact of Sanctions on South Africa and Its Peripherh," *African Studies Review*. 31:2: 61-88.
- Canes, Michael E. 2000."Country Impacts of Multilateral Oil Sanctions," *Contemporary Economic Policy*. Vol. 18. No.2 : 135-144.
- Caruso, Raul. 2003. "The Impact of International Economic Sanctions on Trade: An Empirical Analysis", *Peace Economics, Peace Science and Public Policy*: 9: 2, Article 1.
- Cox, Dan G. and Cooper A. Drury. 2006. "Democratic Sanctions: Connecting Democratic Peace and Economic Sanctions." *Journal of Peace Research* 43: 6: 709-722.
- Dashti-Gibson, Jaleh, Patricia Davis, and Benjamin Radcliff. 1997. "On the Determinants of the Success of Economic Sanctions: An Empirical Analysis." *American Journal of Political Science* 41:2: 608-618.
- Deardorff, A. V. 1995. "Determinants of Bilateral Trade: Does Gravity Work in a Neoclassic World? National Bureau of Economic Research Working Paper 5377.
- Drezner, Daniel W. 1998. "Conflict Expectations and the Paradox of Economic Coercion." *International Studies Quarterly* 42:4: 709-731.
- _____.1999. *The Sanctions Paradox: Economic Statecraft and International Relations*. Cambridge: Cambridge University Press.
- _____. 2000. "Bargaining, Enforcement, and Multilateral Economic Sanctions: When is Cooperation Counterproductive?" *International Organization* 54:1: 73-101.

- _____. 2003. "The Hidden Hand of Economic Coercion." *International Organization* 57:3: 643-659.
- Drury, A. Cooper. 1998. "Revisiting Economic Sanctions Reconsidered." *Journal of Peace Research* 35:4: 497-509.
- Drury, A. Cooper, and Yitan Li. 2006. "U.S. Economic Sanction Threats against China: Failing to Leverage Better Human Rights." *Foreign Policy Analysis* 2:4: 307-324.
- Eichengreen, B., and D. Irwin. 1995. "Trade Blocs, Currency Blocs, and the Reorientation of Trade in the 1930s." *Journal of International Economics* 38: 1-24.
- Elliott, Kimberly Ann. 1998. "The Sanctions Glass: Half Full or Completely Empty?" *International Security* 23:1: 50-65.
- Fearon, James D. and David D. Laitin. 2003. "Ethnicity, Insurgency and Civil War." *American Political Science Review* 97: 1: 75-90.
- Feenstra, R., J. Markusen, and A. Rose. 1998. "Understanding the Home Market Effect and the Gravity Equation." National Bureau of Economic Research Working Paper 6804.
- Frankel, Jeffery A. 1997. *Regional Trading Blocs in the World Economic System*. Washington, DC: Institute for International Economics.
- Fisk, Daniel W. 2000. "Economic Sanctions: The Cuba Embargo Revisited." in *Sanctions as Economic Statecraft. Theory and Practice*, edited by S. Chan and A. C. Drury. Basingstoke: Macmillan. 65-85.
- Galtung, Johan. 1967. "On the Effects of International Economic Sanctions: With Examples from the Case of Rhodesia." *World Politics* 19:3: 378-416.
- Gleditsch, Kristian S. 2002. "Expanded Trade and GDP Data", *Journal of Conflict Resolution*, Vol. 46, no.5, pp. 712-724.
- Gleditsch, Kristian S., and Michael D. Ward. 2001. "Measuring Space: A Minimum Distance Database." *Journal of Peace Research* 38:749-68.
- Gowa, Joanne. 1988. "Public Goods and International Institutions: Trade and Monetary Processes in the United States." *International Organization* 42(Winter): 15-31.
- Gowa, Joanne. 1994. *Allies, Adversaries, and International Trade*. Princeton, NJ: Princeton University Press.
- Green, Jerold D. 1983. "Strategies for Evading Economic Sanctions." in *Dilemmas of Economic Coercion: Sanctions in World Politics*, edited by M. Nincic and P. Wallensteen, New York: Praeger. 61-83.

- Haass, Richard N. 1997. "Sanctioning Madness." *Foreign Affairs* 76, 6: 74–85.
- Helpman, E., and P. Krugman. 1985. *Market Structure and Foreign Trade: Increasing Returns, Imperfect Competition, and the International Economy*. Cambridge: MIT Press.
- Helpman, Elhanan. 1987. "Imperfect Competition and International Trade: Evidence from Fourteen Industrial Countries." *Journal of the Japanese and International Economies*. 1: 62-81.
- Hufbauer, Gary, Jeffrey Schott, and Kimberly Ann Elliott. 1990. *Economic Sanctions Reconsidered: History and Current Policy*, 2d ed. Washington, D.C: Institute for International Economics.
- Hufbauer, G.C., Elliott K.A, Cyrus T., Winston E. 1997. US Economic Sanctions: their impact on Trade, Jobs and Wages, working paper, Institute of International Economics.
- Hufbauer, G.C., Oegg B. 2003. The impact of Economic Sanctions on US Trade: Andrew Rose's Gravity Model, International Economics Policy briefs, PB03-4, Institute for International Economics.
- Gleditsch, Kristian S. and Michael D. Ward. 2000. "War and Peace in Space and Time: The Role of Democratization." *International Studies Quarterly*, 44: 1-29.
- Kaempfer, William H. and Anton D. Lowenberg, 1992. *International Economic Sanctions: A Public Choice Perspective*. Boulder, CO: Westview. 27–50.
- Keele, Luke and Nathan J. Kelly. 2005. "Dynamic Models for Dynamic Theories: The Ins and Outs of Lagged Dependent Variables." *Political Analysis*. 14: 186-205.
- Kirshner, Jonathan. 1997. 'The Microfoundations of Economic Sanctions', *Security Studies* 6(3): 32–64.
- Lacy, Dean, and Emerson M. S. Niou. 2004. "A Theory of Economic Sanctions and Issue Linkage: The Roles of Preferences, Information, and Threats." *The Journal of Politics* 66:1: 25-42.
- Lektzian, David and Mark Souva, 2001. 'Institutions and International Cooperation: An Event History Analysis of the Effect of Economic Sanctions', *Journal of Conflict Resolution* 45(1): 61–79.
- Lektzian, David. 2003. "Making Sanctions Smarter: Are Humanitarian Costs an Essential Element in the Success of Sanctions?" Commissioned Report for Norwegian Red Cross.

- Li, Yitan, and A. Cooper Drury. 2004. "Threatening Sanctions When Engagement Would Be Better: Attaining Better Human Rights in China." *International Studies Perspectives* 5:4: 378-394.
- Li, Q. and D. Sacko 2002. "The (Ir)Relevance of Militarized Interstate Disputes for International Trade." *International Studies Quarterly* 46: 11-43.
- Lindsay, James M. 1986. "Trade Sanctions As Policy Instruments: A Re-Examination." *International Studies Quarterly* 30:2: 153-173.
- Mansfield, Edward, and R. Bronson. 1997. "Alliances, Preferential Trading Arrangements, and International Trade." *American Political Science Review* 91: 94-107.
- Mansfield, Edward, Helen V. Milner and B. Peter Rosendorff. 2000. "Free to Trade: Democracies, Autocracies and International Trade." *American Political Science Review* 94: 305-321.
- Marinov, Nikolay. 2005. "Does Pressure from the Outside Destabilize Leaders on the Inside?" *American Journal of Political Science* 49, 3: 564-576.
- Marshall, Monty G. and Keith Jagers. Polity IV Project: Political Regime Characteristics and Transitions, 1800-2003.
- Martin, Lisa (1992). *Coercive Cooperation: Explaining Multilateral Economic Sanctions*, Princeton: Princeton University Press.
- Morgan, T. Clifton, and Anne Miers. 1999. "When Threats Succeed: A Formal Model of Threat and Use of Economic Sanctions." Presented at the Annual Meeting of the *American Political Science Association*, Atlanta, GA.
- Morgan, T. Clifton, and Valerie L. Schwebach. 1995. "Economic Sanctions as an Instrument of Foreign Policy: The Role of Domestic Politics," *International Interactions*, Vol. 21:3: 247-263.
- _____. 1997. "Fools Suffer Gladly: The Use of Economic Sanctions in International Crises." *International Studies Quarterly* 41:1: 27-50.
- Morgan, T. Clifton and Navin Bapat. 2003. "Imposing Sanctions: States, Firms and Economic Coercion." *International Studies Review*, 5:4: 65-79.
- Murdoch, James C., and Todd Sandler. 2002. "Economic Growth, Civil Wars and Spatial Spillovers." *Journal of Conflict Resolution* 46(1):91-110.

- _____. 2004. "Civil Wars and Economic Growth: Spatial Dispersion." *American Journal of Political Science*. 48,1: 138-151.
- Nooruddin, Irfan. 2002. "Modelling Sanctions Bias in Studies of Sanctions Efficacy." *International Interactions* 28:1: 59-75.
- Pape, Robert A. 1997. "Why Economic Sanctions Do Not Work." *International Security* 22:2: 90-136.
- _____. 1998. "Why Economic Sanctions Still Do Not Work." *International Security* 23:1: 66-77.
- Schwebach, Valerie L. 2000. "Sanctions as Signals: A Line in the Sand or a Lack of Resolve?" in *Sanctions as Economic Statecraft. Theory and Practice*, edited by S. Chan and A. C. Drury. Basingstoke: Macmillan. 187-211.
- Slavov, Slavi T. 2005. "Innocent or not-so-innocent Bystanders?: Evidence from the gravity model of international trade about the effects of UN sanctions on neighbor countries." Working paper.
- Smith, Alastair. 1996. "The Success and Use of Sanctions." *International Interactions* 21:3: 229-245.
- Strand, Harvard, Joachim, Carlsen, Nils P. Gleditsch, Havard Hegre, Christin Ormhaug, and Lars Wilhelmsen. 2005. Armed Conflict Dataset Codebook, version 3. International Peace Research Institute, Oslo. Available at: <http://www.prio.no/csew/armedconflict>
- Timbergen, J. 1962. "Shaping the World Economy: Suggestions for an International Economic Policy." New York.
- Tsebelis, George. 1990. "Are Sanctions Effective? A Game-Theoretic Analysis." *Journal of Conflict Resolution* 34(1): 3-28.
- Wallensteen, Peter. 1968. "Characteristics of Economic Sanctions." *Journal of Peace Research* 5:3: 248-267.
- Wei, Shang-Jin. 1996. "Intra-National Versus International Trade: How Stubborn are Nations in Global Integration?" National Bureau of Economic Research Working Paper 5531.
- Weiss, Thomas G., David Cortright, George A. Lopez and Larry Minear, eds. 1997. *Political Gain and Civilian Pain: Humanitarian Impacts of Economic Sanctions*. Lanham: Rowman and Littlefield.
- Weiss, Thomas G., 1999. 'Sanctions as a Foreign Policy Tool: Weighing Humanitarian Impulses', *Journal of Peace Research* 36(5): 499-510.

Yang, Jiawen, Hossein Askari, John Forrer and Hildy Teegen. 2004. "US Economic Sanctions: an empirical study." *International Trade Journal*. 18(1): 23-62.

Table 1. Annual Bilateral Trade Volumes (1975-2000)

<u>Pair of Countries</u>	<u>Trade Volumes (in US \$ millions)</u>
Any Two Countries (Global Average)	373.63
Bilateral Trade includes at least one OECD Country*	605.25
Bilateral Trade between 2 Non-OECD Countries	116.27
Bilateral Trade between any 2 Neighbor Countries**	1575.10

Data Source: Gleditsch (2002) trade database.

* The OECD countries included in the analysis are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Japan, Korea, Luxembourg, Mexico, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Turkey, United Kingdom. Four OECD members –Czech Republic, Hungary, Poland, and Slovak Republic– are excluded since during the more than half of the time period covered, these Communist-bloc countries were economically less active and became members of the OECD sometime after 1995.

**“Neighbor” refers to a country that has a border distance with another country within less than 950 kilometers (Gleditsch and Ward 2001).

TABLE 2: THE IMPACT OF US SANCTIONS ON BILATERAL TRADE
(dependent variable = log of total trade flows in a dyad)

	Global Model	OECD Model	Non-OECD Model
US Sanctions	-0.010*** (0.004)	-0.023*** (0.006)	0.005 (0.006)
SanctionedNeighbor (MinimumDistance*US Sanction)	-0.063*** (0.016)	-0.004 (0.035)	-0.069*** (0.019)
MinimumDistance	0.236*** (0.010)	0.237*** (0.015)	0.254*** (0.013)
MultilateralSanction	0.023*** (0.009)	-0.026** (0.0128)	-0.035*** (0.012)
Log(GDP*GDP)	0.099*** (0.002)	0.123*** (0.004)	0.085*** (0.003)
Log(Pop*Pop)	-0.036*** (0.002)	-0.044*** (0.003)	-0.031*** (0.003)
Alliance	-0.035*** (0.002)	-0.028*** (0.002)	-0.036*** (0.003)
ColdWar	0.000 (0.004)	0.014*** (0.005)	-0.020*** (0.006)
DyadDemocracy	0.009* (0.005)	0.001 (0.006)	-0.013 (0.008)
CivilWar	-0.0182*** (0.005)	-0.028*** (0.006)	-0.007 (0.007)
War	-0.221*** (0.059)	-0.424*** (0.131)	-0.127** (0.054)
LagTrade	0.897*** (0.002)	0.899*** (0.002)	0.874*** (0.002)
Constant	-2.364*** (0.056)	-3.112*** (0.101)	-1.917*** (0.075)
Observations	101028	53174	47854
Number of Dyads	7303	2872	4431
R²(overall)	0.91	0.93	0.85

Robust standard errors in parentheses. * significant at 10 percent, **at 5 percent ***at 1 percent.

Table 3: The Impact of US Sanctions on the Predicted Value of Total Trade Between the Target and Third Countries

	Initial Value of Total Trade	Value of Total Trade After Change in Variable	Percentage Change in Value of Total Trade
<u>Global Model</u>			
Change from no Sanction to <i>Limited Sanction</i> (US Sanctions = 1)	30.4	30.1	-1%
Change from no Sanction to <i>Extensive Sanction</i> (US Sanctions = 2)	30.4	29.8	-2%
Change from no Sanction to <i>Limited Sanctioned Neighbor</i>	38.5	35.8	-7%
Change from no Sanction to <i>Extensive Sanctioned Neighbor</i>	38.5	33.3	-14%
<u>OECD Model</u>			
Change from no Sanction to <i>Limited Sanctions</i>	54.5	53.2	-2%
Change from no Sanction to <i>Extensive Sanction</i>	54.5	52.0	-5%
<u>Non-OECD Model</u>			
Change from no Sanction to <i>Limited Sanctioned Neighbor</i>	22.0	21.0	-5%
Change from no Sanction to <i>Extensive Sanctioned Neighbor</i>	22.0	19.0	-14%