

Effectiveness Of Economic Sanctions: Empirical Research Revisited

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ABSTRACT

This paper reexamines economic sanctions research and identifies explanatory variables used by many previous theoretical and empirical research studies on the effectiveness of voluntary and non-voluntary economic sanctions since World War I.

A normative legal, political, and economic methodology is used to measure effectiveness of economic sanctions as a random walk process. The paper concludes that choosing a target and imposing economic sanctions is a random process that occurs when a sender is faced with a real or perceived threat. Sanctions are imposed as an alternative to inaction or going to war. The theory and research on effectiveness of sanctions has been a mere exercise in running regressions on a series of random numbers and do not shed any light to guide policymaking.

Keywords: Economic Sanctions; Logit Model of Effectiveness Sanctions; Humanitarian Law & Sanctions

INTRODUCTION

This paper provides a normative legal, political, and economic framework to analyze and measure effectiveness of economic sanctions. A non-exhaustive theoretical and empirical review of sanction debates is provided in the next section. The legal regime of economic sanctions with reference to the United States legal system, the international humanitarian law, various Articles under the United Nations Charter, and the World Trade Organization is provided in the following section. Finally, a normative legal, political, and economic framework (methodology) is used to measure effectiveness of economic sanctions. The paper concludes that probability of success/failure of economic sanctions is a random outcome and empirical works done so far are flawed because of this randomness.

REVIEW OF LITERATURE: ECONOMIC SANCTIONS SINCE WWI

The most comprehensive and serious research on economic sanctions conducted by Hufbauer et al. has been presented in a series of scholarly manuscripts (1985, 1990a, 1990b, and 1997; Elliot and Hufbauer, 1999). Hufbauer et al. estimated effectiveness of sanctions imposed between WWI and 1990 using the Gravity theoretical model (Frankel, 1997) and an Ordinary- Least- Squares regression estimation technique. In their original research, they surveyed experts and constructed a “policy result”, as well as a “contribution of sanctions to policy results” (all on an ordinal scale of 1-4), to measure the success or failure of economic sanctions. They concluded that empirical research on 115 cases of sanctions imposed from World War I to 1990 indicate that sanctions are more likely to succeed if its goal is modest, the target country is smaller than the sending country, the receiving and sending countries have friendly relations with substantial trade prior to imposition of sanctions, the cost to sending country is not significant, and sanctions are imposed quickly and decisively.

The cost of sanctions to the U.S. has been estimated using the same model. Elliot (1997) argued that since 1970, only 13 percent of unilateral sanctions imposed by the U.S. have been successful and had cost the U.S. \$15-\$19 billion annually. Despite these dismal success results, economic sanctions have proliferated since the 1990s. Elliot argues that prior to the 1970s, 50 percent of U.S. economic sanctions partially or fully succeeded. The success ratio declined to 21 percent between 1970 and 1990.

Dashti-Gibson et al. (1997) used the same data collected by Hufbauer but employed a logistic regression model to estimate effectiveness of sanction episodes from 1914 to 1989 in achieving their respective goals. They questioned the statistical construction of the dependent variable (success measure) used by Hufbauer et al. and, instead, developed a binary dependent variable that assumes a value of one for success and zero for failure episodes. They consider six dependent variables to explain success or failure of sanctions. These include cost of sanctions to both target and sending country, political stability and economic health of the target, the duration of sanctions, whether sanctions are financial or trade sanctions, and a secular trend variable. Various estimation results of their model indicate that when the goal of economic sanctions is to destabilize the target, economic costs to target, length of sanctions and the stability of target are determining factors in the success of sanctions. However, when the goal of sanctions is other than destabilization of the target, only the secular trend is negatively and statistically significant.

Drury (1998) also used Hufbauer's data in an ordered logit model to reexamine empirical results and recommendations made by Hufbauer et al. According to his multivariate estimation, only four out of 11 propositions made by Hufbauer et al. are supported.

Parker (2000) provides a comprehensive critique of the methodologies used by various researchers to measure the effectiveness of economic sanctions. He identifies anecdotal, case studies, and scorecards (econometric modeling). He argues that anecdotal approaches deliberately choose isolated examples of effectiveness or ineffectiveness of economic sanctions to demonstrate their points. The case of Cuba sanctions is a primary example of this. Case studies provide a lot of detailed information but do not provide a generalized stylized framework to apply to all cases. He critically evaluates shortcomings of econometrics (scorecard) models, including lack of control group, selection bias, subjectivity, proxy problems, collinearity, and insufficient data, among many others (Parker, 2000 p. 259). Oskarsson (212) argues that definition of sanctions' success determines judgment about their effectiveness. If the goal is regime change and success is defined accordingly, then many sanctions, such as the ones imposed on Libya and Iraq, have been a failure. He provides some detailed information about the devastating impact of sanctions on the economies of Iraq, Iran, and Libya. However, sanctions have not been successful in achieving their officially stated primary goal despite their effectiveness. He agrees with Parker that generalization across all cases is not possible or useful and one needs to study each case individually.

Rarick and Han (2010) highlight the significance of multilateral sanctions to increase the probability of success. The next section briefly considers the legal aspects of economic sanctions before a normative framework (methodology) to measure success of sanctions is presented.

THE LEGAL FRAMEWORK OF ECONOMIC SANCTIONS

While the effectiveness of economic sanctions, as a practical tool of foreign policy, has been called into question, the status in international law can best be described as ambiguous (Kondoch, 2011). The source of this ambiguity generally stems from the nature of international law and questions of jurisdiction and enforcement and, more specifically, from the complex interplay of national legal regimes, the United Nations perceived role as the primary source of governance in the global security arena, humanitarian law, and the role of international trade organizations and economic interdependency.

Domestic Security: The United States

Nations can and do use their own domestic law to effectuate sanctions, often as an alternative to military action. National leaders find that sanctions provide at least the appearance of taking decisive steps without resorting to violence and are more acceptable in the international community. Rationales for imposing sanctions include seeking to influence a country to change its policies, punishing a country for its policies and symbolically demonstrating opposition against a country's policies to a number of possible audiences (Carter, 1987).

The United States is instructive in that it is the most prolific in its willingness to apply unilateral sanctions. There is a tradition of employing sanctions since the colonial era, as a substitute for and complement to the use of force. Carter suggests U.S. laws governing sanctions can be divided into five categories:

1. Government programs, such as foreign assistance and landing rights
2. Export control
3. Import control
4. Private financial transactions
5. International financial institutions

Presidential authority is strongest in the areas of government programs and export control. The President's authority to deny access to large programs providing low-interest credit and loan guaranties, for example, is unfettered when tied to foreign policy reasons. While Congress has the power to oppose such sanctions, to do so would require that body to provide strong political and practical arguments for why it opposes taking action against something which is objectionable to U.S. interests.

The President also has broad authority over exports through the Export Administration Act of 1979 (EAA), which prohibits, with few exceptions, all exports from the U.S. unless they are licensed by the Department of Commerce. While "general licenses" are not burdensome to obtain, the Executive Branch can exert greater control based on national security, foreign policy, or short supply. The EAA was amended in 1985 by the Export Administration Amendments Act of 1975 (1985 EAAA), which placed some limits on the President's power, especially regarding agricultural embargos, foreign policy controls and the "contract sanctity" provision. This latter provision limited the President's ability to impose export controls that abrogate existing contracts unless the President certifies to Congress that there is a serious and direct threat to U.S. strategic interests, the proposed export controls will help remedy that threat, and the export controls will last only as long as the threat persists.

The Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978 (NNPA), gives the President virtually unlimited authority to regulate nuclear materials, equipment and technology. This is also true with all arms exports under the Arms Export Control Act (AECA).

Unlike export controls, the President has no general statutory authority to restrict imports for foreign policy reasons. Rather, his authority is scattered among numerous statutes. For example, Section 232 of the Trade Expansion Act of 1962 provides authority to limit imports for foreign policy reasons, specifically threats to national security. However, "national security" has been interpreted to only limit imports of critical defense materials, especially in order to protect domestic production base or to protect against an embargo of an important foreign supplier. Import controls over particular countries or specific products may also be mandated by statute. Products are particularly challenging, given the multilateral structure of the World Trade Organization, as discussed elsewhere in this paper. Although various statutes allow the President to regulate imports for economic reasons, these statutes do not provide any authority to regulate imports for foreign policy reasons (Carter, 1987).

Still another approach to product sanctions is contained in Section 1502 of the Dodd-Frank Wall Street Reform and Consumer Protection Act, which requires public companies to disclose whether certain minerals in their supply chain originate from the DR Congo or its neighboring countries. Rather than sanctioning so-called "conflict minerals", this section provides consumers with information about where and when these minerals are used, thereby allowing consumers to avoid purchasing products derived from that product. This has been described as a "Second-Order Sanction with Second-Order Humanitarian Effects" (Owen, 2013).

International financial activity has grown dramatically in recent years and offers a potent area for imposition of sanctions. However, it remains difficult under U.S. law to regulate private financial transactions. One source of statutory authority to control U.S. private credit is section 15 of the Export Administration Act, which authorizes regulations that may apply to the "financing, transporting, or other servicing of exports and the participation therein by any person." While it specifically references financing, this language has never been interpreted to prohibit general controls of private financial transactions (Carter, 1987).

While regulation of private financial transactions is difficult, the U.S. has even more limited influence over the international financial institutions, such as the International Monetary Fund and the World Bank. These two institutions control billions of dollars and are designed to promote cooperation within the international monetary community. U.S. laws direct representatives at these various institutions to oppose certain loans or financing; for

instance, when the U.S. sought to cut off IMF assistance to leftist governments that engaged in human rights violations. Decision-making within these institutions, however, is often done through informal consensus. Moreover, economic constraints have reduced U.S. contributions to these institutions and therefore U.S. influence. These factors underscore the fact that the U.S. exerts little real power within the institutions, but rather is limited to informal persuasion to build alliances (Carter, 1987).

The President also has the authority to invoke sweeping emergency powers in the event of a national emergency pursuant to the International Emergency Economic Power Act (IEEPA). As amended in 2006, section 1701(a) of the IEEPA gives the President authority “to deal with any unusual and extraordinary threat, which has its source in whole or substantial part outside the United States, to the national security, foreign policy, or economy of the United States, if the President declares a national emergency with respect to such threat.”

The United States has either comprehensive or limited sanction regimes (Culvahouse, 2010). Countries with comprehensive economic sanctions include Cuba, Sudan (excluding Southern Sudan) and Iran. Limited sanctions regimes that prohibit some, but not all, commerce are currently in place with respect to Syria, Burma (or Myanmar) and North Korea. Since the Bush Administration had a preference for targeting individuals, governments and entities (so-called “specially designated nationals, a.k.a. SDNs), the SDN list grew significantly during his administration. Culvahouse (2010) speculates that the Obama Administration has shown a willingness to relax, if not remove, certain economic sanctions, notably in Cuba and Iran.

International Security: United Nations Security Council

Following World War II and based on the experiences of both World Wars, the international community worked together to devise international institutions which would ensure a “durable peace” (Reyes, 2009 p. 535). The institutions included the United Nations, the International Monetary Fund, the International Bank for Reconstruction and Development and an International Trade Organization. From these institutions, the United Nations developed into the mediator of international security governance.

Chapter VII of the United Nations Charter sets out the U.N. Security Council’s powers to maintain peace and security. It allows the Council to “determine the existence of any threat to the peace, breach of the peace, or act of aggression” and to take military and nonmilitary action to “restore international peace and security”. The Security Council is one of the six principal organs of the United Nations and its powers include establishment of “sanctions” as a measure to be taken against a state to promote international peace and security. Within Chapter VII, Articles 41 and 25, taken together, make any economic sanctions authorized by the Security Council (41) mandatory on all members (25).

Article 41 states:

The Security Council may decide what measures not involving the use of armed force are to be employed to give effect to its decisions, and it may call upon the Members of the United Nations to apply such measures. These may include complete or partial interruption of economic relations and of rail, sea, air, postal, telegraphic, radio, and other means of communication, and the severance of diplomatic relations.

Article 25 states:

The Members of the United Nations agree to accept and carry out the decisions of the Security Council in accordance with the present Charter.

Chapter V sets out the basic structure of the Security Council. There are 15 members, including five veto-wielding permanent members based on the victors of World War II - the United States, the United Kingdom, France, Russia and China. There are also 10 non-permanent members, with five elected each year to serve two-year terms. This basic structure results in no permanent representation from about two-thirds of the world’s population. Further isolating the Security Council’s decision-making authority is the fact that its decisions cannot be reviewed or modified by the U.N. Secretariat or the General Assembly and there is effectively no judicial review. Article 96 of

the U.N. Charter states that the Security Council may ask the International Court of Justice (ICJ) for an advisory ruling on its own actions, but the Court's ruling is non-binding. Given this basic structure, during the Cold War, the veto power of the permanent members, coupled with their various conflicting agendas, effectively constricted decision-making regarding sanctions.

Jurisdiction and enforcement are two fundamental legal principles that are strained in the context of the Security Council's role in economic sanctions. First, the U.N. does not have compulsory jurisdiction. Although the ICJ is charged with adjudicating international disputes, it is merely a secondary mechanism since nations must consent to its jurisdiction. Indeed, even when a nation consents, it can be withdrawn if there is an adverse decision, as the U.S. did in the *Nicaragua* case. Also, even when the ICJ issues a decision on the merits of a case, it does not have enforcement power and a number of nations have openly refused to comply. The Security Council can enforce ICJ decisions, but its inherent discord makes it difficult to take action. Second, although the U.N. Charter provides for the development of standing U.N. military forces, none was ever created. Article 43 created a mechanism whereby member states would provide armed forces to serve as a United Nations standing army. However, no member state ever provided those forces. The U.N. must rely on a "coalition of the willing" in order to respond to specific security threats, greatly reducing its ability to regulate economic sanctions regimes (Reyes, 2009).

Notwithstanding these limitations, the use of sanctions by the Security Council became more prevalent after the Cold War ended. During the 1990s, the Security Council imposed sanctions against eleven countries, most notably Iraq. The Iraq sanctions are instructive to understanding the legal regime created by the basic structure of the Security Council. In 1990, following Iraq's invasion of Kuwait, the Security Council issued Resolution 661 which contained no provisions for how or when the sanctions would expire. This created a scenario where the only way to end the sanctions was through action of the Security Council, which could be blocked by any permanent member, forcing the sanctions to continue indefinitely. Further, under the Resolution, a committee of the Security Council was created to provide oversight. Since part of the mandate for the so-called "661 Committee" was to address sanctions' violations, the committee decided to operate in closed meetings, with restricted circulation of its minutes. Essentially, the committee would act as its own enforcement and accountability mechanism. Since its actions are secret, there was no functioning precedent to guide the committee from decision to decision, allowing for inconsistency and arbitrariness. For example, Iraq would be allowed to import ambulances on one occasion and denied the identical application a few months later, without explanation (Gordon, 2001). In her article *Chokehold on the World*, Gordon describes the case of Iraq Sanctions Committee as follows:

I have never before heard of any bureaucratic apparatus with such an extreme aversion to transparency that the agenda for its meetings was not distributed to its own members and no actual minutes were kept, only summaries. The 6,000 decisions per year were not computerized, making them effectively unavailable, even to the committee's own members. (Gordon, 2001 P. 29)

The U.N. exercise of this authority has been criticized for a number of reasons, especially humanitarian concerns and their ineffectiveness. Regarding the legal structure, it has been suggested that there is a need to provide much more structured legal principles to guide the case of U.N. Security Council Sanctions. In the "Bossuyt" Report, prepared by the Sub-Commission on the Promotion and Protection of Human Rights, a six-prong test was suggested to evaluate a sanctions regime. First, the reasons for imposing the sanctions must be valid (a threat of or actual breach of international peace and security). Second, the sanctions must target the parties responsible for the threat. Third, no humanitarian goods should be targeted. Fourth and fifth, the sanctions must be reasonably limited by time and effectiveness. Sixth, any objections by governments, NGOs, intergovernmental bodies, scholars and the general public must be considered prior to adopting the sanctions (Kondach, 2001).

Humanitarian Law

There are two aspects of humanitarian international law to consider in the context of sanctions. First, sanctions are being used more widely than ever as a response to perceived and real human rights violations on the part of the targeted states. Second, sanctions can also be viewed as the cause of human rights violations on the part of the sanctioning nation.

While sanctions have long been a feature of foreign and national security policy, in recent years they have been increasingly invoked as instrumentalities of international human rights law and policy under generally applicable rubrics of public international law and foreign affairs law. For instance, the U.S. trade sanctions against South Africa were instituted in response to that nation's apartheid. While those sanctions did not end apartheid, they are viewed as having been at least one motivating factor in South Africa's decision to terminate that practice (Malloy, 2013).

A more direct legal challenge to both unilateral and multilateral sanctions has been the often devastating humanitarian impact that sanctions cause in the target nation. While sanctions are often viewed as more neutral and less devastating than military action, there is no doubt that they have always exacted a humanitarian cost (Kondach, 2001).

Humanitarian law provides several avenues to challenge the legality of economic sanctions. First, promoting and encouraging respect for human rights and fundamental freedoms is considered to be among the primary purposes of the United Nations. Therefore, the Security Council must take those principles into account when acting under Chapter VII. Second, the doctrine of *jus cogens* was developed in the late 1960s and can be found in Article 53 of the Vienna Convention on the Law of Treaties, 1969. *Jus cogens* is that body of peremptory principles or norms from which no derogation is permitted; those norms are recognized by the international community, as a whole, as being fundamental to the maintenance of an international legal order. Those norms include the safeguarding of peace and humanitarian concerns, including prohibitions against genocide, slavery, and racial discrimination. This doctrine provides the most basic core of human rights and international humanitarian law, and therefore applies to the Security Council under Chapter VII. Finally, and more generally, if the Security Council were to ignore the two preceding points, this disregard for the rule of law would contradict their responsibility for maintaining international peace and security (Kondach, 2001).

The four Geneva Conventions, the Protocols thereto, and relevant customary international law provide specific rules regarding humanitarian law and economic sanctions in the course of an armed conflict. The Geneva Conventions and their Protocols do not address non-military sanctions because the drafters did not anticipate the humanitarian costs that would later accrue from sanctions that were imposed outside of armed conflicts. This fact does not preclude applying customary humanitarian international law to non-military sanctions, especially given the fact that this area of law is "highly adaptive and widely interpreted in a dynamic way" (Kondach, 2001 P. 284).

Kondach identifies the following requirements of international humanitarian law in armed conflict.

1. Starvation as a method of warfare is prohibited.
2. There is an absolute right to humanitarian assistance, including:
 - a. Free passage and distribution of relief goods, such as medical supplies, religious objects, and essential food stuffs, clothing and tonic, for civilian populations.
 - b. Relief actions may be undertaken, subject to consent of the parties concerned.
 - c. Civilians threatened by starvation or severe shortage of medical supplies, as a result of naval blockades, must be granted relief.
 - d. Relief assistance must be provided to civilians in occupied territories.
3. The rule of distinction provides that belligerents are required to distinguish between civilians and combatants at all times.
4. The principle of proportionality requires that any collateral damage to noncombatants not be excessive in relation to the concrete and direct military advantage that is anticipated.

It has been suggested that the application of these rules of international humanitarian law in armed conflict can be imposed either directly or by analogy to sanction regimes that are outside the context of an armed conflict. This argument is particularly strong when the humanitarian suffering continues into peacetime after an armed conflict. It is less clear how this applies when the sanctions are not originally associated with an armed conflict.

Kondach (2001) concludes that regardless of whether the Geneva Conventions and their protocols apply when not associated with armed conflict, the legal regime provided by human rights law and the genocide

convention can protect civilians from the adverse effects of economic sanctions during peacetime. This regime consists of the following:

1. The right to life is incorporated in numerous international human rights instruments, such as Article 6 of the International Covenant on Civil and Political Rights (1966). These can be interpreted to require states to provide essential goods to those in need or, at a minimum, to prohibit states from deliberately acting to deprive human beings of food and to cause hunger and starvation.
2. The United Nations Convention on the Rights of the Child (1989) provides, inter alia, that every child has the inherent right to life and the right to the highest attainable standard of health and access to medical services.
3. The Convention on the Prevention and Punishment of the Crime of Genocide, 1948, prohibits genocide in times of peace and war. Genocide is described as killing or attempting to kill a group based on intent to destroy a national ethnic, racial, or religious group, as such.
4. The principle of proportionality, which can be found in almost all branches of international and national law, requires that a balance be struck between the interest in attaining the goal of a sanctions regime and its interest in avoiding unacceptable harm to the civilian population.

Preferential Trade Agreements and Economic Sanctions

Preferential trade agreements (PTAs) have increased dramatically in recent years. One recent study suggests that these agreements have no direct effect on the propensity of states to sanction each other (Haffner-Burton, 2008). Others see inherent power in PTAs, specifically the World Trade Organization (WTO), as “uniquely situated to act as an effective governor of national security in the economic sphere” (Reyes, 2009 p. 531). The WTO governs a variety of international economic treaties which prohibit restrictive trade measures that are often used in the name of national security. One such treaty - the General Agreement on Tariffs and Trade (GATT) - specifically prohibited embargos and quotas, which are economic tools often used to protect national interest. However, Article XXI of the GATT provided an exception for national security:

Nothing in this Agreement shall be construed:

- (a) *to require any contracting party to furnish any information the disclosure of which it considers contrary to its essential security interests; or*
- (b) *to prevent any contracting party from taking any action which it considers necessary for the protection of its essential security interests*
 - (i) *relating to fissionable materials or the materials from which they are derived;*
 - (ii) *relating to the traffic in arms, ammunition and implements of war and to such traffic in other goods and materials as is carried on directly or indirectly for the purpose of supplying a military establishment;*
 - (iii) *taken in time of war or other emergency in international relations; or*
- (c) *to prevent any contracting party from taking any action in pursuance of its obligations under the United Nations Charter for the maintenance of international peace and security.*

WTO members have successfully argued that the WTO Dispute Settlement Body (DSB) has no authority when sanctions are imposed for national security reasons, which are considered too sensitive and closely related to a nation’s sovereignty. The issue of determining if one of the five criteria set forth in Article XXI has been met is determined subjectively; the nation invoking Article XXI is allowed to make that determination without an objective assessment of the record.

As part of the Uruguay Round, the WTO adopted a Dispute Settlement System (DSS). There are three reasons the DSS is viewed as an important international tribunal. First, there is compulsory jurisdiction over disputes arising under the WTO-covered agreements. Second, decisions issued within DSS enjoy a high rate of compliance. Third, members typically seek redress within the DSS rather than the alternative - withdrawing from the WTO altogether (Reyes). These dispute settlement features remedy the three primary failures of the ICJ. The extent to which the WTO will impact the enactment and enforcement of sanctions regimes will be closely watched going forward.

In conclusion, the legal framework for economic sanctions is comprised of multiple layers of both domestic and international law. The United States' legal regime involves both statutory and legislative authority and often revolves primarily around the notion of national security and the need to take action short of military engagement. The legal regime in international law is contained in various treaties, accords, and doctrines. Issues of jurisdiction and enforcement add to the ambiguity of the status of sanctions in international law. This uncertain legal framework only exacerbates the random outcomes for sanctions' success or failure rates.

METHODOLOGY

A brief review of sanctions literature and the legal framework provided above leads to the conclusion that success of economic sanctions depends on many economic, political, and legal variables, as measured and estimated by various researchers. These variables include sanction goals, political or economic stability of the target, presence of international cooperation (McLean & Whang, 2010; Kondoch, 2001), friendly or adversarial relations of sender and the target, threat to national security of the sender, ideological nature of the target's regime (Takeyh & Maloney, 2011), the duration of sanctions, the authoritarian or democratic nature of the target's government (Lekzian & Souva, 2007), cost to the sender as a percentage of Gross Domestic Product (GDP), cost to the target as a percentage of GDP, and openness of the target's economy to international trade measured by sum of exports and imports as a percentage of GDP. This almost exhaustive list of potential variables that could affect the outcome of economic sanctions could normatively be grouped into three broad factors - *Economic, Political, and Legal*.

Almost all political and legal measures of these factors used by various researchers assign binary values of one or zero to explanatory variables. For example, Druray (1998) assigns a value of one when a threat to national security of the sender is present and a value of zero when it is absent. He also assigns the same binary values for presence or absence of multinational sanctions. So, it is not unusual to see a multivariate regression result with multiple dummy variables that assume values of one or zero. The original work of Hufbauer et al. (1990a) measured success of sanctions by surveying experts who assigned values of 1 to 4 to "policy results" and "sanctions contribution to policy results" variables. A multiplicative index of these two variables produced the universe of all possible values for success/failure composed of 1, 2, 3, 4, 6, 8, 9, 12, and 16. These values were used in an OLS regression model as the dependent variable considering a value of 9 or greater as a success and anything less as a failure (Hufbauer et al., 1990a). In conclusion, in logit or multivariate models of sanctions effectiveness, the universe of all possible values for political and legal factors included binary or limited ordered numbers. The *economic factor* is generally expressed as a percentage of GDP, but given the nature of the relevant variables (cost to sender and target, openness to international trade, etc...) presents limited possible variations based on structure of the global economy and the economic position of targets and senders.

This paper constructs three samples of randomly assigned numbers from the universal set of Hufbauer's data (1, 2, 3, 4, 6, 8, 9, 12, and, 16) for the dependent variable (success or failure of sanctions), a dummy variable that assumes a value of one when a positive political or economic factor is present and a value of zero in its absence, and a normative set of possible economic outcomes (1, 5, 10, 15, 20, and 40 percent) to measure the impact of economic variables on success of economic sanctions. Ordinary least Squares results of regressing success (failure) of sanctions (Y) on a constant, any legal/political factor (X1), and any economic factor (X2) are presented in Table 1. All randomly generated samples produce a statistically significant positive constant term and insignificant coefficients for political/legal explanatory variable. Only estimation results of Sample one indicate that the economic factor impacts success of sanctions positively and significantly. In all cases, the R-squares range from one to five percent indicating that the explanatory variables, at most, explain five percent of variations in success of economic sanctions.

Table 1: Dependent Variable (Y) Equals Success of Economic Sanctions

Variable	Coefficient	Standard Error of Coefficient	t-value
Sample 1			
X ₁	.811	.924	.878
X ₂	7.520	3.496	2.151
R ²		.054	
F		2.754	
Sample 2			
X ₁	-1.072	1.036	-1.034
X ₂	2.969	3.744	.793
R ²		.014	
F		.661	
Sample 3			
X ₁	.254	.828	.307
X ₂	5.120	3.493	1.466
R ²		.023	
F		1.145	

The cumulative distributions of the dependent and explanatory variables for all samples are presented in Table 2. As expected, the probability of drawing each item in these randomly drawn numbers is 1/n, where n is the number of possible outcomes. Therefore, the average cumulative probability of success (outcomes 9, 12, and 16, according to Hufbauer, 1990a) across three samples is 0.31. Also, the mean probability of existence of favorable legal and political attributes across the samples is 0.49. Normatively, one could assert that the role of economic factors could be low (outcomes 0.01, 0.05, and 0.10), moderate (outcomes 0.15 and 0.20), and high (outcome 0.40). The mean probabilities of existence of low, moderate, and high favorable of economic factors are 0.508, 0.316, and 0.175, respectively. These random outcomes are pretty much in line with empirical research presented in the review of literature above.

Table 2: Cumulative Frequencies for Success Scores, Political/Legal Environment, and Economic Factors

Variables			Cumulative Frequency (Percentage)								
			Sample 1			Sample 2			Sample 3		
Y Success	X ₁ Political/Legal	X ₂ Economic	Y	X ₁	X ₂	Y	X ₁	X ₂	Y	X ₁	X ₂
1	0	.01	13.1	47.5	23.2	12.1	50.5	15.2	16.2	49.5	17.2
2	1	.05	22.2	100	37.4	19.2	100	37.4	28.3	100	26.3
3		.10	38.4		53.5	27.3		54.5	39.4		44.4
4		.15	53.5		69.7	38.4		65.7	54.5		66.7
6		.20	60.6		82.8	55.6		78.8	63.6		85.9
8		.40	69.7		100	62.6		100	73.7		100
9			82.8			72.7			89.9		
12			88.9			85.9			93.9		
16			100			100			100		

Countries impose economic sanctions as an alternative to inaction or going to war. Targets are not chosen because of the existence of most favorable factors that would make sanctions successful. For example, the United States did not impose an economic sanction on Iraq because it could receive domestic and international legal and political support or because Iraq’s economy was very vulnerable to sanctions. The U.S. imposed multilateral, UN-backed sanctions on Iraq because of its invasion of Kuwait. Also, the U.S. would not impose a sanction on the European Union because of strong economic ties and openness of the EU economy. Targets chosen are basically random outcomes of some political, economic, or security threats felt by the sending country. Unlike consumers who may behave according to economic theory supported by empirical work, political policymakers chose targets based on existence of some real or perceived threat regardless of sanctions theory and research. Thus, this paper concludes that the choice of imposing economic sanctions and targets is a random outcome and the probability of its success is 1/N, where N is the possible success outcome as defined by researchers.

CONCLUSIONS

This paper provided a legal, political, and economic framework to analyze and measure effectiveness of economic sanctions. The legal regime of economic sanctions was discussed with reference to the United States' legal system, international humanitarian law, various Articles under the United Nations Charter, and the World Trade Organization. Theoretical and empirical research on the effectiveness of voluntary and non-voluntary economic sanctions since World War I were examined in order to identify variables that explain success of economic sanctions.

A normative legal, political, and economic normative methodology was used to measure effectiveness of economic sanctions as a random walk process. The paper concludes that choosing a target and imposing economic sanctions is a random process that occurs when a sender is faced with a real or perceived threat. Sanctions are imposed as an alternative to inaction or going to war. The theory and research on effectiveness of economic sanctions has been a mere exercise in running regressions on a series of random numbers and it doesn't shed any light to guide policymaking. For example, the research doesn't guide policymakers as to when and how an economic sanction may be effective. It also doesn't provide any practical and useful information about what economic, political, or legal variables are significant in affecting sanction outcomes. Also, sanctions are imposed regardless of existence of favorable or unfavorable conditions and structures.

AUTHOR INFORMATION

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