

2000

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Recommended Citation

Parker, Richard, "On the Cost- Effectiveness of Economic Sanctions" (2000). *Faculty Articles and Papers*. 428.

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THE COST EFFECTIVENESS OF ECONOMIC SANCTIONS

RICHARD W. PARKER*

I. INTRODUCTION

For over one hundred years, the attraction of economic sanctions as a middle path between talk and violence has prompted the use of sanctions for a wide variety of purposes ranging from weakening adversaries, toppling governments, and promoting human rights¹ to opening foreign markets, promoting intellectual property,² and protecting the global environment.³

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1. Although the United States is a frequent user of sanctions, it is not the only user. Of the 116 post-World War I foreign policy sanctions episodes examined by Hufbauer, Schott and Elliott through 1990, 39 cases involved exclusively non-U.S. sending states, and the authors admit they probably missed a number of cases involving foreign 'senders' of sanctions. GARY C. HUFBAUER ET AL., *ECONOMIC SANCTIONS RECONSIDERED: HISTORY AND CURRENT POLICY* 8-9 (2d ed. 1990) [hereinafter *ECONOMIC SANCTIONS RECONSIDERED*]; see also GARY C. HUFBAUER ET AL., *ECONOMIC SANCTIONS RECONSIDERED: HISTORY AND CURRENT POLICY* 13-20 (1st ed. 1985) [hereinafter *ECONOMIC SANCTIONS RECONSIDERED* (1st ed.)] (listing the 103 cases analyzed in that edition).

2. The most frequent user of this type of economic sanctions has been the United States, followed by the European Union. Since 1974, section 301 of the Trade Act of 1974 has authorized the President to retaliate against foreign trade practices that infringe GATT rights or are otherwise 'unreasonable.' Bayard and Elliott report that the United States overtly invoked Section 301 of the Trade Act of 1974 in 89 separate cases over the period from 1974 to 1992. See Thomas O. Bayard & Kimberly A. Elliott, 'Aggressive Unilateralism' and Section 301: Market Opening or Market Closing?, 15 WORLD ECON. 685, 687 (1992) [hereinafter *Aggressive Unilateralism*]; Alan O. Sykes, *Constructive Unilateral Threats in International Commercial Relations: The Limited Case for Section 301*, 23 L. & POL'Y INT'L BUS. 263 (1992).

3. Approximately 20 multilateral agreements currently require or authorize nations to restrict imports or exports of goods or services to promote some conservation purpose. See WTO Sub-committee on Trade and Environment, *Trade Measures for Environmental Purposes Take Pursuant to Multilateral Environmental Agreements: Recent Developments* (note by the Secretariat) (Oct. 13, 1994), PC/SCTE/W/3, at <http://www.wto.org/wto/ddf/ep/search.html>. In addition, the United States has, on occasion, used or threatened unilateral trade restrictions to promote a wide variety of conservation objectives related to ocean and endangered species conservation. For an overview of these cases, see Robert E. Hudec, *GATT Legal Restraints on the Use of Trade Measures against Foreign Environmental Practices*, in 2 FAIR TRADE AND HARMONIZATION 95, 98-106 (Jagdish Bhagwati & Robert E. Hudec eds., 1996).

In recent years, however, economic sanctions have been subjected to stricter scrutiny than ever before, due to a sustained media and lobbying blitz by the U.S. business community under the banner of "USA*Engage."⁴ The campaign, begun in 1997, has produced a deluge of newspaper editorials and stories, virtually all critical of sanctions.⁵ One result of the campaign has been the introduction (though not yet the passage) of legislation that would impose procedural shackles on all new sanctions.⁶ Most of all, the movement appears to have begun to alter long-standing attitudes in the public and in Congress, shifting the historic presumption in favor of sanctions towards a more cautious approach and perhaps even a presumption against them.⁷

Powering the USA*Engage campaign, intellectually, are two broad claims: (1) economic sanctions are costly to U.S. businesses, farmers, and workers, and (2) economic sanctions are seldom effective and often counter-productive.⁸ These claims of generalized defectiveness have been used to justify the introduction of the legislation mentioned above, which would establish a new procedural rule requiring detailed analysis of the costs to U.S. business balanced against the likely effectiveness of any proposed new sanction before it is enacted into law.⁹ The

4. For an overview of this campaign and its message, see USA*Engage—About Us, available at <http://www.usaengage.org/background/about.html> (last visited Feb. 12, 2000).

5. For a small sampling, see Richard Lawrence, *Sanctions Debate Enters Critical Phase*, editorial, J. COM., Aug. 2, 1999, at 8; Michael S. Lelyveld, *Business Fights Sanctions Tide; Trade Council to Address Impact on Economy, Jobs*, J. COM. Feb. 4, 1997 at 1A; Gary Hufbauer, *The Snake Oil of Diplomacy: When Tensions Rise, the U.S. Peddles Sanctions*, WASH. POST, July 12, 1998, at C1 [hereinafter *Snake Oil*]; Evelyn Iritani, *U.S. Learns How to Anger Friends While Failing to Influence Enemies*, L.A. TIMES, Mar. 24, 1997, at A6; Jack R. Payton, *U.S. Sanctions: Talk Softly, Carry No Stick*, ST. PETERSBURG TIMES, July 21, 1998, at 2A; Barbara Slavin, *Sanctions May Be Losing Favor As Top Policy Weapon*, USA TODAY, June 25, 1998, at 10A; Louis Uchitelle, *Who's Punishing Whom*, N.Y. TIMES, Sept. 11, 1996, at D1. For a more comprehensive listing of anti-sanctions news stories in 1999, see USA*Engage, *Editorials & Op-eds*, at <http://www.usaengage.org/resources/editorcomm99.html> (last visited Oct. 2, 2000).

6. See, e.g., The Sanctions Policy Reform Act, S. 757, 106th Cong. (1999); Enhancement of Trade, Security, and Human Rights through Sanctions Reform Act, H.R. 2708, 105th Cong. (1997).

7. As Richard Lawrence observed in the *Journal of Commerce* on August 2, 1999, "Congress' attitude toward sanctions appears much changed from only a short time ago. In September 1997, roughly 20 bills advocated tighter sanctions. Now, of roughly three dozen bills pending, most would rescind sanctions or reform the sanctions process." Lawrence, *supra* note 5, at 8.

8. See *Sanctions Revisited: Hearing Before Subcomm. on Int'l Econ. Policy and Trade of the Comm. on Int'l Relations*, House of Representatives, 105th Cong. 44 (1998) (testimony of Frank Kittredge, Vice Chairman for USA*Engage) [hereinafter *Kittredge Testimony*]; USA*Engage, *The High Costs of Unilateral Sanctions*, at <http://www.usaengage.org/studies/costs.html> (last visited Sept. 26, 2000).

9. See S. 757 § 6(d)(1).

bill also would require on-going review of the costs and effectiveness of sanctions that have been imposed.¹⁰ The bill would automatically sunset every sanction after two years unless it is affirmatively re-enacted by Congress.¹¹ Finally, the bill would give the President broad authority to waive sanctions the President determines to be too costly or ineffective.¹²

While the requirement for close scrutiny of the costs and benefits of sanctions seems unopposable, at least superficially, it does bring a difficult question to the fore: how to judge the cost and effectiveness of sanctions, either *ex ante* or *ex post*? That is the issue this Article will consider, beginning with the cost of sanctions.

II. COST

Although news stories and Internet sites abound with anecdotes of contracts and sales lost to economic sanctions, by far the most widely cited and influential estimate of the costs of high foreign policy sanctions to the U.S. economy overall is the one prepared by Hufbauer, Elliott, Cyrus, and Winston (HECW) in 1997.¹³ Scores of newspaper and magazine stories, editorials, scholarly writers, and congressional testifiers have quoted the central HECW finding: U.S. economic sanctions cost the U.S. economy \$15 to \$19 billion in lost exports and 200,000 to 260,000 in lost U.S. jobs during 1995.¹⁴ The model on which the authors base this prediction is well-established, but the numbers reported above are fundamentally misleading in a number of respects.

To begin with, there is the matter of perspective. Seldom, if ever, do public reports of the HECW findings place them in the perspective of a \$7 to 8 trillion U.S. gross national product.¹⁵ Yet expressing costs and

10. *See id.*

11. *Id.* § 7(d)(1)(C).

12. *See id.* § 9(a).

13. GARY C. HUFBAUER ET AL., U.S. ECONOMIC SANCTIONS: THEIR IMPACT ON TRADE, JOBS AND WAGES (working paper) (Apr. 1997), at <http://www.iie.com/CATALOG/WP/1997/SANCTION/sanctnwp.htm> [hereinafter SANCTIONS COSTS].

14. *See, e.g.*, Richard J. Mahoney, *Limited Role for Government*, J. COM., Jan. 22, 1998, at 7A; *Sanctions Fever*, J. COM., June 22, 1998, at 6A (editorial); Daniel W. Drezner, *Serious about Sanctions*, 53 NAT. INT. 66; David R. Francis, *Not Just a World Cop, US Spends Big to Keep Peace*, CHRISTIAN SCI. MONITOR (Boston), Dec. 2, 1998, at 1; Paul Magnusson, *Getting a Grip on Trade Sanctions*, BUS. WK., Nov. 17, 1997, at 115; John Shaw, *Sanctions: Enough Already*, CHRISTIAN SCI. MONITOR (Boston), Apr. 28, 1999, at 11.

15. GNP was \$7.3 trillion. BUREAU OF THE CENSUS, ECON. AND STAT. ADMIN., U.S. DEP'T OF COMMERCE, STATISTICAL ABSTRACT OF THE UNITED STATES 1998, at 456, tbl.721 (1998). 1998 GNP was reported to be \$8.5 trillion. Bureau of Econ. Analysis, Dep't of Commerce, *Gross Domestic Product*:

impacts of sanctions as a ratio of GNP is the time-honored way of gauging the impact of sanctions on economies as a whole. While the average reader might be shocked by reports of sanctions costing \$20 billion per year, she might find herself somewhat less dismayed—assuming sanctions cumulatively accomplish anything beneficial—to learn that something less than one-third of one percent of GNP has been set aside for sanctions.

Moreover, even the \$20 billion expense and the 200,000 job-loss figures may well overstate the true cost of sanctions to the U.S. economy. Under current conditions of full employment, significant net job loss is impossible almost by definition. Therefore, as the HECW study recognizes, the actual loss in 1995 was more likely zero jobs lost and \$800 million to \$1 billion per year of income loss, a figure that represents the export sector wage premium that the authors believe is sacrificed when export sanctions foreclose export opportunities.¹⁶ Of course, \$1 billion is only five percent of \$20 billion and only about *one-seventieth of one percent* of 1995 GNP, yet the \$1 billion figure is almost never reported.¹⁷ Indeed, even the \$1 billion figure may be too high since it assumes, counter-factually, that exports lost to country A cannot be diverted to country B. For example, some exports denied to Iraq can be, and are, sold in other countries, thereby salvaging some of the export wage premium.

On the other hand, neither the \$20 billion nor the \$1 billion figure captures any of the “unreliable supplier effect”—the tendency of foreign purchasers to abstain from placing new orders with companies deemed “unreliable suppliers” due to the export policies of their parent governments. How significant is the omission? There is little reason to doubt that reliability concerns *have* cost U.S. companies some

Fourth Quarter 1998 (Final) (News Release) (Mar. 31, 1999), at <http://www.bea.doc.gov/bea/newsrel/gdp498f.html>.

16. See SANCTIONS COSTS, *supra* note 13, at 7.

17. See, e.g., Kittredge Testimony, *supra* note 8; Donald V. Fites, *From Isolation to Engagement: The Case Against Unilateral Sanctions*, in CEO SERIES, at 4 (Ctr. for the Study of Am. Bus., No. 18, Nov. 1997) (“A study released earlier this year by the Institute for International Economics found that in 1995 alone, between 200,000 and 250,000 U.S. jobs were lost due to unilateral U.S. trade sanctions that reduced our exports to 26 target countries by an estimated \$15 billion to \$20 billion.”); Slavín, *supra* note 5. In some fora, Hufbauer and others are careful to qualify their cost estimates with appropriate caveats. Gary C. Hufbauer & Barbara Oegg, *Economic Sanctions: A Primer for Journalists*, 87 THE QUILL, Jan./Feb. 1999, at 21 (qualifying the \$20 billion figure by explaining that in a full employment economy the net wage loss is the lower figure of \$800 million to \$1 billion). *But see Snake Oil*, *supra* note 5, at C4 (offering the \$15-20 billion and 200,000 job loss estimate without caveat).

lost sales, and sanctions do raise questions of fairness for individual businesses who are singled out for special burdens. However, the HECW study looked for clear evidence of unreliable supplier effects in the macroeconomic numbers and found none.¹⁸ There is, indeed, no available empirical support for the proposition that the cost of export sanctions to the U.S. *economy* is large enough to be a matter of national concern. The fundamental issue for sanctions policy is not so much their *economic* cost, as whether they advance their policy goals at an acceptable *political* cost to U.S. leadership. This leads to the question of effectiveness.

III. EFFECTIVENESS

Effectiveness must be defined in relation to goals. In this article, usage of the term “effectiveness” refers to the contribution of sanctions to the goal of changing foreign state behavior in the direction desired by the sanctioning state. “Effectiveness” does not refer to effectiveness in self-expression or in satisfying domestic political demands.¹⁹

A moment’s reflection will reveal that there are three main ways one might go about substantiating assertions about the effectiveness of economic sanctions: anecdotes, case studies, and “scorecards.” Anecdotes make good speech material, but they obliterate nuance and context; they can illustrate points, but they do not *prove* anything. Case studies supply the crucial details omitted by anecdotes, but case studies

18. Compare THE PRESIDENT’S EXPORT COUNCIL, UNILATERAL ECONOMIC SANCTIONS: A REVIEW OF EXISTING SANCTIONS AND THEIR IMPACTS ON U.S. ECONOMIC INTERESTS WITH RECOMMENDATIONS FOR POLICY AND PROCESS IMPROVEMENT, app. II (June 1997) (offering examples of lost U.S. export sales due to “unreliable supplier” effects arising from sanctions); USA*Engage, *The High Cost of Unilateral Sanctions*, sec. 2A, at <http://www.usaengage.org/studies/costs.html> (last visited Sept. 26, 2000) (citing “power generation industry estimates that it takes seven to ten years to re-establish market share after sanctions have been imposed and lifted” along with other anecdotal examples of unreliable supplier effects), with SANCTIONS COSTS, *supra* note 13, at 5 (finding no clear evidence of unreliable supplier effects in macroeconomic statistics). For a review of the search for hard economic proof of the pollution-haven theory, see ROBERT REPETTO, JOBS, COMPETITIVENESS, AND ENVIRONMENTAL REGULATION: WHAT ARE THE REAL ISSUES? (1995); Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 MICH. L. REV. 570, 628-33 (1996).

19. This approach deliberately departs from Baldwin’s line of defense of sanctions as signaling and expressive devices aimed at domestic audiences and at the target state. DAVID A. BALDWIN, *ECONOMIC STATECRAFT* (1985). There is much to be said for treating sanctions as speech—mechanisms for dissociating sending states from immoral and harmful conduct by target states. The exclusion of speech values in this analysis is solely for reasons of analytical interest: sanctions almost by definition achieve their speech goals, but they do not always achieve helpful change in foreign behavior.

are difficult to digest. Moreover, the case studies that have been done so far suffer from a crucial failing: they do not follow a constant format, test the same propositions, or look at the same variables. This makes it very difficult to arrive at case-to-case comparisons or to extract general conclusions from the studies that have been done.

The deficiencies of anecdotes and case studies point to the attractions of scorecards, which examine the success of sanctions across a wide spectrum of cases in a given issue area. Scorecards thus avoid the problem of selective focus that anecdotes present. They also systematically examine the influence on success or failure of the same variables in each and every case, thereby facilitating inter-case comparisons. Most of all, scorecards employ quantitative methods to test hypotheses and report results. They distill a vast range of experience into a few easy-to-report and easy-to-remember numbers, which seem to carry the authority of science.

By far the most influential empirical study of the effectiveness of economic sanctions is Hufbauer, Schott, and Elliott's (HSE's) monumental work, *Economic Sanctions Reconsidered*, which has been cited in at least eighty-five national magazine stories, one hundred major newspaper articles or editorials, and sixty-six law review articles, since it first appeared.²⁰ Not surprisingly, the study is a sanctions scorecard. Now entering its third edition, the analysis examines over one hundred cases in which sanctions were used for foreign policy purposes during this century. It finds an overall sanctions success rate of thirty-six percent and a forty percent success rate for sanctions involving "modest policy goals," though the authors observe a sharp decline in the effectiveness of sanctions since 1973.²¹

Besides calculating the "success rate" of sanctions, the HSE study also uses quantitative techniques to correlate the level of success in each episode with at least fifteen independent variables that are thought to influence success.²² This yields the study's famous Nine Command-

20. See sources and cites collected in Parker, *supra* note *, at 252 n.53.

21. *ECONOMIC SANCTIONS RECONSIDERED* (1st ed.), *supra* note 1, at 80-81.

22. The independent variables are (1) time; (2) nature of policy goal; (3) occurrence during world war; (4) accompaniment by covert action, or not; (5) accompaniment by military force, or not; (6) index of international cooperation; (7) existence of third-party assistance to target, or not; (8) index of prior relations between sender and target; (9) length of sanctions episodes in years; (10) index of political and economic health and stability of target; (11) cost of sanctions to the target, expressed as a percentage of GNP; (12) pre-sanction trade linkage between target and sender, expressed as percentage of target's total trade; (13) relative size of target and sender economies; (14) type of sanction; and (15) index of cost of sanctions to sender. *ECONOMIC SANCTIONS RECONSIDERED*, *supra* note 1, at 95-102.

ments, which have remained largely unchanged through two editions and have shaped much of the current orthodoxy about the use of economic sanctions for foreign policy goals.²³

The database of cases and studies compiled by HSE represents a major contribution to sanctions analysis. Nonetheless, there are several large methodological problems that undermine the validity of the HSE study as a basis for general conclusions. Moreover, these issues confront *any and all* efforts to apply empirical methods to the study of sanctions. The remaining discussion will focus on six of these problems.

A. *Selection Bias*

Drawing valid inferences from a database requires examining either the entire population or a randomly chosen cross-section of data points. The HSE scorecard does neither. With only a handful of exceptions, it excludes threat-only cases in which either the sender backs down after issuing a threat or the target backs down and complies after receiving the threat.²⁴ The former omission is not terribly material for policy formulation; no trade harm is done when the sender blinks, though future credibility may be impaired. The latter omission, however, includes the sanctions' greatest success stories—cases where threat alone was sufficient to achieve desired results. The practical reasons for excluding quiet threat cases are clear and understandable:

23. Compare ECONOMIC SANCTIONS RECONSIDERED (1st ed.), *supra* note 1, at 81-91, with ECONOMIC SANCTIONS RECONSIDERED, *supra* note 1, at 94-105. The Nine Commandments are: (1) sender governments should not ask too much of sanctions as they are seldom effective in achieving major policy change or impairing the military potential of a major power; (2) sanctions requiring international cooperation are seldom successful, while those seeking modest policy changes often do not require cooperation from allies to succeed; (3) sanctions against politically or economically unstable countries are more likely to succeed than those targeted at healthy, stable countries; (4) economic sanctions aimed at friends and allies are more effective than those directed against long-time adversaries of the sender country; (5) the longer the duration of sanctions, the lower the likelihood of success; (6) the more costly the sanctions to the target state, the greater the likelihood of success; (7) the more sanctions cost the sender, the less likely they are to succeed; (8) companion measures—covert action, quasi-military, or regular military operations; and (9) sender governments should think through their means and objectives carefully before taking a final decision to deploy sanctions. ECONOMIC SANCTIONS RECONSIDERED, *supra* note 1, at 94-105.

24. The HSE study includes six threat cases. USSR v. Romania (62-3); U.S., Canada v. South Korea (75-1); League of Nations v. Yugoslavia (21-1); League v. Greece (25-1); Western Allies v. GDR (61-3); and U.S. v. El Salvador (87-3). See ECONOMIC SANCTIONS RECONSIDERED, *supra* note 1, at 84-90 tbls.4.3-4.7. However, this tiny sample does not begin to encompass the universe of threat-only cases in the foreign policy realm over that period.

these cases are hard to spot, and finding them would require an enormous amount of rummaging through diplomatic history. However, leaving them out means excluding a very important category of success stories from the sanctions database.²⁵ The net effect is to create a downward bias on the measured success rate for sanctions.

B. *Subjectivity and Proxy Problems*

Though the HSE study is famous and much quoted because of its quantitative and, hence, “objective” analysis and results, the study is in fact riddled with subjective and often arbitrary assessments. For example, the study assigns numerical scores to ordinal qualities: success of outcome (scored 1 to 4), contribution of sanctions to success (scored 1 to 4), warmth of prior relations between sender and target (scored 1 to 3), economic health and stability of target (scored 1 to 3), cost to sender (scored 1 to 4), international cooperation with sender (scored 1 to 4).²⁶

Where do these numbers come from? The scoring of such variables requires highly subjective judgments on at least three levels: first, deciding which case studies to include in the database; second, deciding which passages from each case study to excerpt in the two-or-three-page scorecard case write-up; and third, arriving at the “number” to assign to the variables of success, contribution, warmth of prior relations, international cooperation, etc. Nowhere is the basis for any scoring disclosed to the reader. Indeed, the authors’ scanty excerpts sometimes reveal contradictory assessments of sanction’s success and/or contribution.²⁷ Nor is the authors’ choice of case studies or subsequent

25. Indeed, threat cases are the “normal” sanctions scenario, except where one or more states miscalculate. As Eaton and Engers have observed, “In a world of perfect information, senders never actually resort to punishing. If the measure works, the target shapes up in anticipation. If not, the sender never threatens it initially.” Jonathan Eaton & Maxim Enger, Paper, *Sanctions: Some Simple Analytics*, 89 AM. ECON. REV. 409-10 (1999).

26. ECONOMIC SANCTIONS RECONSIDERED (1st ed.), *supra* note 1, at 32-33, app. A at 99-102.

27. An example, chosen at random, is case 74-1. ECONOMIC SANCTIONS RECONSIDERED (1st ed.), *supra* note 1, app. C at 491-95. It involves U.S. sanctions against Turkey in the wake of the Turkish invasion of Cyprus, 1974-78. HSE scores the episode a failure for sanctions (outcome score of one) and the impact of sanctions negligible (contribution score of one). This scoring is based on two case studies—one by Keith R. Legg and another by Ali S. Karaosmanoglu—which, if anything, seem to support the opposite conclusion. Legg is quoted opining that “[t]he real effect . . . of the embargo was to prevent an alteration of the balance of forces in the Aegean Sea.” *Id.* at 494. Karaosmanoglu reports that “[t]he embargo also did great harm to Turkey’s armed forces.” *Id.* These assessments would suggest that, while the sanctions may not have been effective in rolling back Turkey’s gains, they made a significant contribution to preventing or deterring further aggression by Turkey against the 60% of the island that it did not then control. Such an

analysis validated by any sort of peer review. Indeed, many of the study's sources appear to involve little more than journalistic accounts. Yet controlling the quality of the database is a large undertaking, as is standardizing the format of case studies and making sure that reliable values are found for all the variables that must be measured in estimating the impact of sanctions.

Subjective scoring raises a further methodological difficulty. In a now-classic study of the influence of the scientist on the experiment, Robert Rosenthal has documented the powerful, subconscious and nearly unavoidable tendency of experimenters to measure even objective variables with a bias towards their prior expectations.²⁸ This is not a sign of moral turpitude, but, according to Rosenthal, an unavoidable human impulse that has been documented in almost every conceivable scientific situation, ranging from the observation of movements of earthworms to experiments in telekinesis.²⁹

One way to avoid the perils of subjective scoring is to rely on objective proxies of key variables. But this raises a further dilemma: finding measurable proxies that accurately reflect the variables being measured. This is not always possible, and other studies have gotten themselves into a lot of methodological trouble by using purportedly objective proxies that do not clearly approximate the thing being measured.³⁰

outcome would hardly be considered a "failure" for sanctions. The HSE study also did not provide any documentation for its assessment of the prior state of relations between the United States and Turkey (rated three, the best possible) or the economic health and stability of Turkey (rated two on scale of one to three). *Id.* at 495.

Another example is Case 85-1, U.S. v. South Africa (apartheid), in which the study offers three "assessments" by other authors that economic sanctions against South Africa were effective and two suggesting that sanctions were ineffective. Without further explanation, the HSE study scored the case a failure, though the authors were later to opine (based on subsequent events) that South African sanctions were a success after all. ECONOMIC SANCTIONS RECONSIDERED, *supra* note 1, at 246-48. In Case 65-2, U.S. v. India (1965-67: Agricultural Priorities), on the other hand, the HSE study scores the outcome a complete success (score of 16), notwithstanding a study which concluded that "the [leverage] . . . enjoyed by the U.S. was not enough to produce total compliance with U.S. economic reform demands, and it certainly was not sufficient to produce any visible gains for the U.S. in the diplomatic realm." ECONOMIC SANCTIONS RECONSIDERED (1st ed.), *supra* note 1, at 407-08 (quoting Robert L. Paarlberg, *The Limits of Food Power: Lyndon Johnson's "Short Tether" Policy Against India, 1965-67*, AM. POL. SCI. ASSOC. CONVENTION (Aug. 1984)).

28. See ROBERT ROSENTHAL, EXPERIMENTER EFFECTS IN BEHAVIORAL RESEARCH 16-26 (1966).

29. *Id.* at 25 ("[I]t is difficult to avoid the subconscious tendency to reject for good reason data which weaken a hypothesis while uncritically accepting those data which strengthen it.")

30. Bayard and Elliott, for example, estimate the impact of five quite different factors: (1) economic stakes for the sending state; (2) likelihood of counter-retaliation; (3) proportion of

Herein lies one of the central ironies of sanctions scorecards and, indeed, quantitative cost-benefit analyses generally. The analyses conjure images of objectivity by offering a parade of numbers and equations. Buried beneath this veneer of objectivity, however, is the startling reality that many of the numbers turn out to be *assigned* values, which reflect the subjective judgements, biases, and preferences of the researchers. Yet the HSE study appears almost oblivious to this problem and makes no effort to correct or account for it.

C. *Omitted Variables*

Despite the multiplicity of independent variables employed in the HSE study, the authors omit a number of vitally important variables, and the omission undermines the soundness of their analysis. For example, the study makes only the crudest allowance for variation in the target's perception of its own political and economic cost of compliance with the sender's demands. Yet both theory and common-sense would suggest that the target state's cost of compliance is a crucial variable that must be modeled with some accuracy.³¹ Related to the political costs of compliance is another significant variable that the HSE study likewise fails to take into consideration—the underlying legitimacy of the goal sought.³² The economic impact of sanctions—again, only crudely modeled in the HSE analysis—can be difficult even to determine *ex post*, much less predict. Yet economic impact must be

target's total exports sent to the United States; (4) the nature of the measure complained of (border restriction, subsidy, or technical/administrative barrier); and (5) the credibility of the threat. All are modeled by objectively measurable variables. The problem is that the variables measured are not particularly good proxies for the factors the authors are trying to estimate. For example, the first variable, economic stakes, is proxied by a dummy which takes the value one if U.S. pre-sanction trade with the target state is between \$10 million and \$100 million, and zero otherwise. This is based on the theory that *small* cases—involving products with below \$10 million of pre-sanctions trade—are not credible predicates for retaliation because the U.S. Government is simply less concerned with them, while *large* pre-sanctions trade flows are also less credible situations for retaliations because in those cases the United States will fear counter-retaliation against US exports. Bayard & Elliott, *supra* note 2, at 698-700 tbl.4. But the notion that credibility of threat flips “on” at the point where the magnitude of pre-sanction trade reaches \$10 million and then flips “off” at trade levels over \$100 million must, as hypotheses go, be considered speculative at best.

31. As Baldwin has emphasized, it is necessary to adjust for the difficulty of the goal (target state costs of compliance) in each case when tallying the successes and failures of economic sanctions. BALDWIN, *supra* note 19, at 133.

32. See, e.g., THOMAS M. FRANCK, *THE POWER OF LEGITIMACY AMONG NATIONS* (1990).

measured accurately, along with the distribution of the sanctions' impact and the political influence of those helped or hurt by sanctions.

It is likewise imperative that studies better analyze the factors shaping the political impact of sanctions on target states—that suite of factors that determine why some sanctions cause target state and third-country audiences to focus criticism on the *target* government, while others tend to mobilize sympathy for the target and criticism of the *sender*. These omitted variables are vital to any rigorous analysis of sanctions' impact.³³

D. Omitted Interaction Terms

Imagine an investigation of the causes of fire, using econometric techniques. Following the HSE approach, one would simply plug in a linear series of separate variables representing (a) a spark, (b) dry kindling, and (c) oxygen, and then try to estimate the coefficients for each variable through simple regression.³⁴ Assuming these variables are randomly distributed with respect to each other—meaning that the presence of a spark does not affect the likelihood of kindling being present, which in turn does not affect the likelihood of oxygen being present—one would find a rather low correlation between each of these individual variables and fire. In fact, the occurrence of at least one of the above variables would result in fire only about one in eight times, on average. However, if interaction terms were inserted into the equation—combinations of kindling-spark, spark-oxygen, kindling-oxygen—higher correlations between the combinations and fire would result. And, if one inserted a term representing the combination of spark, dry kindling, and oxygen, the measured correlation would be near perfect. In order for the experiment to arrive at the “right” result about the causes of fire, the hypothesis must reflect physical reality; fires are caused by a combination of circumstances—kindling, spark, oxygen—occurring simultaneously.³⁵

This simple example illustrates a further difficulty in the HSE analysis; it fails to examine interaction effects. “Successful” sanctions would seem to require the simultaneous occurrence of a combination of circumstances: in simplest terms, a credible threat to impose costs

33. For a more complete discussion of these variables, see Parker, *supra* note *, at 271-72 n.132.

34. See equation specified in *ECONOMIC SANCTIONS RECONSIDERED* (1st ed.), *supra* note 1, at 99-102.

35. See WILLIAM H. GREENE, *ECONOMETRIC ANALYSIS* 387-88 (3d ed. 1997).

that are greater than the cost of compliance with the sender's demands. Thus, the effect of a sanction costing the target \$1 million per year depends crucially on whether the contemporaneous cost of complying with the sender's demand is \$500,000 or \$1.5 million. It also depends on whether the target believes that defying the sender will elicit a ninety percent, fifty percent, or thirty percent chance of such sanctions being imposed. Factors like cost of sanctions and cost of compliance cannot be modeled separately like beads on a string, as the HSE study does. What is significant is the *ratio* of expected sanctions cost to expected compliance cost. Any analysis that looks only at sanctions impacts and compliance costs in isolation, without taking account of their inter-relation, is likely to yield seriously flawed results.

E. *Problems of Endogeneity*

One of the most intriguing and difficult problems that surfaces in the HSE study is the problem of endogeneity. Endogeneity occurs when x (an independent variable) affects y (a dependent variable), but y then turns around and affects x .³⁶ In the present context, endogeneity may be understood as the problem of self-fulfilling prophecies.

Intuition suggests, for example, that threats of sanctions are more likely to be successful if they are credible, while actual sanctions are more likely to succeed if target states believe sanctions will be continued and perhaps enlarged, absent compliance with the sender's demands. A key factor affecting the credibility of sanctions, however, is the expectation of the sender about the likely success of sanctions.

The cat is chasing its tail, and that chase has important ramifications for sanctions scholarship and for policy. For purposes of scholarship, endogeneity requires sophisticated techniques to account for these mutually reinforcing effects—techniques that are not employed by the HSE study and that require certain conditions that may not be met here.³⁷

For policy purposes, the endogeneity problem means that *public* analysis of the cost and effectiveness of future sanctions—as the USA*Engage coalition calls for—is highly ill-advised, for it will alter the very subject being measured, most probably in a negative direction. Suppose future aggressors and autocrats know that if they can survive one year of sanctions, this will generate a negative cost-benefit analysis in the next annual review that will lead to the lifting of sanctions. That

36. See *id.* at 712-14.

37. See WILLIAM E. GRIFFITHS ET AL., *LEARNING AND PRACTICING ECONOMETRICS* 581-609 (1993).

expectation will certainly give the autocrats a powerful incentive to hold out. Publicly announcing one's cost-benefit estimate seems a lot like showing all one's cards in poker, and then disclosing one's view of the strength of the hand, while the wagering is still proceeding. Why would anyone do it? Sanctions analysis is fundamentally an intelligence estimate and ought to be treated as such.³⁸

F. *Boundary Problems*

Finally, sanctions analysis raises the twofold problem of defining the boundaries of episodes and establishing the criteria of success. These problems can be illustrated with an example from the whaling regime. Charnovitz has documented eight instances in which the United States threatened trade sanctions under the Pelly Amendment against would-be whaling states in support of the IWC regime, four of which involved Norway.³⁹ Should these instances be tallied as eight episodes, five episodes, or one episode?

Similarly, it is well established that, at least until quite recently, all nations have honored the whaling moratorium with regard to endangered stocks (at least publicly), though a few nations have flouted the moratorium with regard to plentiful minke stocks.⁴⁰ How does one score success in such a case? Was U.S. leverage unsuccessful because it failed to deter Japan and Norway, in isolated instances, from engaging in *de facto* commercial whaling? Or was it successful to the extent that it reduced Japanese and Norwegian take from what it would otherwise be, persuaded them to accept observers to monitor compliance, focused their efforts on clearly non-endangered species, and deterred

38. This does not mean that there can be no congressional oversight of impact assessment and/or no public report. It simply means that there should be no automatic presumption that an "ineffective" assessment necessarily leads to the repeal of sanctions, as opposed to alteration or escalation. And, it means that the key facts and factors that underlie the ultimate policy decision on sanctions should be kept confidential so that targets cannot game them. Proponents of public sanctions impact assessment defend the practice by analogy to environmental impact assessment, which, of course, is done publicly. Richard Haass, *Keynote Address: Sanctions Reform? Evaluating the Economic Weapon in Asia and the World*, 32 LAW & POL'Y INT'L BUS. 1, 7 (2000). This analogy misses a crucial difference: the environment cannot and will not alter its behavior based on what the environmental impact assessment says.

39. Steve Charnovitz, *Recent Developments: Environmental Trade Sanctions and the GATT: An Analysis of the Pelly Amendment on Foreign Environmental Practices*, 9 AM. U. J. INT'L L. & POL'Y 751, 763-69 (1994).

40. For an excellent account of the events underlying this example, see David D. Caron, *The International Whaling Commission and the North Atlantic Marine Mammal Commission: The Institutional Risks of Coercion in Consensual Structures*, 89 AM. J. INT'L L. 154 (1995).

other states from whaling *at all*? Were sanctions against Libya unsuccessful, as some say, because they failed for a long time to secure extradition of the Lockerbie killers? Or were they successful in deterring Libya and perhaps other states from further acts of airline terror?

What these examples illustrate is that bean-counting approaches miss the big picture. Sanctions episodes should be viewed broadly and their effectiveness defined strategically—by the contribution of sanctions over time to the growth of a desirable system of world behavior in a particular issue area. However, a strategic approach requires a broader analytical view than can be obtained from case studies and scorecards that are narrowly focused on individual face-offs between overt sender and target countries.

IV. CONCLUSION

This Article has examined some of the methodological problems that bedevil the leading academic study of the cost and effectiveness of economic sanctions. It is important to understand, however, that these same problems confront *any* attempt to look at the impact of sanctions in a systematic and rigorous way. Whether one employs a quantitative scorecard or some other approach, the basic requirements of effective analysis are the same. Effective sanctions analysis requires enlarging the database to permit investigation of “threat-only” cases. Sound analysis requires taking a strategic (rather than narrowly tactical) view of the role of sanctions in shaping the behavior of both target states and states *other than* the named target. It means developing sound models of sanctions behavior, looking at all the variables and their mutual interactions, and developing valid proxies (if quantification is to be attempted) for all relevant variables. It means conducting sanctions analysis in a way that does not alter the very subject being measured.

Most of all, establishing a sound analytical foundation for sanctions policy will require greater efforts at objectivity than those exhibited thus far. No one of relevance to this debate knowingly doctors their analysis. As seen, however, the problem of epistemological bias (the so-called “expectancy effect”) is pervasive in all aspects of human endeavor—particularly in situations where highly subjective judgments are required. Yet the current institutional structure for sanctions analysis contains no meaningful safeguards to promote objectivity and provides no meaningful peer review to act as a check on error or subjectivity. Achieving smarter sanctions will require more than better methodology; it will require procedural and institutional reform.

Faced with such challenges, there are two possible responses. One response is to shrug off the problem on the theory that foreign policy

has always been an exercise in which judgements having vast consequences are made with imperfect information and imprecise analysis.

The second approach—the one advocated by this Article—is to conclude that sanctions analysis can and should be improved. Sanctions policy is too important to be decided so casually. Smart sanctions policy requires an enormously subtle and complex calculation, and the stakes are high. Pharmaceutical companies have been known to spend many months and millions of dollars in developing a new hair tonic. Is it unreasonable to suggest that the United States, as a nation, devote a similar level of resources to the development of sound sanctions policies?

