

Economic Sanctions and Human Rights: Quantifying the Legal Proportionality Principle

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ABSTRACT

The benchmarks of necessity and proportionality are constants across different interpretations of the proportionality principle. Both rest on empirical premises—with the necessity test involving a prognostic effectiveness assessment and the proportionality test assessing the actual effects of the sanctions. This Article examines these empirical premises and inquires more generally into the potential, and limitations, of quantitative assessments in the application of international law. To that end, we employ econometric techniques to explore the proportionality of U.S. sanction episodes between 1976 and 2012. Our results cast doubt on the effectiveness of sanctions aimed at human rights improvements. Furthermore, the results refine the judgment of sanctions’ (un)proportionality by distinguishing the impact on specific types of rights; and they inform the debate on unilateral versus multilateral as well as targeted sanctions. More generally, our analysis can inform the debate on the application of proportionality in the field of international law and we outline challenges in importing quantitative standards into the proportionality assessment.

INTRODUCTION

Sanctions remain a popular tool of economic leverage to conduct foreign policy, with the United States and the European Union (EU) being the most active users.¹ In theory, economic pressure on civilians translates into pressure on the government for policy change.² However, a growing criticism of this theory is that economic sanctions frequently fail to achieve

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1. See Gabriel Felbermayr et al., *The Global Sanctions Data Base*, 129 EUR. ECON. REV. 1, 1–2 (2020).

2. See Toke S. Aidt, Facundo Alborno & Esther Hauk, *Foreign Influence and Domestic Policy*, 59 J. ECON. LITERATURE 426 (2021); Emilie M. Hafner-Burton, *A Social Science of Human Rights*, 51 J. PEACE RES. 273 (2014); David Cortrright & George A. Lopez, *Introduction: Assessing Smart Sanctions: Lessons from*

desired policy changes, while still harming the civilian population.³ Efficacy and impact of sanctions—traditionally subjects of political and economic sciences—increasingly draw the attention of legal scholarship. It must be recognized by those lawyers that it is widely viewed in political science that coercive sanctions fail in their ability to change behavior.⁴ Calls for transdisciplinary openness in the study of sanctions have been voiced, with behavioral and socio-psychological insight as well as international relations as main sources of extrajudicial insight.⁵

Unabated use of sanctions does not square with its legal regulation, as the use of sanctions has been surrounded by legal controversy for some time. There is consensus that unilateral economic sanctions have either been unregulated or based on ambiguous legal standards,⁶ with the regulation of multilateral sanctions being subject to slightly different, yet not much more defined, legal regulation than unilateral sanctions.⁷ A thick strand of literature addresses this phenomenon with a focus on the lawfulness of economic sanctions, adopted either through collective action by the UN Security Council⁸ or through unilateral actions.⁹ These studies inquire into the legality standard when the very purpose of the sanctions is to enforce human rights and the maintenance of peace and security. International hu-

the 1990s, in *SMART SANCTIONS: TARGETING ECONOMIC STATECRAFT 1* (David Cortright and George A. Lopez eds., 2002).

3. See Paul de Waart, *Economic Sanctions Infringing Human Rights: Is There a Limit?*, in *ECONOMIC SANCTIONS UNDER INTERNATIONAL LAW* 125 (Ali Z. Marossi & Marisa R. Bassett eds., 2015); Dursun Peksen, *Economic Sanctions and Human Security: The Public Health Effect of Economic Sanctions*, 7 *FOREIGN POL'Y ANALYSIS* 237 (2011).

4. See Alexandra Hofer, *The Efficacy of Targeted Sanctions in Enforcing Compliance with International Law*, 113 *AJIL UNBOUND* 163, 165 (2019); T. Clifton Morgan & Valerie L. Schwebach, *Fools Suffer Gladly: The Use of Economic Sanctions in International Crises*, 41 *INT'L STUD. Q.* 27, 46 (1997).

5. See, e.g., OONA A. HATHAWAY AND SCOTT J. SHAPIRO, *THE INTERNATIONALISTS: HOW A RADICAL PLAN TO OUTLAW WAR REMADE THE WORLD* 371 (2017); MOSHE HIRSCH, *INVITATION TO THE SOCIOLOGY OF INTERNATIONAL LAW* 157 (2015); Alexandra Hofer, *The Proportionality of Unilateral "Targeted" Sanctions: Whose Interests Should Count?*, 89 *NORDIC J. INT'L L.* 399, 421 (2020).

6. See generally Nigel White & Ademola Abass, *Countermeasures and Sanctions*, in *INTERNATIONAL LAW* 537 (Malcolm D. Evans ed., 2014).

7. See Devika Hovell, *Unfinished Business of International Law: The Questionable Legality of Autonomous Sanctions*, 113 *AJIL UNBOUND* 140, 140 (2019).

8. See, e.g., Elias Davidsson, *Legal Boundaries to UN Sanctions*, 7 *INT'L J. HUM. RTS.* 1 (2003); Matthew Happold, *Economic Sanctions and International Law: An Introduction*, in *ECONOMIC SANCTIONS AND INTERNATIONAL LAW* 1 (Matthew Happold & Paul Eden eds., 2016); Boris Kondoch, *The Limits of Economic Sanctions under International Law: The Case of Iraq*, 7 *J. INT'L PEACEKEEPING* 267, 281 (2001); Mary Ellen O'Connell, *Debating the Law of Sanctions*, 13 *EUR. J. INT'L L.* 63, 64 (2002); August Reinish, *Developing Human Rights and Humanitarian Law Accountability of the Security Council for the Imposition of Economic Sanctions*, 95 *AM. J. INT'L L.* 851 (2001).

9. See, e.g., Alexander Orakhelashvili, *The Impact of Unilateral EU Economic Sanctions on the UN Collective Security Framework: The Cases of Iran and Syria*, in *ECONOMIC SANCTIONS UNDER INTERNATIONAL LAW* 3 (Ali Z. Marossi & Marisa R. Bassett eds., 2015); Buhm Suk Baek, *Economic Sanctions Against Human Rights Violations*, Cornell Law School Inter-University Graduate Student Conference Papers (2008), https://scholarship.law.cornell.edu/cgi/viewcontent.cgi?article=1039&context=lps_clacp [<https://perma.cc/5AHH-3GVZ>]; Berta Esperanza Hernández-Truyol, *Embargo or Blockade? The Legal and Moral Dimensions of the U.S. Economic Sanctions on Cuba*, 4 *INTERCULTURAL HUM. RTS. L. REV.* 53 (2009).

humanitarian law, countermeasures law, and human rights have been invoked as appropriate legality yardsticks. Divergence in substantive legal standards notwithstanding, the core legal restraint has been the principle of proportionality. This principle offers a metric to balance out the sending and targeted states' rights as well as the associated collateral harm to those that are not directly targeted but still affected—notably the civilian population of the targeted state.¹⁰

Just as legal scholarship drew motivation to explore legal regulation from the humanitarian consequences of sanctions regimes, the empirical social sciences literature has devoted attention to measuring the effects of sanctions on human rights. This literature points out the exacerbation of human rights problems and harm to innocent people as a consequence of sanctions.¹¹ Some empirical studies suggest that sanctions may lead to discrimination against marginalized groups in society¹² and widespread infringements of human rights.¹³ Other studies even go so far as to compare the effects of sanctions on human rights to those resulting from military interventions.¹⁴

This Article seeks to connect these strands of literature by incorporating empirical social science analysis on the effect of economic sanctions into the legal assessment. With the proportionality principle widely held as the primary yardstick under humanitarian law, countermeasure law, and international human rights law, there is scope to avail of this principle for integrating extrajudicial insight to inform the legal analysis. In spite of the variable contours of the principle's definition and application according to the areas in which it is applied,¹⁵ the general definition of proportionality

10. See, e.g., O'Connell, *supra* note 8, at 64; W. Michael Reisman & Douglas L. Stevick, *The Applicability of International Law Standards to United Nations Economic Sanctions Programmes*, 9 EUR. J. INT'L L. 86, 126 (1998); Bryan R. Early & Marcus Schulzke, *Still Unjust, Just in Different Ways: How Targeted Sanctions Fall Short of Just War Theory's Principles*, 21 INT'L STUD. REV. 57 (2019); Christopher Michaelson, *Human Rights as Limits for the Security Council: A Matter of Substantive Law or Defining the Application of Proportionality?*, 19 J. CONFLICT & SEC. L. 451 (2014); Daniel H. Joyner, *United Nations Counter-Proliferation Sanctions and International Law*, in RESEARCH HANDBOOK ON UN SANCTIONS AND INTERNATIONAL LAW 105 (Larissa van den Herik ed., 2017); Reinisch, *supra* note 8, at 851.

11. See, e.g., Peter Andreas, *Criminalizing Consequences of Sanctions: Embargo Busting and its Legacy*, 49 INT'L STUD. Q. 335 (2005); Cortright & Lopez, *supra* note 2; de Waart, *supra* note 3; Jerg Gutmann, Matthias Neuenkirch & Florian Neumeier, *Sanctioned to Death? The Impact of Economic Sanctions on Life Expectancy and its Gender Gap*, 57 J. DEV. STUD. 139 (2021); Robert A. Pape, *Why Economic Sanctions Do Not Work*, 22 INT'L SEC. 90 (1997); Peksén, *supra* note 3.

12. See Dursun Peksén, *Economic Sanctions and Official Ethnic Discrimination in Target Countries, 1950-2003*, 27 DEF. & PEACE ECON. 480 (2016).

13. See Abel Escribà-Folch, *Authoritarian Responses to Foreign Pressure: Spending, Repression, and Sanctions*, 45 COMP. POL. STUD. 683 (2012); Dursun Peksén & A. Cooper Drury, *Economic Sanctions and Political Repression: Assessing the Impact of Coercive Diplomacy on Political Freedoms*, 10 HUM. RTS. REV. 393 (2009).

14. See Susan Allen & David Lektzian, *Economic Sanctions: A Blunt Instrument?*, 50 J. PEACE RES. 121, 121 (2013).

15. See generally JENS DAVID OHLIN & LARRY MAY, *NECESSITY IN INTERNATIONAL LAW* (2016); Enzo Cannizzaro, *The Role of Proportionality in the Law of International Countermeasures*, 12 EUR. J. INT'L L. 889 (2001).

includes elements of necessity and proportionality *stricto sensu*.¹⁶ The methodological bridge for connecting legal and quantitative economic analyses lies in the empirical premises which the proportionality judgment builds upon. With necessity implying a test of the effectiveness of sanctions aiming at human rights and with proportionality *stricto sensu* offering an account of, inter alia, collateral humanitarian damages, there is a case for incorporating empirical insight into the legal analysis. Specifically, the *necessity test* involves an assessment whether the measure is well-suited to achieve the sanction's objective (e.g., changing the target country's policies). This test implies an empirical judgment regarding whether sanctions exert a substantive effect towards achieving their objectives. In turn, the *proportionality test* examines the causality claim concerning the broader effect of sanctions on the human rights situation. Both the legal and political science literature typically presume the existence of a causal relationship between sanctions and human rights deterioration, however without offering sound empirical evidence that the human rights situation is actually worsened due to the imposition of sanctions (statistically, the so-called treatment effect) rather than for reasons for which sanctions have been imposed in the first place (the selection effect).

Our goal is to evaluate the empirical premise underlying the judicial proportionality assessment of economic sanctions (that is, the actual consequences of sanctions) and, more generally, to inquire into the potential and limitations of quantification in international law. To that end, we study all U.S. sanction episodes between 1976 and 2012, comprising a dataset of 34 targeted countries who experienced sanctions in 235 yearly observations (or sanction-years). Human rights sanctions are evaluated based on whether they reduce human rights violations or whether they even have adverse effects on human rights. The results of our empirical analysis inform the legal interpretation on four levels. First, because we find no evidence that sanctions actually lead to human rights improvements, economic sanctions that aim explicitly at an improvement of human rights in the target country generally do not pass the necessity test. On the contrary, we find that countries targeted with sanctions to improve their human rights protection experience a deterioration of some human rights, which is even more pronounced compared to sanctions that do not pursue human rights objectives. Second, because economic sanctions can have very different effects on different categories of human rights, a meaningful proportionality analysis should include an assessment of the impact of sanctions on different types of human rights rather than compounding them in one overall effect. This contrasts with the legal literature that treats human rights as a uniform body of rights without highlighting the varying effects of sanctions on dif-

16. See Thomas Cottier et al., *The Principle of Proportionality in International Law: Foundations and Variations*, 18 J. WORLD INVESTMENT & TRADE 628, 633 (2017); Emily Crawford, *Proportionality*, in MAX PLANCK ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW (Rüdiger Wolfrum ed., 2011).

ferent kinds of human rights.¹⁷ Third, while our empirical estimation strategy limits our study to (unilateral and multilateral) U.S. sanctions and as such to third-party sanctions, the empirical implications for the assessment of necessity and proportionality should extend to sanctions imposed by the UN Security Council or other regional organizations. Our empirical results support the view that multilateral sanctions should not enjoy a privileged legal treatment because they are not less harmful to human rights than unilateral sanctions. This corroborates legal scholarship arguing that the legal gulf between unilateral and multilateral sanctions is narrower than sometimes claimed.¹⁸ We also contribute to the rich literature on targeted sanctions that emerged as a response to the negative humanitarian experience of some sanction episodes.¹⁹ Counterintuitively, we find that targeted sanctions do not perform better regarding their human rights effects than non-targeted sanctions, casting doubts on benign proportionality judgments of the former.

Finally, the overall implication of available quantitative evidence aims a spotlight at the role of quantitative insight for the study of sanctions, proportionality, and international law more generally. With empiricism on the rise in international law and the availability of data and sophisticated econometric methods fostering interdisciplinary exchange, the transfer of quantitative insights appears particularly valuable where it illuminates the empirical premises underlying normative judgments. At the same time, the variability of proportionality across substantive law areas limits the use of quantitative analysis. Value-based balancing of proportionality militates against the use of quantification where policy measures pursue not just one but several objectives. Also, the question of what level of quantifiable effectiveness is necessary to pass the test remains difficult to answer. Further challenges to quantification lie in the nature of judicial review, such as whether the expected effectiveness must exist at the moment the measure was designed (*ex tunc* review) or after practical application of the measure (*ex nunc* review), or how the precision of quantitative insight squares with a margin of appreciation typically granted by courts where socio-economic policy decisions are concerned.

Against this background, the Article is structured as follows. Section II explores the variable legal standards invoked in legal scholarship, originating in humanitarian law, countermeasure law, and human rights law, with proportionality as the key benchmark. Section III explains varied formulas entailed in the proportionality regimes. Section IV offers our empirical as-

17. See O'Connell, *supra* note 8, at 63; Stephen P. Marks, *Economic Sanctions as Human Rights Violations: Reconciling Political and Public Health Imperatives*, 89 AM. J. PUB. HEALTH 1509 (1999); Robin Geiss, *Humanitarian Safeguards in Economic Sanctions Regimes: A Call for Automatic Suspension Clauses, Periodic Monitoring, and Follow-Up Assessment of Long-Term Effects*, 18 HARV. HUM. RTS. J. 167, 167 (2005).

18. See Hovell, *supra* note 7, at 143.

19. See Anne van Aaken, *Introduction to the Symposium on Unilateral Targeted Sanctions*, 113 AM. J. INT'L L. UNBOUND 130 (2019).

essment. Section V feeds the empirical result into the legal framework. Section VI asks for the wider role of empirical evidence and its limitations, after which Section VII concludes.

II. THE VARIABLE LEGALITY STANDARDS TO UNILATERAL SANCTIONS

Despite the abundance of both multilateral and unilateral economic sanctions, the applicable legal standard remains ambiguous. Ever since the Security Council began regularly imposing sanctions, there has been consensus among international lawyers that while the Security Council possesses a “supranational competence” vesting it broad authority to impose sanctions, it must observe some standards in how sanctions are imposed.²⁰ In contrast, unilateral sanctions are considered a state’s prerogative to pursue and protect its interests. Yet, even though unilateral sanctions remain “one of the least developed areas of international law,”²¹ the freedom granted under international law does not release the sanctioning state from legal restrictions, with main sources of restrictions drawn from countermeasure law, humanitarian law, or human rights law.²² Across these areas of law, the proportionality principle serves as a pivotal yardstick in balancing the permissible unilateral action with the interest of the targeted state and the collateral effects of sanctions. For the purpose of this analysis, it is only under a clarified legal benchmark and a well-defined proportionality metric that a quantitative analysis can inform the legal judgment.

A. *International Humanitarian Law*

With sanctions frequently adopted in lieu of military measures, many lawyers considering the regulation of sanctions look to humanitarian law.²³ The indiscriminate nature of economic sanctions and their detrimental effects on target populations inspired the view that economic sanctions should be treated like weapons of warfare and regulated as such. Indeed, there are a few international humanitarian norms that may regulate the use of certain economic sanctions under severe situations.²⁴ For example, Article 54(1) of Additional Protocol I prohibits the starvation of a civilian population;²⁵ Article 24 of Geneva Convention IV requires that Parties allow the passage of medical and hospital supplies, religious accouterments and essen-

20. O’Connell, *supra* note 8, at 64; Michaelsen, *supra* note 10.

21. White & Abass, *supra* note 6.

22. Reisman & Stevick, *supra* note 10, at 86–141. On the necessity tests under human rights law and international humanitarian law, see OHLIN & MAY, *supra* note 15, at 121–40.

23. Reisman & Stevick, *supra* note 10, at 86, 127.

24. Mallory Owen, Note, *The Limits of Economic Sanctions under International Humanitarian Law: The Case of the Congo*, 48 TEX. INT’L L. J. 103, 113 n.77 (2013).

25. Protocol Additional to the Geneva Conventions of 12 August 1949, and relating to the Protection of Victims of International Armed Conflicts art. 54(1), June 8, 1977, 1125 U.N.T.S. 3 [hereinafter Additional Protocol I].

tial foodstuffs;²⁶ and Article 75(2)(d) of Additional Protocol I suggests that all manners of collective punishment are prohibited.²⁷

Necessity and proportionality are the legal benchmarks to determine the extent of permissible collateral damage under international humanitarian law.²⁸ Drawing on international humanitarian norms recognized under traditional warfare, sanctions hindering the supply of medical and hospital supplies could easily be disproportionate when weighed against their effects on the targeted regime, even more so if sanctions are the cause of starvation of civilian population. Likewise, such grave effects that collide with humanitarian norms would support a necessity test that leads to ruling out such sanctions and requires the sending state to consider alternative means. Specifically, necessity imposes a limitation on the sending state to those measures that can reasonably be expected to achieve its objective. This rule is stipulated in Article 57(3) of Additional Protocol I: “When a choice is possible between several military objectives for obtaining a similar military advantage, the objective to be selected shall be that the attack on which may be expected to cause the least danger to civilian lives and to civilian objects.” Hence, there is an obligation to choose the least destructive measure capable of achieving its intended goal. In turn, proportionality is specified in Article 51(5)(b) of Additional Protocol I, where it states that parties to an armed conflict are prohibited from launching any attack which may be expected to cause “incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, which would be excessive in relation to the concrete and direct military advantage anticipated.”

With necessity and proportionality encompassing elements both of effectiveness of the measure in pursuit of an legitimate objective as well as the overall effects of the measure, some commentators have proposed relying on these principles in applying the international humanitarian legal framework to economic sanctions.²⁹ Yet, the application of humanitarian law to sanctions has convincingly been contested³⁰ as the *raison d'être* of classic international humanitarian law has been to regulate military actions and the use of arms, not foreign trade policies.³¹ International humanitarian law, particularly the principles of necessity and proportionality, have evolved to contain

26. Geneva Convention Relative to the Protection of Civilian Persons in Time of War art. 24, Aug. 12, 1949, 6 U.S.T. 3516, 75 U.N.T.S. 287.

27. Additional Protocol I, *supra* note 25, art. 75(2)(d).

28. Owen, *supra* note 24, at 117; Geiss, *supra* note 17, at 174; Reisman & Stevick, *supra* note 10, at 128–29. See also International Committee of the Red Cross, *Distinction: Protecting Civilians in Armed Conflict* (2007), available at http://www.icrc.org/eng/assets/files/other/icrc_002_0904.pdf [<https://perma.cc/9T43-344W>] (describing the principle of distinction as a “cornerstone” of the 1977 Additional Protocols).

29. Cortright & Lopez, *supra* note 2; Owen, *supra* note 24, at 117.

30. August Reinisch, *Developing Human Rights and Humanitarian Law Accountability of the Security Council for the Imposition of Economic Sanctions*, 95 AM. J. INT'L L. 851, 860 (2001) (asserting rules of international humanitarian law do not directly apply to economic sanctions).

31. Owen, *supra* note 24, at 114.

scope and effects of actual hostilities. International humanitarian law rests on the premise that antagonists are both armed and pose a danger to each other, while the detrimental effect of economic sanctions is of a different nature, and if they kill, it is in a different way than weapons.³²

B. Countermeasure Law

Given the hurdles of analogy associated with using international humanitarian law, legal restrictions on sanctions have been identified in countermeasure law. Countermeasure law extends to the non-war setting and provides a set of standards that are equally applicable to multilateral and unilateral measures.³³ The International Law Commission's (ILC) Articles on State Responsibility (ARSIWA) clarify and refine the scope of a state's right to deploy countermeasures, setting out a number of conditions, in particular that measures must aim to induce the targeted state to comply with its obligations, be proportionate to the injury suffered, and do not affect fundamental human rights norms.³⁴

In any event, just as when applying international humanitarian law to sanctions, necessity and proportionality are key to countermeasures and are specified in the ILC's Articles on State Responsibility. There is an effectiveness element in requiring that the countermeasure must aim to induce the targeted state to comply with its obligations (Art. 49(1) of ARSIWA), and the measure must be proportionate to the injury suffered (Art. 51 of ARSIWA), although in case of third-party countermeasures the requirement of equivalence between breach and response lacks the reciprocal element that is typical for countermeasures.³⁵ Furthermore, under Article 50(1)(c) countermeasures are barred from adversely affecting "obligations for the fundamental protection of human rights"—an element of proportionality designed specifically to contain collateral damage for human rights.

Yet again, the application of countermeasures law to sanctions is not obvious, as countermeasures and sanctions do not follow the same inherent logic. Countermeasures have temporary effects and a coercive character, as they are specific and limited in their objective to repeal the original illegal measure; whereas sanctions have a punitive and stigmatic character, inflicting retaliation and punishment on the target country.³⁶ Countermeasures are not punitive; they are taken to ensure that the responsible state

32. O'Connell, *supra* note 8, at 74.

33. Frederic L. Kirgis Jr., *The Security Council's First Fifty Years*, 89 AM. J. INT'L L. 506, 517 (1995); Hovell, *supra* note 7, at 143.

34. *Responsibility of States for Internationally Wrongful Acts*, arts. 49–54, (2001) 2 Y.B. INT'L L. COMM'N 31, A/56/49(Vol. I)/CORR.4.

35. Vladyslav Lanovoy, Book Review, 113 AM. J. INT'L L. 200, 206. (2019) (reviewing MARTIN DAWIDOWICZ, *THIRD-PARTY COUNTERMEASURES IN INTERNATIONAL LAW* (2017)).

36. Hofer, *supra* note 4, at 167; Clara Portela, *European Union Sanctions and Foreign Policy: When and Why Do They Work?* 37 (2010).

ceases its violation. As such, they are instrumental to comply with international law.³⁷

In addition, human rights-oriented sanctions concern third-party countermeasures and thus whether an unlawful sanction adopted by a non-directly injured state in defense of a community or collective obligation, an obligation *erga omnes*, can be justified as collective countermeasure becomes a relevant issue.³⁸ On this matter, the ILC inconclusively held that “the current state of international law on countermeasures taken in the general or collective interest is uncertain.” Given sparse state practice involving a limited number of states only, the ILC expressly reserved its position on this question, leaving “resolution of the matter to the further development of international law.”³⁹

C. *Human Rights Law*

Human rights advocates have identified legal restrictions on sanctions in human rights law.⁴⁰ Sanctions authorized by the UN Security Council have been the focus of a debate on the binding character of human rights law. In principle, the UN Charter grants the Security Council the authority to decide what non-forcible measures shall be taken to maintain or restore international peace and security, which may include economic sanctions against targeted entities.⁴¹ However, ever since the review of the Committee on Economic, Social and Cultural Rights (CESCR) of the impact of UN sanctions on Iraq from 1996, in which the CESCR argued that the UN Security Council should hold itself accountable for its human rights obligations,⁴² human rights have vividly been invoked as a legal benchmark binding not only the senders of unilateral sanctions, but also restraining economic sanctions vested with the legitimacy of the UN Security Council.⁴³

Proportionality plays a pivotal role in international human rights law.⁴⁴ Though not explicitly mentioned in many human rights treaties, its application is widely accepted, leading international treaty bodies to develop

37. Crawford, *supra* note 16, at 61; Anne van Aaken & Betül Simsek, *Rewarding in International Law*, 115 AM. J. INT'L L. 195 (2021); White & Abass, *supra* note 6, at 539.

38. Lanovoy, *supra* note 35.

39. Int'l Law Comm'n, *Commentaries to ILC Articles on State Responsibility*, Rep. on the Work of Its Fifty-third Session, U.N. Doc. A/56/10, at 139 (2001).

40. Related to sanctions of the United Nations Security Council, see Nicolas Angelet, *International Law Limits to the Security Council*, in UNITED NATIONS SANCTIONS AND INTERNATIONAL LAW 71, 75–77 (Vera Gowlland-Debbas ed., 2001); Michaelsen, *supra* note 10, at 468; In relation to unilateral sanctions, see Hum. Rts. Council, *Rep. of the Special Rapporteur on the negative impact of unilateral coercive measures on the enjoyment of human rights*, U.N. Doc A/HRC/30/45, ¶ 18 (2015).

41. Hovell, *supra* note 7, at 142.

42. Center for Economic and Social Rights (CESR), *Unsanctioned Suffering: A Human Rights Assessment of United Nations Sanctions on Iraq*, at 42 (May 1996).

43. For human rights binding upon the Security Council, see Michaelsen, *supra* note 10.

44. Marc-André Eissen, *The Principle of Proportionality in the Case-Law of the European Court of Human Rights*, in THE EUROPEAN SYSTEM FOR THE PROTECTION OF HUMAN RIGHTS 125 (Ronald St. J. Macdonald, Franz Matscher & Herbert Petzold eds., 1993).

extensive jurisprudence that recognizes that a proportionality-based decision is one designed to impair as little as possible the right in question; to be carefully designed to meet the objectives in question; and to not be arbitrary, unfair, or based on irrational considerations.⁴⁵ The European Court of Human Rights (ECtHR) and the European Court of Justice (CJEU) have been particularly active in shaping the doctrine of proportionality to assess restrictions of fundamental rights, thereby fostering the growth of human rights protection as a core pillar of documented public international law.⁴⁶ More specifically, the European Convention for the Protection of Human Rights (ECHR) contains a number of provisions which act to ‘qualify’ rights according to the principle of proportionality. Certain rights granted under the ECHR are qualified by a ‘necessity’ clause, allowing states to ‘interfere’ with these rights only if such interference is deemed ‘necessary in a democratic society’ and ‘in the interest’ of the public.⁴⁷ For means-end proportionality in the context of human rights law, “proportionality judges the harm caused by restrictions on a protected liberty when weighed against the legitimate ends those restrictions are meant to serve.”⁴⁸

III. THE EMPIRICAL ELEMENTS OF NECESSITY AND PROPORTIONALITY

Divergence across law areas on the precise benchmark to apply and the role of proportionality contribute to a general variability of the legal standard of proportionality. Its doctrinal contours vary depending on the regional and cultural origins. Some refer to a three-tier test of proportionality: suitability (effectiveness), necessity, and proportionality *stricto sensu*.⁴⁹ This school draws from national⁵⁰ and regional traditions.⁵¹ German law conceptualizes proportionality as a means-ends relationship between the aims pursued by a specific action of the government and the means employed to achieve the end.⁵² This differs from the standard of reasonableness originating from common law⁵³ and Anglo-American and Anglo-Saxon legal tradi-

45. Michaelsen, *supra* note 10, at 465.

46. See generally JAN KLABBERS, ANNE PETERS & GEIR ULFSTEIN, *THE CONSTITUTIONALIZATION OF INTERNATIONAL LAW* (2009).

47. Janneke Gerards, *How to improve the necessity test of the European Court of Human Rights*, 11 J. INT'L CON. L. 466, 467 (2013); Crawford, *supra* note 16.

48. David Kretzmer, *The Inherent Right to Self-Defence and Proportionality in Jus Ad Bellum*, 24 EUR. J. INT'L L. 235, 238 (2013).

49. Cottier et al., *supra* note 16, at 629; Crawford, *supra* note 16.

50. For the influential German administrative origin Delbrück, see ‘Proportionality’ in *ENCYCLOPEDIA OF PUBLIC INTERNATIONAL LAW* 1141 (R. Bernhardt ed., 2011).

51. For the three-tier test under EU law see Tor-Inge Harbo, *The Function of the Proportionality Principle in EU Law*, 16 EUR. L. J. 158, 165 (2010).

52. See NICHOLAS EMILIOU, *THE PRINCIPLE OF PROPORTIONALITY IN EUROPEAN LAW: A COMPARATIVE STUDY* 23–24 (1996).

53. See also 2 WILLIAM BLACKSTONE, *COMMENTARIES ON THE LAWS OF ENGLAND* 69–71 (4th ed. 1899).

tions that embrace necessity and reasonableness while remaining skeptical about proportionality.⁵⁴

However, irrespective of the cultural embeddedness of proportionality, there are certain empirical contingencies underlying the application of proportionality that play out illustratively in relation to sanctions, largely independent from the applicable substantive law. Although weighing interests and rights constitutes a genuine normative and legal exercise, there is an empirical dimension to assessing the proportionality of a sanction to its policy goal. The proportionality assessment rests on empirical parameters because it requires a sanctioning state to assess the prospective economic, social, and political effects of the sanction.⁵⁵ For example, designing proportionality as a three-tier test draws a distinction between suitability or effectiveness (i.e., is a specific measure suitable for attaining a specific purpose?), necessity (i.e., is there a less intrusive means to achieve the purpose?⁵⁶), and proportionality *stricto sensu*, inviting an overall weighing-and-balancing between the goal pursued by the measure and its effects on fundamental rights.⁵⁷ All of these elements incorporate prognosis of the empirical effects associated with certain measures, regardless of the ultimate balancing. However, the variability in legal standards applied to unilateral sanctions requires a closer look at the area-specific empirical contingencies.

A. *Necessity and Effectiveness Test*

Among international lawyers, there seems to be a consensus that certain necessity considerations must be attached to sanctions, with *effectiveness* as the main element, often supplemented by a least-intrusive means test.⁵⁸ Article 49(1) of ARSIWA makes this explicit in regards to countermeasure law; the measure must be fit “to induce that State to comply with its obligations”—a requirement that has been interpreted in the literature not only as an effectiveness requirement but also as a limit on the sanction “sender” to choose the least intrusive measure.⁵⁹ Similarly, under humanitarian law, the necessity test amounts to whether the measure is capable of

54. See Cottier et al., *supra* note 16, at 666.

55. KERN ALEXANDER, *ECONOMIC SANCTIONS: LAW AND PUBLIC POLICY* 64 (2009); see also Reisman & Stevick, *supra* note 10, at 131.

56. As paraphrased by Lord Diplock’s aphorism, “You must not use a steam hammer to crack a nut, if a nutcracker would do.” *R v Goldschmidt* [1983] 1 C.M.L.R. 244 (HL) 247 (Lord Diplock).

57. While the three-tier test has roots in German administrative law, the proportionality principle has become an established tool across jurisdictions to review the legality of government intervention. See BENEDIKT PIRKER, *PROPORTIONALITY ANALYSIS AND MODELS OF JUDICIAL REVIEW: A THEORETICAL AND COMPARATIVE STUDY* 7–8 (2013).

58. See ALEXANDER, *supra* note 55, at 65; Gerards, *supra* note 47, at 481.

59. Hofer, *supra* note 5, at 421.

accomplishing its desired outcome⁶⁰ and is the least harmful measure compared to its alternatives⁶¹—a metric also familiar under human rights law.⁶²

Under the necessity test, a legitimate goal pursued by the sanctioning party is evaluated against the prospective effects, limiting the state to those measures that can reasonably be expected to achieve its objective.⁶³ Decisively for the purpose of this analysis, this standard of effectiveness towards achieving a certain policy goal contains a prognostic judgment,⁶⁴ with the implicit causality claim enshrining empirical contingencies. There must be empirically founded plausibility that the measure is likely to achieve the sanction's objective (e.g., changing the target country's policies). If the objective is to improve the human rights situation in the targeted country, the sanction must at least, to some degree causally promote this objective. In addition, designing the necessity test as a least-restrictive-measure test adds a comparative dimension to this requirement, because necessity does not give full discretion to the state as to the choice of the measure it considers necessary to attain the objective. Rather, the measure as well as alternative means should be subject to an empirical comparative assessment regarding its efficacy towards achieving the objective.⁶⁵

Empirical aspects of legal necessity have implicitly been addressed in the political science literature, without, however, drawing a clear picture regarding the effect of sanctions. On one hand, sanctions may intuitively result in an improvement in human rights if they increase pressure on the regime and undermine its resources.⁶⁶ On the other hand, a number of studies find that there can be a deterioration of the human rights situation and greater government repression.⁶⁷ Methodologically, these studies do not provide a causal analysis, since they ignore the endogeneity of economic sanctions. The imposition of economic sanctions is, in many cases, moti-

60. See ROBERT KOLB & RICHARD HYDE, AN INTRODUCTION TO THE INTERNATIONAL LAW OF ARMED CONFLICTS 47 (2008).

61. See Reisman & Stevick, *supra* note 10, at 130–31.

62. Michaelsen, *supra* note 10, at 465.

63. Geiss, *supra* note 17, at 175; Owen, *supra* note 24, at 118.

64. See ALEXANDER, *supra* note 55, at 65; NICHOLAS A. J. CROQUET, THE ROLE AND EXTENT OF A PROPORTIONALITY ANALYSIS IN THE JUDICIAL ASSESSMENT OF HUMAN RIGHTS LIMITATIONS WITHIN INTERNATIONAL CRIMINAL PROCEEDINGS 29 (2015).

65. ALEXANDER, *supra* note 55, at 64–65. On the limited effectiveness of human rights sanctions in general, see Sarah H. Cleveland, *Human Rights Sanctions and International Trade: A Theory of Compatibility*, 5 J. INT'L ECON. L. 133, 145 (2002). See also Owen, *supra* note 24, at 118; Reisman & Stevick, *supra* note 10, at 130.

66. See generally Jean-Marc F. Blanchard & Norrin M. Ripsman, *Asking the Right Question: When do Economic Sanctions Work Best?*, 9 SECURITY STUD. 219 (1999); Jon Hovi, Robert Huseby & Detlef F. Sprinz, *When do (Imposed) Economic Sanctions Work?*, 57 WORLD POLITICS 479 (2005).

67. See generally Andreas, *supra* note 11; de Waart, *supra* note 3; Gary C. Hufbauer & Barbara Oegg, *Targeted Sanctions: A Policy Alternative?*, 32 L. & POL'Y INT'L. BUS. 11, 11 (2000); Yitan Li & A. Cooper Drury, *Threatening Sanctions When Engagement Would Be More Effective: Attaining Better Human Rights in China*, 5 INT'L. STUD. PERSP. 378 (2004); Robert A. Pape, *Why Economic Sanctions Do Not Work*, 22 INT'L. SECURITY 90 (1997); Peksen, *supra* note 3; TOM WEISS ET AL., POLITICAL GAIN AND CIVILIAN PAIN: HUMANITARIAN IMPACTS OF ECONOMIC SANCTIONS (1997).

vated by an unfavorable human rights situation. Hence, a careful researcher has to disentangle the *treatment effect* of economic sanctions from the *selection effect*. Combining our empirical approach of estimating endogenous treatment regression models to the legal necessity test will likely contribute to this literature by inviting a more sophisticated empirical method to tackle endogeneity concerns, while also offering a more meaningful input for the legal analysis.

B. *Proportionality Test*

Even if it is necessary to achieve its objectives, a sanction may not exceed the bounds of proportionality.⁶⁸ The proportionality *stricto sensu* test requires a weighing and balancing between the goal pursued with the measure and its effects, especially on fundamental rights. This limits the magnitude of damage that may otherwise be acceptable through the necessity test.⁶⁹ The central function of the proportionality principle is to keep sanctions from spiraling out of control.⁷⁰

Proportionality *stricto sensu* implies empirical contingencies no matter the substantive law standard. Applying humanitarian law by analogy as described above, the effect of sanctions matters both in terms of the harm inflicted on the targeted country, as well as on groups not responsible for the initial injury. With the International Court of Justice (ICJ) ruling on the limit of the use of armed force, it prohibited the infliction of “a harm greater than that unavoidable to achieve legitimate military objectives.”⁷¹ As mentioned, these restrictions are further manifested in the prohibition on indiscriminate attacks to avoid incidental loss of civilian life, injury to civilians, or damage to civilians. While jurisprudence has not offered a precise “exchange rate” for weighing the sanction and collateral damage, it generally imposes limits on the implementation of sanctions to minimize the losses to those not responsible for the initial unlawful act.⁷²

Countermeasure law presents a somewhat different situation: because it also accounts for the magnitude of the initial injury, its empirical question has two dimensions. First, the tit-for-tat logic enshrined in Article 51 of ARSIWA requires that countermeasures are commensurate with the injury suffered, considering the gravity of the internationally wrongful act and the rights in question. The provision suggests a quantitative proportionality test, as commensuration hinges on the scope and effect of the countermea-

68. Reisman & Stevick, *supra* note 10, at 131.

69. Owen, *supra* note 24, at 118.

70. See Thomas M. Franck, *On Proportionality of Countermeasures in International Law*, 102 AM. J. INT'L. L. 715, 763 (2008); ALEXANDER, *supra* note 55, at 61.

71. Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. 226, ¶ 78 (July 8). See generally William J. Fenrick, *The Rule of Proportionality and Protocol I in Conventional Warfare*, 98 MIL. L. REV. 91, 93 (1982); John Embry Parkerson Jr., *United States Compliance with Humanitarian Law Respecting Civilians During Operation Just Cause*, 133 MIL. L. REV. 31, 47 (1991).

72. See ALEXANDER, *supra* note 55, at 64.

sure and the initial wrong.⁷³ Second, when sanctions are adopted as third-party countermeasures in the name of the community of collective interests, such as for the protection of human rights, their impact on the multilateral order should be considered. Consequently, interests beyond the sanctioner and the sanctioned are relevant, including those that would be affected when disregarding “obligations for the fundamental protection of human rights,” as prohibited under Article 50(1)(c) of ARSIWA. Thus, proportionality accounts for the collateral damage, the amount of which can only be determined in light of the degree and durability of the injury inflicted on the public.⁷⁴ It is essential to evaluate whether economic sanctions actually lead to adverse effects on human rights, as is often presumed in the legal literature.

IV. EMPIRICAL ASSESSMENT

The empirical part of our analysis consists of four parts: First, we clarify the notion of human rights as an empirical category. Unlike the legal approach, which clusters human rights on the basis of historical or normative reasons, we develop an empirical technique that groups human rights according to their similarity in protection levels across time and space, based on data compiled from 19 well-established human rights indicators for 121 countries over the years 1981 to 2011. Second, we demonstrate how the empirical premises of the necessity and proportionality principles can be tested by exploring U.S. sanction episodes between 1976 and 2012, yielding a dataset of 235 sanction-years and 34 targeted countries. Third, we develop our estimation strategy seeking to identify the causal effects of sanctions on human rights. To that end, we carefully disentangle the *treatment effect*, that is, the consequences of economic sanctions, from the *selection effect*, that is, the reasons for which the sanctions have been imposed in the first place. Fourth, we employ three different treatment instruments for identifying causal effects and discuss the resulting empirical evidence.

A. *Legal Versus Empirical Categorization of Human Rights*

The legal literature on the proportionality of sanctions often treats human rights as a monolith. No distinction is made between the types of human rights affected, with the (un)proportionality verdict on collateral damages rendered uniformly across all human rights.⁷⁵ Our study seeks to employ a more sophisticated approach by distinguishing the dimensions of the human rights concerned. This allows us to detect potentially opposing

73. ROBERT KOLB, *THE INTERNATIONAL LAW OF STATE RESPONSIBILITY: AN INTRODUCTION* 180 (2017).

74. Owen, *supra* note 24, at 118.

75. See, e.g., O'Connell, *supra* note 8, at 64; Marks, *supra* note 17.

effects on different human rights, thereby drawing a more nuanced picture for the proportionality analysis.

There are two obvious ways of classifying human rights for our analysis. First, according to the traditional approach, human rights fall into three categories, namely first, second, and third generation rights, in line with the historical development of human rights.⁷⁶ While useful as a conceptual typology, this classification has been criticized in view of cultural bias and the associated artificial distinctions between human rights, which militates against the notions of indivisibility, universality, and interdependence of human rights.⁷⁷ The approach has also been criticized for its rigid definition, disallowing conceptual permeability between different rights.⁷⁸ To overcome these concerns, we put forward a second typology of human rights that is empirically derived. This typology does not rely on normative or chronological proximity as the criterion for grouping human rights, but rather on the empirical patterns in which types of human rights are typically violated. The violation of a right in one group tends to be accompanied by violations of other rights in the same group more than violations of human rights in other groups. The principal component analysis employed for this purpose is based on the common variation in the underlying indicators and it is robust to systematic biases and measurement errors in those variables. This means that within each group of human rights, protection levels are highly correlated with each other. In comparison, correlations between rights that belong to different groups are much lower.

The empirical grouping of human rights aligns significantly with the structure that underlies many international human rights agreements. It distinguishes four human rights categories:⁷⁹ basic human rights (e.g., right to life, inviolability of the person), economic rights (e.g., property rights, freedom to trade), women's rights (e.g., women's economic and political rights), and political rights and civil liberties (e.g., freedom of assembly and speech).⁸⁰ Our empirically-founded classification implies, for example, that a sanction leading to the violation of the right to trade typically goes along with a deterioration of property rights. In turn, encroachments in the freedom of assembly would coincide with the infringement of electoral self-

76. Dividing human rights into three separate generations refers to (1) civil and political rights; (2) economic, social, and cultural rights; and (3) collective or solidarity rights.

77. Stephen P. Marks, *The Past and Future of the Separation of Human Rights into Categories*, 24 *Md. J. INT'L L.* 209, 215–27 (2009).

78. John C. Mubangizi, *Towards a New Approach to the Classification of Human Rights with Specific Reference to the African Context*, 4 *AFR. HUM. RTS. L. J.* 93, 96–97 (2004).

79. Compare Table A1 in the Appendix for an overview of human rights categories, their dimensions or subcategories, and important corresponding international agreements.

80. See Jerg Gutmann & Stefan Voigt, *The Effects of Large-Scale Disasters on Human Rights* (2015) (on file with authors). Principal component analysis is used to distinguish different dimensions of human rights. See also Jerg Gutmann, Matthias Neuenkirch & Florian Neumeier, *Precision-guided or Blunt? The Effects of US Economic Sanctions on Human Rights*, 185 *PUB. CHOICE* 161 (2020). Note that women's rights can be thought of here as measures of inequality between rights of men and women. Women's political rights are, thus, not just another way to measure political rights in general.

determination. Rights violations are more likely to coincide within these categories than across categories—although rights violations are still positively correlated across categories.

B. *Measurement of Human Rights and Economic Sanctions*

From this empirically determined typology of human rights, we demonstrate how the empirical premises of the proportionality principle can be tested. We build on the analysis by Gutmann et al., who study the human rights consequences of economic sanctions imposed by the United States.⁸¹ However, unlike Gutmann et al., we differentiate between sanctions that have been imposed with the explicit aim to improve the target country's human rights situation and economic sanctions in general. The classification of motives for imposing sanctions is based on the justification of the respective bill in the U.S. Congress. This distinction is essential to our goal of assessing sanctions' systematic compliance with the proportionality principle. While stated motives can deviate from the real motives, we assume that there is at least a high correlation between them.

The dependent variables used in our empirical analysis capture the human rights consequences of economic sanctions in terms of the overall human rights situation and in terms of four individual human rights dimensions (basic, economic, women's, and political rights). Blume and Voigt motivate the use of this categorization. Indicators reflecting these dimensions are taken from Gutmann and Voigt, who apply principal component analysis to 19 well-established human rights indicators covering 121 countries over the period 1981 to 2011.⁸² In our analysis, we standardize the five indicators such that each of them has a mean of zero and a standard deviation of one in order to simplify the interpretation of our coefficient estimates. Higher values indicate a better *de facto* protection of human rights. Our main explanatory variable, a sanction indicator, takes the value 1 if country *i* is subject to U.S. economic sanctions in year *t*, and zero otherwise. We rely on a unique dataset by Neuenkirch and Neumeier that covers all U.S. sanction episodes between 1976 and 2012.⁸³ These sanctions include retractions of foreign aid, bans on grants, loans, credits or investment, restrictions on the sale of specific products or technologies, import or export restrictions, and embargoes on all or most economic activity. As indicated by this broad definition, there is some heterogeneity across sanctions. Our study aims to assess the average effects of sanctions on human rights, but we also evaluate the effects of different categories of

81. Gutmann & Voigt, *supra* note 80.

82. Lorenz Blume & Stefan Voigt, *The Economic Effects of Human Rights*, 60 KYKLOS 509 (2007); Gutmann & Voigt, *supra* note 80.

83. Matthias Neuenkirch & Florian Neumeier, *The Impact of UN and US Economic Sanctions on GDP Growth*, 40 EUR. J. POL. ECON. 110 (2015); Matthias Neuenkirch & Florian Neumeier, *The Impact of US Sanctions on Poverty*, 121 J. DEV. ECON. 110 (2016).

sanctions, such as unilateral versus multilateral sanctions, and targeted versus non-targeted sanctions. After combining the data on economic sanctions with the smaller human rights dataset, 235 country-year observations with U.S. sanctions remain. The list of countries in our sample can be found in Table A2 in the Appendix. In total, the United States imposed sanctions on 34 out of these 111 countries.

To get a first impression of the human rights situation in sanctioned and non-sanctioned countries, Table 1 displays the average human rights scores in both groups alongside t-tests of differences between the groups.

TABLE 1: DESCRIPTIVE STATISTICS

	No Sanctions	Sanctions	Difference
Overall Human Rights	0.128	-1.285	1.413**
Basic Human Rights	0.102	-1.020	1.121**
Economic Rights	0.116	-1.160	1.276**
Women's Rights	0.085	-0.850	0.935**
Political Rights	0.117	-1.178	1.295**
Observations	2,359	235	

Note: Table shows mean values of the overall human rights indicator and the four human rights dimensions for country-year observations (not) subject to sanctions alongside t-tests of differences between the groups. ** and * indicate significance at the one and five percent level, respectively.

The human rights situation is clearly worse in sanctioned countries compared to their non-sanctioned counterparts as indicated by the negative figures for the latter. The difference is as large as 1.4 standard deviations for the overall human rights indicator. However, can we take these differences at face value?

C. Estimation Strategy

The descriptive findings outlined in Table 1 are not surprising and do not necessarily imply that sanctions lead to a deterioration of human rights. In fact, sanctions are typically imposed for three reasons:⁸⁴ (i) to coerce states (or militant groups within states) to stop threatening or infringing the sovereignty of another state; (ii) to foster democratic change in a country, protect democracy, or destabilize an autocratic regime; or (iii) to protect the citizens of a state from political repression and enforce human rights. As a consequence, one would expect the human rights situation in countries that are about to be sanctioned to be worse than that of the aver-

84. See G. C. HUFBAUER ET AL., *ECONOMIC SANCTIONS RECONSIDERED* (3rd ed. 2009).

age non-sanctioned country. Only a careful empirical analysis of the human rights consequences of economic sanctions ensures that the *treatment effect*, that is, the consequences of economic sanctions themselves, is disentangled from the *selection effect*, that is, the reasons for why the sanctions have been imposed in the first place.

The simplest, yet imperfect, way to account for the selection effect is to estimate the conditional effect of sanctions on human rights, holding other variables related to the human rights situation constant. To do so, we rely on a panel difference-in-differences model:

$$(1) y_{it} = \alpha_i + x'_{it}\beta + \delta \text{sanctions}_{it} + \lambda_t + \varepsilon_{it}$$

The dependent variable y_{it} is one of the five human rights indicators; our key independent variable is the binary sanction variable sanctions_{it} . Country-fixed effects α_i and time-fixed effects λ_t account for time-invariant unobserved heterogeneity in human rights protection between countries as well as a global non-linear time trend. The control variables x_{it} include one-year lagged realizations of the four human rights dimensions, a country's level of democracy, as well as dummy variables for minor conflicts and major conflicts. Additionally, we consider the following one-year lagged macroeconomic variables as controls: real GDP per capita in logs, the growth rate of real GDP per capita, population size in logs, trade openness (exports plus imports divided by GDP), the trade share with the United States (exports plus imports from the United States divided by the country's total exports plus imports), economic and military aid per capita received from the United States (both in logs), and foreign direct investment per capita from the United States (in logs). The error term is denoted by ε_{it} .

In a second step, we account for the fact that a two-way panel fixed effects model might not be sufficient to tackle endogeneity concerns. The economic, political, and social environment in targeted countries might not be fully captured by the set of covariates employed in the regression analysis. This unobservable environment might be systematically related to our sanctions indicator, since countries in an adverse situation are more likely to be targeted. In such a situation, the estimates of Equation (1) are biased because we cannot distinguish the effect of sanctions from the effect of the environment in which sanctions tend to be imposed. To account for this potential endogeneity problem and to identify the causal influence of U.S. economic sanctions on the target states' respect for human rights, we employ an endogenous treatment model.⁸⁵ Endogenous treatment models allow identification of the causal treatment effect when selection into

85. An alternative approach to establishing causality in the context of sanctions is an event study design, but this would presuppose longer time series. See e.g., Jerg Gutmann et al., *The Economic Effects of International Sanctions: An Event Study* (Center for Economic Studies and Ifo Institute for Economic Research, Working Paper No. 9007 (2021)).

treatment is based on unobservable factors (e.g., the economic, political, and social environment) that also affect the outcome of interest. An endogenous treatment model consists of two parts. The first part, the *outcome model*, is similar to the ordinary least squares (OLS) model in Equation (1):

$$(2) \tilde{y}_{it} = \tilde{\alpha}_i + x'_{it}\tilde{\beta} + d \text{ sanctions}_{it} + \tilde{\lambda}_t + \tilde{\varepsilon}_{it}$$

All variables are defined as in the OLS case. The second part, the *selection model*, is a probit model explaining the selection into treatment (i.e., which countries are getting sanctioned):

$$(3) d_{it}^* = z'_{it}\tilde{\gamma} + \tilde{v}_{it}$$

d_{it}^* is a latent variable, which is assumed to be standard normally distributed such that selection into treatment is given to

$$d_{it} \begin{cases} 1 \text{ iff } d_{it}^* > 0 \\ 0 \text{ iff } d_{it}^* \leq 0 \end{cases}$$

z_{it} is a vector of exogenous covariates that affect the likelihood of being selected into treatment. The vector z_{it} in the selection model may, but does not have to, overlap with the vector of covariates x_{it} employed in the outcome model.

To see how the endogeneity of treatment assignment affects the outcome of interest, it is helpful to take a closer look at the relation between the error terms of Equations (2) and (3), $\tilde{\varepsilon}_{it}$ and \tilde{v}_{it} . Assume that the vector of error terms comes from a mean zero bivariate normal distribution and has the following covariance matrix:

$$\Sigma = \begin{bmatrix} \sigma^2 & \sigma\rho \\ \sigma\rho & 1 \end{bmatrix}$$

ρ measures the correlation between the treatment assignment errors and the outcome errors and σ^2 measures the variance of the outcome error $\tilde{\varepsilon}_{it}$. For identification, the variance of the selection error \tilde{v}_{it} is restricted to 1. Exogeneity of the treatment implies that $\rho = 0$, that is, the outcome of interest is not related to unobservables affecting the likelihood of treatment assignment. In this case, there is no need for an endogenous treatment model and estimation of Equation (1) would be sufficient. In contrast, $\rho \neq 0$, indicates the existence of a selection bias, as it implies that unobservables predicting the imposition of sanctions also affect the outcome of interest. For example, a negative value of ρ implies that unobservables that negatively affect a country's human rights situation tend to concur with unobservables that increase the likelihood of being subject to U.S. economic sanctions. As a consequence, the standard OLS estimates would be biased.

Estimating the treatment effect presupposes the identification of p which, in turn, requires that at least one variable in the vector z_{it} is not included in vector x_{it} . This non-included variable (or variables) also needs to be significantly correlated with the likelihood of receiving treatment, but uncorrelated with the error term of the outcome model. We refer to a variable that fulfills these conditions as a treatment instrument.

D. Treatment Instruments for Identifying Causal Effects

We employ three different treatment instruments in our analysis.⁸⁶ For our first treatment instrument, we use the geographical distance in logs between the capital of each country included in our sample and Washington, D.C.⁸⁷ There are several reasons to believe that countries that are close to the United States are, *ceteris paribus*, more likely to become targets of U.S. economic sanctions. First, internal conflict in a country close to the United States may represent a greater threat to U.S. security. Moreover, human rights violations that cause safety-seeking refugee flows are more threatening to U.S. interests when the country of origin is close to the United States.⁸⁸ Second, the closer a country is to the United States, the greater the awareness of its political and social situation among the general public in the United States, thus increasing the pressure on U.S. politicians to intervene.⁸⁹ Finally, sanctions may be considered more effective if the prospective target nation is close.⁹⁰

Our second treatment instrument is an indicator of genetic distance, as discussed by Spolaore and Wacziarg.⁹¹ Underlying this instrument is the same logic used for the geographic distance indicator. Giuliano et al. show that genetic distance functions as a proxy for geographical barriers to migration and trade (specifically seas, mountain chains, and the ruggedness of territory) beyond what can be explained by a simple measure of distance because these factors shaped genetic differences between populations around the time of the Neolithic Revolution.⁹² These features of geography are important barriers to cultural and economic exchange between countries, and we use genetic distance as a proxy for these barriers. We expect, in line with our arguments in the previous paragraph, that countries with a higher

86. Gutmann, Neuenkirch & Neumeier, *supra* note 80, at 172.

87. The same instrument was used in Sam R. Bell et al., *The Effect of U.S. Troop Deployments on Human Rights*, 61 J. CONFLICT RESOL. 2020 (2017).

88. See Richard A. Nielsen, *Rewarding Human Rights? Selective Aid Sanctions against Repressive States*, 57 INT'L STUD. Q. 791, 798 (2013).

89. Nielsen, *supra* note 88, at 793; Dursun Peksen et al., *Media-Driven Humanitarianism? News Media Coverage of Human Rights Abuses and the Use of Economic Sanctions*, 58 INT'L STUD. Q. 855, 857 (2014).

90. Neuenkirch & Neumeier, *supra* note 83, at 118.

91. Enrico Spolaore & Romain Wacziarg, *The Diffusion of Development*, 124 Q. J. ECON. 469 (2009).

92. Paola Giuliano et al., *Genetic Distance, Transportation Costs, and Trade*, 14 J. ECON. GEOGRAPHY 179, 195 (2014).

genetic distance to the United States are less likely to be targeted by U.S. sanctions.

Using data taken from Bailey et al.,⁹³ our third treatment instrument measures the alignment of a country's votes in the United Nations General Assembly (UNGA) with U.S. votes in the UNGA. Arguably, a country that tends to vote in line with the United States (i.e., those countries where the values of the voting distance measure are close to zero) can expect a more favorable treatment, thus reducing the likelihood of being targeted by U.S. sanctions.⁹⁴

The vector z_{it} of the selection model includes all variables mentioned as part of vector x_{it} in the outcome model. In addition, we control for U.S. President-specific and time-specific influences, such as differences in foreign policy positions between U.S. Presidents (Reagan, Bush Sr., Clinton, Bush Jr., and Obama) or changes in the global political environment (e.g., the fall of the Iron Curtain or the adoption of the Millennium Development Goals), with the help of U.S. President-fixed effects, i.e., binary indicators that capture the different propensity of different U.S. administrations to use international sanctions.

Table A3 in the Appendix shows that, indeed, two of the three treatment instruments (geographical distance and genetic distance) explain significant differences in the likelihood of being sanctioned and the sign of the estimated coefficients is in line with our priors. Based on a modified over-identifying restrictions test, we can confirm that our treatment instruments are excludable, that is, uncorrelated with the error term of the outcome model. Hence, we are able to identify a causal effect of economic sanctions on human rights with the help of the endogenous treatment model.

E. Empirical Results

The OLS estimates from the two-way fixed effects model are presented in Table 2. These results suggest that U.S. economic sanctions have an adverse effect on the target state's respect for human rights in general and for basic human rights, political rights, and civil liberties in particular. This finding is in line with the extant empirical evidence in the sanctions literature.⁹⁵ Quantitatively, the results indicate that the human rights situation in countries that are subject to sanctions is, *ceteris paribus*, roughly ten percent of a standard deviation worse than in non-sanctioned countries. In contrast, we

93. Michael A. Bailey et al., *Estimating Dynamic State Preferences from United Nations Voting Data*, 61 J. CONFLICT RESOL. 430, 443 tbl. 1 (2017).

94. Axel Dreher & Nathan M. Jensen, *Country or Leader? Political Change and UN General Assembly Voting*, 29 EURO. J. POL. ECON. 183, 191 (2013); Nielsen, *supra* note 88; Christian von Soest & Michael Wahman, *Not All Dictators Are Equal: Coups, Fraudulent Elections, and the Selective Targeting of Democratic Sanctions*, 52 J. PEACE RES. 17, 19 (2015).

95. Dursun Peksen, *Better or Worse? The Effect of Economic Sanctions on Human Rights*, 46(1) J. PEACE RES. 59, 60 (2009); Reed M. Wood, "A Hand upon the Throat of the Nation": *Economic Sanctions and State Repression, 1976-2001*, 52 INT'L STUD. Q. 489, 494 (2008).

do not find a significant association between economic sanctions and the level of economic rights or women's rights.

TABLE 2: OLS ESTIMATES

	Overall	Basic	Economic	Women's	Political
(1) U.S. Sanctions	-0.081** (0.021)	-0.099* (0.040)	0.000 (0.016)	-0.048 (0.042)	-0.117** (0.026)

Note: Table shows effects of U.S. sanctions on the overall human rights indicator and the four different human rights dimensions based on panel least squares (Equation 1). Models include control variables described in Section IV.C, as well as country-fixed effects and year-fixed effects. ** and * indicate significance at the one and five percent level, respectively.

As mentioned above, panel least squares estimations might not be sufficient to address endogeneity concerns. Hence, Table 3 presents the estimates based on our endogenous treatment model. Here, we look not only at the effects of sanctions in general (row 1), but also at the effects of specific subgroups of sanctions. We distinguish between sanctions that were explicitly imposed because of human rights infringements in the target state (113 observations, row 2) and those not explicitly imposed due to the human rights situation (122 observations, row 3).

TABLE 3: ENDOGENOUS TREATMENT ESTIMATES

	Overall	Basic	Economic	Women's	Political
(1) U.S. Sanctions	-0.040 (0.039)	-0.064 (0.056)	-0.015 (0.024)	0.285** (0.093)	-0.094** (0.035)
(2) U.S. HR Sanctions	-0.049 (0.044)	-0.198** (0.066)	0.003 (0.027)	0.106 (0.121)	-0.095* (0.042)
(3) U.S. Non-HR Sanctions	0.008 (0.055)	0.115 (0.076)	-0.028 (0.036)	0.456** (0.082)	-0.119* (0.047)

Note: Table shows effects of U.S. sanctions on the overall human rights indicator and the four different human rights dimensions based on endogenous treatment models (Equations 2 and 3). Models include control variables described in Section IV.C, as well as country-fixed effects and year-fixed effects. ** and * indicate significance at the one and five percent level, respectively. The results of the selection stage can be found in Table A3 in the Appendix.

The results based on the endogenous treatment model draw a different picture than the OLS estimates. Regarding sanctions in general (row 1), the treatment effect estimates for overall human rights and basic human rights are smaller and statistically insignificant, indicating that the OLS estimates are indeed biased downwards due to endogeneity. A dispiriting finding is that sanctions that aim specifically at improving the human rights situation

(row 2) are found to have a strong negative effect on basic human rights and on political rights (respectively twenty and ten percent of a standard deviation). Furthermore, the results suggest that the common criticism that economic sanctions may lead targeted regimes to become even more repressive is, across all sanctions, only true with respect to political rights. The adverse effect on political rights is due to both human rights-motivated (row 2) and other sanctions (row 3). In contrast, we find a strong and significantly positive influence of U.S. economic sanctions on the target state's respect for women's rights. The positive effect on women's rights is particularly driven by U.S. non-human rights sanctions (row 3).⁹⁶

V. EMPIRICISM AND THE LEGAL ASSESSMENT

With the proportionality judgment resting on empirical premises connected to both the necessity test and the proportionality test, our empirical results offer insight for the legal assessment in several regards. First, on the level of the necessity test, the empirical results feed into the assessment of whether economic sanctions can reasonably be expected to achieve their objective, as required no matter if humanitarian law, countermeasure law, or human rights law serve as the legal yardstick. Second, the determination of collateral damage associated with sanctions informs the proportionality assessment. Third, the results relate to the discussion about unilateral versus multilateral sanctions and, fourth, they inform the effects of targeted sanctions.

A. *Effectiveness of Sanctions*

With effectiveness at the core of necessity, the empirical analysis allows us to disentangle those sanctions which aim explicitly at improving the human rights situation from other sanctions. Table 3 illustrates the effect of sanctions depending on their motivation (all sanctions; human rights motivated sanctions; non-human rights motivated sanctions, e.g., serving to topple dictators or end wars). The legal effectiveness test focuses on the effect of sanctions aiming specifically at human rights improvements and the results in Table 3, row 2 show that these sanctions fall short of improving any dimension of human rights. As there is no positive significant effect on any human rights dimension,⁹⁷ human rights sanctions fail the effective-

96. Gutmann, et al., *supra* note 80, at 176.

97. A variable's effect is considered significant if its point estimate is statistically different from zero after taking the precision of the estimate (i.e., its standard error) into account. In such a case, the null hypothesis that economic sanctions exert no effect on a human rights dimension (i.e., the 'true' coefficient is equal to zero) can be rejected because there is sufficient evidence for a (positive or negative) effect of economic sanctions. This evaluation is based on the standard 5 percent significance level, which represents the probability of wrongly rejecting the null hypothesis. For instance, the coefficient estimate of -0.095 in the column 'Political', row (2) of Table 3 is significant at the 5 percent level (as indicated by a *) when taking its standard error of 0.042 into account. Put differently, we can infer with suffi-

ness test. This result is at odds with the assumptions underlying the necessity analysis of economic sanctions prevalent in legal scholarship, which rarely questions effectiveness.⁹⁸ In fact, sanctions aiming at human rights improvements even lead to a deterioration of the protection of basic political and civil rights, as shown by the negative and significant results.

While our results cannot (and are not supposed to) generally rule out the necessity of all (including future) economic sanctions intended to improve human rights, the results cast doubt on the general suitability of economic sanctions as an instrument to improve the human rights situation in a country. This empirical insight informs the necessity test originating in humanitarian law, human rights law, or countermeasure law as discussed above. Specifically, what is explicitly required for necessity under Article 49 of ARSIWA regarding countermeasures is that sanctions “induce that State to comply with its obligations”; under international humanitarian law that the targeting state limit itself to those measures that can reasonably be expected to achieve its objective;⁹⁹ and under human rights law that interferences with individual rights must be necessary to achieve the goals of the action¹⁰⁰—the necessity test applicable across all areas of the law is not passed if economic sanctions are not apt to alleviate human rights restrictions.

With that unfavorable effectiveness verdict in mind, one could vary the causation test in a manner that makes attainment of policy goals more probable. Applying causation strictly implies that sanctions must be apt to lead to human rights improvements. A less strict interpretation would replace the human rights objective with alternative goals, such as to impact on the target economy, e.g., through reduced trade and investment. In that vein, economic sanctions would pass the necessity test simply by inflicting economic harm on the target country’s economy, which in turn would, in theory, affect interest groups that could induce the regime to change its policies.¹⁰¹ It is, thus, in the sender’s hand to vary her policy goals associated with sanctions in order to ensure the effectiveness of the sanction towards its goal. However, at least countermeasure law does not allow variation of the policy goal towards an easier to achieve effectiveness level, as it is the specific action of the targeted state which is in breach of collective interests (e.g., human rights obligations) that needs to be altered towards compliance with international law. The causation test of effectiveness

cient certainty that the estimated deterioration in political rights due to economic sanctions is non-random, given a tolerance level of 5 percent. The size of the coefficient implies that economic sanctions lead to a decline in political rights by almost a tenth of a standard deviation.

98. *But see, e.g.,* Hofer, *supra* note 4, at 165.

99. Owen, *supra* note 24, at 118, Reisman & Stevick, *supra* note 10, at 128.

100. JONAS CHRISTOFFERSEN, FAIR BALANCE: PROPORTIONALITY, SUBSIDIARITY AND PRIMACY IN THE EUROPEAN CONVENTION ON HUMAN RIGHTS 164 (2009).

101. ALEXANDER, *supra* note 55, at 65.

can thus not be softened for countermeasures by varying the policy ends pursued by sanctions.

B. *Proportionality of Sanctions*

As proportionality is mainly concerned with evaluating and limiting the magnitude and collateral nature of damage inflicted by sanctions,¹⁰² our empirical analysis may inform the proportionality test on various levels. First, there is significant heterogeneity in the effects on human rights, which deviates from the common approach in legal literature to consider the effect of sanctions as that on a homogenous and uniform body of human rights—an approach that ignores the variable impact that sanctions can generate on different human rights. By contrast, our study’s approach to classify human rights along patterns of actual affectedness (see above IV. A.D), rather than on the basis of historical-normative criteria, adds more granular details to the analysis. Effect heterogeneity is best illustrated by the difference between treating human rights as one category (Table 3, column “overall”) and the results for the respective individual human rights dimensions (the other columns). Where proportionality accounts for the collateral damage of sanctions, the differentiated human rights assessment may highlight the degree to which protected liberties are restricted or not. Considering the symmetrical logic enshrined in Article 51 of ARSIWA, according to which countermeasures are required to be “commensurate with the injury suffered, taking into account the gravity of the internationally wrongful act and the rights in question”,¹⁰³ the above empirical results may enrich the assessment of commensuration. Standards under humanitarian law prohibiting the infliction of “a harm greater than that unavoidable to achieve legitimate military objectives” can benefit from the empirical assessment to the extent that harm can be specified both pertaining to the kind of human rights concerned and the severity of encroachment. On the same footing, the empirical results inform the application of those proportionality standards under humanitarian law that refer to the “weighing and balancing” between the harm caused by restrictions on a protected liberty and the legitimate ends those restrictions are meant to serve.¹⁰⁴

The empirical results further enrich the proportionality analysis to the extent that they reject the simple “before-after-comparison” that many approaches in legal and political science analysis use when considering the effect of sanctions on the state of human rights. Instead, a proper appraisal must be concerned about endogeneity and take the identification of the

102. Franck, *supra* note 70, at 763; ALEXANDER, *supra* note 55, at 61.

103. International Law Commission, Articles on the Responsibility of States for Internationally Wrongful Acts, August 2001, Art. 51.

104. AHARON BARAK, PROPORTIONALITY: CONSTITUTIONAL RIGHTS AND THEIR LIMITATIONS 169 (2012); George A. Bermann, *The Principle of Proportionality*, 26 AM. J. COMP. L. 415, 426 (1978); see generally Franck, *supra* note 70.

causal effect of economic sanctions seriously. Reliance on mere correlations, as shown in Table 1, would suggest that a dramatic deterioration of human rights may have occurred due to economic sanctions, as the mean values of the overall human rights indicator have worsened after the imposition of sanctions. Such a simple before-after-comparison would render the legal analysis empirically ill-founded, because it does not differentiate between the *treatment effect*, that is, the consequences of economic sanctions themselves, and the *selection effect*, that is, the reasons for which sanctions have been imposed in the first place. In fact, accounting for endogeneity casts doubt on the widely held view of the harmful effects of economic sanctions. However, studies that disentangle different categories of human rights are more conclusive and accurate than those that treat human rights as one monolithic group. While there is no adverse effect on human rights overall (Table 3, column 1), a rights-specific exploration offers qualifications to this conclusion. Considering all sanctions (combining sanctions aimed at human rights improvements and sanctions motivated otherwise), we find no worsening of basic human rights, economic rights, and women's rights, though sanctions in general have an adverse effect on political rights (Table 3, row 1).¹⁰⁵ These results allow for two conclusions. First, empirical rigor is needed to uncover the disparate impact of sanctions on human rights, which leads the proportionality analysis to a more granular level. Unlike the standard legal approach, which treats human rights in the legality review of violations as a monolithic body of rights, the empirically refined approach allows for a differentiated violation assessment. Second, given the insignificant overall effect on human rights (Table 3, column 1), it is plausible to infer that economic sanctions typically cannot be dismissed due to disproportionate effects on human rights as a whole. If proportionality serves as "the principle of avoiding excessive disproportionality",¹⁰⁶ the widely echoed disproportionality claim of economic sanctions is short of an empirical basis.

Table 3 shows another disturbing result. Whereas U.S. sanctions in general (human rights motivated and others combined) exhibit both positive and negative effects on human rights, sanctions imposed to improve human rights protection have only adverse effects (significant deteriorations in both basic and political human rights, see Table 3, row 2). The irony is that sanctions motivated by other reasons than human rights violations perform more favorably (compare Table 3, row 3 and row 2).

Viewing necessity and proportionality together, the results from empirical analysis diverge in two different directions. As demonstrated, the necessity test is likely to fail in cases where sanctions primarily serve to attain improvements in human rights. This result calls into question whether eco-

105. Sanctions aiming specifically at human rights improvements generate no effect on women's and economic rights, yet they deteriorate basic and political rights. *Supra* Table 3, row 2.

106. Kirgis, *supra* note 33, at 517.

conomic sanctions aimed at improving human rights are a suitable policy instrument. With improvements of human rights not materializing despite that being the stated goal, sanctions lack suitability to achieve their objective. Regarding proportionality, in turn, the differentiation between human rights sanctions and other sanctions offers a worse picture: sanctions not only lack necessity due to failed improvements, but even harm human rights. Sanctions are disproportionate since they produce harmful effects without these effects being outweighed by the objectives of the sanctions being accomplished. However, the proportionality test may come to a different conclusion where the imposition of sanctions aims at and achieves other goals.

C. *Unilateral and Multilateral Sanctions*

Our empirical analysis also allows us to distinguish between unilateral and multilateral sanctions. Although it has occasionally been claimed that the difference in legality standards between unilateral and multilateral sanctions is limited,¹⁰⁷ the view prevails that it makes a difference who adopts sanctions, given that legal doctrine has always accorded greater permissibility towards collective interventions, such as those by international, regional, or sub-regional organizations, particularly when backed up by recommendations of the UN Security Council, than towards third-party countermeasures adopted by individual states.¹⁰⁸ However, even when vested with the “supranational competence” of the UN Security Council, sanctions may cause negative humanitarian consequences. In this way, sanctions initiated by the Security Council have been followed by accountability for breaches of human rights.¹⁰⁹

Empirically, this analysis shows that sanctions of unilateral or multilateral origin contribute differently to the above overall effect of sanctions on human rights. Recalling that the overall finding of Table 3 showed U.S. sanctions’ negative impact on political rights and positive effects on women’s rights, the distinction between unilateral and multilateral in Table 4 highlights that the improvement of women’s rights is driven by unilateral U.S. sanctions, whereas multilateral sanctions are responsible for the deterioration of political rights. Thus, with unilateral sanctions producing less intrusive consequences than multilateral sanctions, there is an empirical argument not to offer more lenient legal treatment to multilateral sanctions compared to unilateral sanctions.¹¹⁰

107. Hovell, *supra* note 7, at 143.

108. See White & Abass, *supra* note 6, at 536.

109. For human rights binding upon the Security Council, see Angelet, *supra* note 40; J.A. Frowein & Nico Krisch, *Introduction to Chapter VII*, in *THE CHARTER OF THE UNITED NATIONS: A COMMENTARY* 711 (B. Simma et al. eds., 2d ed. 2002).

110. On different standards, see O’Connell, *supra* note 8, at 75.

TABLE 4: ENDOGENOUS TREATMENT ESTIMATES FOR UNILATERAL AND MULTILATERAL SANCTIONS

	Overall	Basic	Economic	Women's	Political
(1) U.S. Unilateral Sanctions	-0.019 (0.046)	-0.096 (0.067)	-0.035 (0.031)	0.358** (0.084)	-0.063 (0.043)
(2) U.S. Multilateral Sanctions	-0.071 (0.052)	-0.043 (0.073)	0.001 (0.030)	-0.179 (0.140)	-0.116** (0.045)

Note: Table shows effects of U.S. sanctions on the overall human rights indicator and the four different human rights dimensions based on endogenous treatment models (Equations 2 and 3). Models include control variables described in Section IV.C, as well as country-fixed effects and year-fixed effects. ** and * indicate significance at the one and five percent level, respectively. The results of the selection stage can be found in Table A3 in the Appendix.

D. Targeted Sanctions

An entire strand of literature emerged in response to the negative humanitarian consequences surrounding UN Security Council approved sanction episodes. Rather than abandoning sanctions, the Security Council has sought to make them smarter, more targeted, and less onerous for humanitarian needs.¹¹¹ Hence, these smart sanctions were designed to be more proportionate than comprehensive sanctions regimes.¹¹²

TABLE 5: ENDOGENOUS TREATMENT ESTIMATES FOR (NON-)TARGETED SANCTIONS

	Overall	Basic	Economic	Women's	Political
(1) U.S. Targeted Sanctions (Low Costs to Target)	-0.004 (0.059)	-0.095 (0.067)	-0.030 (0.029)	0.447** (0.069)	-0.051 (0.044)
(2) U.S. Non-Targeted Sanctions (High Costs to Target)	-0.029 (0.049)	0.022 (0.081)	-0.010 (0.035)	-0.042 (0.153)	-0.059 (0.050)

Note: Table shows effects of U.S. sanctions on the overall human rights indicator and the four different human rights dimensions based on endogenous treatment models (Equations 2 and 3). Models include control variables described in Section IV.C, as well as country-fixed effects and year-fixed effects. ** and * indicate significance at the one and five percent level, respectively. The results of the selection stage can be found in Table A3 in the Appendix.

This empirical assessment disentangles the effects of targeted sanctions from those of other sanctions. The sanction database comprises high-cost

111. *Id.* at 70; *see, e.g.*, Press Release, Security Council, Speakers Call for Clearer Definition, Tighter Targeting of UN Sanctions as Council Draws on 'Lessons Learned' to Refine Sanctions, U.N. Press Release SC/6845 (Apr. 17, 2000).

112. *See* Cleveland, *supra* note 65, at 138.

and low-cost sanctions. In line with the empirical literature,¹¹³ low-cost sanctions reflect the targeted character of sanctions. They typically include travel restrictions on a nation's leadership or other diplomatic sanctions as well as retractions of foreign aid, bans on grants, loans, or credits, or restrictions on the sale of specific products or technologies.

Intuitively, low-cost sanctions would be expected to produce significantly better effects on the human rights situation, as negative side-effects on the human rights situation of citizens are alleviated while maintaining pressure on political leaders. However, across human rights categories, almost no significant effects can be observed (see Table 5). It is only women's rights that benefit from the more targeted sanctions. All other categories lack significant effects, suggesting that the claimed preference for targeted over non-targeted sanctions in terms of their milder impact on human rights is not supported by strong empirical evidence.

VI. WHAT ROLE FOR EMPIRICAL EVIDENCE?

This study's attempt to instill empirical insight into legal review of sanctions echoes recent calls in the legal sanctions literature for a greater acknowledgment of extra-judicial insight. Claims for more interdisciplinarity toward international relations scholarship in exploring inter-state relations have been voiced,¹¹⁴ and openness toward empirical social science is on the rise in international law.¹¹⁵ In the context of sanctions, the relevance of sociological scholarship has been put forward to account for the social-psychological impact of sanctions on state behavior.¹¹⁶ Treating states like individuals would allow for greater understanding of state behavior, as, for example, the social-psychological effect of stigmatization gains explanatory power.¹¹⁷ In fact, this empirical finding of ineffectiveness of sanctions on the state of human rights is in line with sociological theories on stigmatization.¹¹⁸ In principle, states that are stigmatized through sanctions can react in three ways: stigma recognition, stigma rejection, and counter-stigmatization. The optimistic theory of sanctions rests on the first group, while

113. Daniel W. Drezner, *Sanctions Sometimes Smart: Targeted Sanctions in Theory and Practice*, 13 *Int'l Stud. Rev.* 96, 100 (2011).

114. Jeffery L. Dunoff & Mark A. Pollack, *International Law and International Relations*, in *INTERDISCIPLINARY PERSPECTIVES ON INTERNATIONAL LAW AND INTERNATIONAL RELATIONS: THE STATE OF THE ART* (J. Dunoff & M. Pollack eds. 2013); Hofer, *supra* note 5, at 421.

115. See generally Gregory Shaffer & Tom Ginsburg, *The Empirical Turn in International Legal Scholarship*, 106 *AM. J. INT'L L.* 1 (2012); Adam Chilton & Dustin Tingley, *Why the Study of International Law Needs Experiments*, 52 *Colum. J. Transnat'l L.* 173 (2013).

116. Hofer, *supra* note 4, at 164.

117. ROBIN MARKWICA, *EMOTIONAL CHOICES: HOW THE LOGIC OF AFFECT SHAPES COERCIVE DIPLOMACY* 36–94 (2018).

118. Rebecca Adler-Nissen, *Stigma Management in International Relations: Transgressive Identities, Norms and Order in International Society*, 68 *INT'L ORG.* 143 (2014); see MARK DANIEL JAEGER, *COERCIVE SANCTIONS AND INTERNATIONAL CONFLICT: A SOCIOLOGICAL THEORY* 22 (2018).

this study suggests that other groups are more likely to drive the reaction of targeted states.¹¹⁹ Finally, there is a parallel yet discipline-narrowed strand of empirical literature on the impact of sanctions, with the legal literature hitherto assuming causal effects of sanctions on human rights—a view challenged in our contribution.

The above analysis sought to offer what one may consider a pragmatic view on the contribution of empirical social sciences to international law by asking how and under what conditions empirical evidence can inform the application of proportionality in the field of international law more generally, while also recognizing the limitations associated with importing quantitative standards into the proportionality assessment. It implies defining and disentangling which aspects of the legal issue at stake can be explored through empirical analysis and how this analysis—accounting for methodological limitations—can be used to support, not replace, the legal assessment.

A. *Empirical Insight and the Wider Context of Sanctions, Proportionality and Beyond*

Proportionality and its inherent elements of prognosis and comparative effect judgment of alternative policy measures make quantitative social sciences its natural partner.¹²⁰ However, with the great variability of the proportionality principle originating in cultures as different as the European culture (defining proportionality broadly as a means-end relationship) and the Anglo-Saxon background (defining proportionality according to the concept of reasonableness),¹²¹ any general conclusions on the role of empiricism must be drawn with caution. To the extent that elements of prognosis of future effects and comparative effect analysis of alternative policy measures form part of legal necessity and proportionality, the empirical approach in this Article may prove fertile to better inform the proportionality judgment. Some courts—including those of the EU, the ECHR, and the World Trade Organization (WTO)—normally use a three-part test, with the analysis entirely focusing on the relationship between means and ends.¹²² For example, in construing Article XX(d) of General Agreement Tariffs and Trade, the WTO has characterized the necessity requirement as ensuring the effectiveness of the measure or “the extent to which the measure contributes to the realization of the end pursued.”¹²³ There is some uncertainty as to whether the WTO defers to a state’s own determination

119. Hofer, *supra* note 4, at 166.

120. See Gerards, *supra* note 47, at 489; Dieter Grimm, *Proportionality in Canadian and German Constitutional Jurisprudence*, 57 U. TORONTO L. J. 383, 397 (2007).

121. Cottier et al., *supra* note 16, at 629.

122. Alec Stone Sweet & Jud Mathews, *Proportionality Balancing and Global Constitutionalism*, 47 COLUM. J. TRANSNAT’L L. 72, 75 (2008).

123. Appellate Body Report, *Korea—Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, ¶¶ 162–64, WTO Doc. WT/DS161/AB/R (adopted Jan. 10, 2001).

that such measures are effective to promote the legitimate state interest,¹²⁴ but the effectiveness test and the exploration of alternative, less intrusive measures lends itself to employ quantitative analysis.

Empirical insight of the nature discussed is also relevant for the reconstruction of proportionality on the judicial level. Typically, proportionality must be ascertained by judges. How can empirical evidence enrich the proportionality review in legal adjudication? This crucially hinges on whether courts are legally held to rely on available evidence in conducting a legality review. There is a related debate under the ECHR review of measures interfering with human rights regarding the point in time which is decisive for the ECtHR to review the effectiveness of a policy measure—either at the moment the measure was designed (*ex tunc* review) or as it appears after practical application of the measure (*ex nunc* review).¹²⁵ *Ex nunc* review requires the court to include available empirical evidence on the effectiveness of a policy measures. With the passage of time since entering into force, the impact on individual interests can be observed. By contrast, under *ex tunc* review, the court's review would focus on whether the policymaker's initial prediction corresponds to what could have been reasonably expected at the time of adoption and how the measure would function in practice.¹²⁶ The choice of review (and hence the role of empirical evidence) may also interact with the policy area concerned and the level of deference granted to policymakers. There is established jurisprudence developed by the CJEU and some constitutional courts to reduce the intensity of judicial review when these courts decide on measures requiring complex socio-economic assessments and predictions.¹²⁷ The value-based decisions to be made in these contexts lead the courts to only look at the intended effects at the time of decision making (*ex tunc* review), implying a lenient stance vis-à-vis the decision-making authority if there is an indication that, at the time, the measure appeared to be an appropriate and suitable one, and that there was some factual basis on which a reasonable expectation of effectiveness could be founded. By contrast, these courts apply more intense scrutiny when discretionary leeway is more limited or when fundamental rights have been infringed. In these cases, the judiciary would be more concerned about the actual effects of the measure (*ex nunc* review), with the corresponding consequences for the quality of empirical evidence it may request from the parties. With increased availability and sophistication of empirical insight, socio-economic complexity can ultimately be reduced and judges can be put into the position to more rigorously assess what previously had been opaque

124. Cleveland, *supra* note 65, at 165.

125. Gerards, *supra* note 47, at 476.

126. Sujit Choudry, *So What Is the Real Legacy of Oakes? The Decades of Proportionality Analysis under the Canadian Charter's Section 1*, 34 SUP. C. L. REV. 501, 524–25 (2006).

127. Gerards, *supra* note 47, at 477.

to them. This may eventually lead to a tighter judicial review and a less deferential approach by courts.

Such an approach amounts to a “procedural” proportionality review, according to which governments must demonstrate that the authorities made an appropriate effort to explore various alternatives and to obtain sufficient information as to their hypothetical effects¹²⁸—a logic also inherent in the necessity test requiring the government to choose the least-intrusive measure. Thus, rather than undertaking an evaluation of the available evidence and conducting a necessity test by comparing the measures at stake with hypothetical alternatives, the court would limit its review to whether the government exerted appropriate care to collect evidence in support of its policy decision.¹²⁹

B. *Limitations of Quantitative Proportionality Analysis*

Even if some elements of necessity and proportionality can be quantified, this analysis is far from claiming that proportionality would have an exact determinable content.¹³⁰ Neither does this analysis offer a complete guide for proportionality assessment, nor can quantitative assessment replace qualitative reasoning in proportionality altogether.

To start with countermeasures law, the notion prevails that proportionality measures the sanction against the injury. The ICJ ruled that “an important consideration is that the effects of a countermeasures must be commensurate with the injury suffered taking into account the rights in question.”¹³¹ Likewise, the WTO rules employ the same concept by requiring “equivalence” between injury suffered and measures in response. However, this analysis cannot quantify the initial injury that the targeted state has inflicted on its citizens’ human rights. But determining scope and magnitude of the initial injury would pose challenges in terms of making measurable data available in order to address injury through quantitative analysis. While in monetarized contexts, such as international trade, injury may be fairly easy to determine, it is more difficult to translate the injury of war, espionage, or seizure of territory into quantitative data.

Another caveat of the effectiveness assessment is that it requires disentanglement of one specific policy goal. As soon as states pursue more than one policy objective, a conclusive effectiveness assessment would have to mea-

128. Armin Steinbach, *The Fiscal Federalism Function of Proportionality*, Eur. L. J., (forthcoming).

129. See Joanne Scott & Susan Sturm, *Courts as Catalysts: Rethinking the Judicial Role in New Governance*, 13 COLUM. J. EUR. L. 565, 569 (2007); Gerards, *supra* note 47, at 487.

130. Ioannis Rodopoulos, *The Dialectical Function of the Principle of Proportionality: A European Perspective*, 100(3) KRITISCHE VIERTELJAHRSSCHRIFT FÜR GESETZGEBUNG UND RECHTSWISSENSCHAFT [CRITV] 201, 211 (2017).

131. Gabcikovo-Nagymaros Project (Hung. v. Slov.), Judgement, 1997 I.C.J. No. 92, ¶ 85 (Sept. 25).

sure against attainment of each of these goals.¹³² Regularly, sanctions not only pursue changing the targeted state's human rights treatment, but may also seek simply to isolate and entrench the foreign government, or compel it to seek other economic allies and markets.¹³³ Determining effectiveness would produce ambiguous results. Quantification may encounter further limitations where the proportionality assessment intrinsically relies on qualitative reasoning. The weighing and balancing of proportionality is often associated with elements of valuing which remain alien to quantification. There are also other elements typically relied on for the assessment of encroachment with international law violations, such as the gravity, duration, irreversibility of the injury, etc.—all of these parameters would ultimately require some kind of value-based qualitative reasoning. Hybrid approaches combining elements of empirical and normative analysis are hence indispensable to account for discipline-specific and methodological limitations. This empirical sanction analysis, for instance, would not be able to make a conclusive proportionality assessment on its own footing—although offering valuable insight to determine the actual effects of sanctions, it remains for a genuine legal assessment to engage in an overall weighing of objectives and effects of sanctions.

Finally, designing necessity as least-restrictive alternative exploration requires a comparison of different policy measures promoting the intended goal to variable degree and effectiveness. Taking the example of human rights and given that international policymaking typically involves complex political relationships, it appears hardly possible to demonstrate that no less trade-restrictive alternative is reasonably available to promote a legitimate human rights value. With a broad arsenal of coercive measures channeled through diplomatic means, withholding foreign assistance, or other means to exert subtle or explicit pressure on targeted states, there are numerous alternatives (or a combination of them) to push toward compliance with human rights.¹³⁴ Empirical evidence is not apt to capture the political complexity of international relations and produce credible evaluative comparisons—value-based comparisons and vague effectiveness prognosis are inevitable.

More generally, the degree of effectiveness required to pass necessity limits the explanatory power of quantification. There is no determinable threshold dictating necessity. Concerning our study, what would be the level of statistical significance proving effectiveness or ineffectiveness? Would all categories of human rights have to benefit for sanctions to be effective or does a mixed pattern suffice? Within a spectrum of effectiveness, one could require that a measure must be fully effective to realize its

132. See ARMIN STEINBACH, *RATIONALE GESETZGEBUNG* 145 (2017) (explaining that multi-objectives legislation generally poses methodological challenges to impact assessment).

133. Cleveland, *supra* note 65, at 145.

134. *Id.* at 165; White & Abass, *supra* note 6, at 543.

objectives. This would imply that all types of human rights would have to improve in statistically significant terms, but meeting this test is unlikely in light of the above results. Alternatively, if one accepts a certain margin of discretion of national authorities, a more lenient standard would not entail immediately dismissing a measure if it only partly achieves the intended results, or if it only contributes to realizing its objectives in the long run. It would only entail dismissing those measures that have in no way the desired effects, or that would produce effects contrary to the aims pursued.¹³⁵ This approach corresponds to the logic of a necessity test that varies depending on the fundamental rights concerned. In this vein, higher demands on the means-end relationships correspond directly proportionate to the standard of protection of the right. That is, the greater the importance of the individual right concerned, the more evidence is required to justify the choice for a particular measure.¹³⁶ Again, a judgment inevitably implies the choice of the decision-making body as well as a sophisticated evaluation of the effectiveness of alternative means¹³⁷—a task barely conceivable with quantitative analysis.

A distinct question concerns disciplinary limitations of the legal professions. It may be doubtful whether the availability of knowledge and expertise would put courts in the position to properly assess the factual and empirical evidence that is required to underpin a sound *ex nunc* judgment. First, it requires a considerable openness in mindset to open discipline-bound legality review for an import of alien insight. Monodisciplinary background in legal professions would require from judges a general willingness to accept insight with which they are methodologically unfamiliar. Second, judges understandably lack knowledge and ease to deal with empirical analysis, hence they would need additional (costly and timely) resources to seriously engage with the available data and methodology. In any event, to overcome these hurdles, raw empirical evidence would need to be transferred and communicated in a digestible format to non-experts, a process not unfamiliar to the involvement of experts in court proceedings. Third, core evidence surrounding the issue at stake is typically produced within the apparatus of policymakers, by academia, or specialized institutions, and these parties may be reluctant to provide evidence to the court that could undermine their case, leaving the court with limited access to the relevant information.

135. Gerards, *supra* note 47, at 475; Robert W. Bennett, 'Mere' Rationality in Constitutional Law: Judicial Review and Democratic Theory, 67 CALIF. L. REV. 1049, 1065 (1979).

136. CHRISTOFFERSEN, *supra* note 100, at 191.

137. Gerards, *supra* note 47, at 484.

CONCLUSION

While empirical approaches are becoming increasingly popular in international law, surprisingly little attention has been devoted to the empirical susceptibility of the “cardinal principle” of international law.¹³⁸ One natural reason for this may be the ambiguous terms of proportionality across law areas, or even more subtle, that proportionality prevails as a product of political, cultural, and social construction¹³⁹—rather than “a naturally existing relationship,” which pretends to become quantifiable through econometric studies. Just as sanctions are not an exact science, nor is proportionality.¹⁴⁰

Acknowledging the necessary caution vis-à-vis generalizing features of proportionality across legal matters, this analysis sought to highlight how causality claims are inherent in proportionality and how they can be illuminated by empirical social sciences. Elsewhere it has been argued that the standard approach to testing necessity often rests on “the use of common sense” in evaluating if a certain measure will be effective.¹⁴¹ Mere common sense, whether applied on the level of lawmakers or under judicial review, remains insufficient, as it does not offer the same precision and rigor as methodologically sound empirical evidence. In fact, it disregards that any effectiveness test and the associated prognosis (*ex ante*) or retrospection (*ex post*) hinges on a genuinely extra-judicial and non-normative exercise of impact evaluation—an exercise that lawyers are not trained to perform. With proportionality combining elements of empirical impact assessment and normative balancing, the former is extra-judicial and in principle inaccessible with the traditional tools of the legal discipline. A proper impact assessment, however, is an indispensable input for the ensuing normative part of the proportionality review. The invitation to borrow from quantitative social science is therefore not only an academic plea for interdisciplinarity, but a necessity due to both legal requisite and professional limitation.

This does not mean that importing quantitative analysis does not come without caveats. Although impact assessments and evidence-based policymaking have become elements of good governance,¹⁴² implementation of empirical insight on the level of legality review must not only be reconcilable with doctrinal premises, but also deal with practical challenges. It defies intuition to expect judges to develop an empirical analysis that complies with complex methodological standards. However, to the extent that quantification may offer insight rather than replacing qualitative reasoning, the

138. Legality of the Threat or Use of Nuclear Weapons, Advisory Opinion, 1996 I.C.J. Rep. 226, ¶ 78 (July 8).

139. Rodopoulos, *supra* note 130, at 212.

140. Hofer, *supra* note 5, at 421.

141. Gerards, *supra* note 47, at 473.

142. Andrew Blick, Iain Byrne & Stuart Weir, *Democratic Audit: Good Governance, Human Rights, War Against Terror*, 58 PARLIAMENTARY AFFS. 408, 408–23 (2005).

additional source of insight may be useful, particularly because it instills some more objectivity to an otherwise subjective process.

Controversies surrounding economic sanctions in legal and social science scholarship offer an illustration of both the potential of quantification for the proportionality test and interdisciplinary mutual stimulus. With international lawyers drawing their motivation to regulate sanctions from the effects which these sanctions produce on targeted countries and their population, there is a genuine interest to integrate effect-oriented knowledge into legal analysis.¹⁴³ Among the various results drawn from this study, few should be emphasized to warrant future research in the field of human rights and sanctions. By way of exploiting the granularity that empirical research can offer, legal analysis should abandon treating human rights in the legal review of violations as a monolithic body of rights, but to account for the diversity in protection levels between human rights. Policy measures impact human rights to different degrees and proper judicial balancing would take this variability into account. Such granular assessment became possible, as we offered an alternative to the traditional approach of defining human rights categories along exogenously set historical or normative criteria. Rather, empirical proximity of specific human rights allows determining a typology of human rights which in turn renders the legal infringement analysis more differentiated. This approach may also prove useful to the legality review of human rights breaches more generally.

Pertaining to the proportionality of sanctions, this analysis casts doubt on whether economic sanctions inflicted on other states with the intention of protecting human rights attain their objective. With this ineffectiveness (also of targeted sanctions) in mind, attention should be diverted to inquire which policy alternatives to coercion exist—this extends an interdisciplinary invitation towards international relations.¹⁴⁴ At the same time, given the limited overall effect of sanctions on human rights as demonstrated above, it is plausible to infer that economic sanctions typically cannot be blatantly dismissed as causing disproportionate effects on human rights, as the pattern of deteriorating impact is mixed and short of statistical significance. If proportionality serves as “the principle of avoiding excessive disproportionality,”¹⁴⁵ then the widely echoed disproportionality claim of economic sanctions falls silent.

This study’s focus on sanctions paves paths for further research. One potential avenue may be to explore quantitative analysis in relation to proportionality in other areas of international law. For example, under WTO law (and besides the data-driven trend under international economic law),¹⁴⁶

143. MATTHIAS KLATT & MORITZ MEISTER, *THE CONSTITUTIONAL STRUCTURE OF PROPORTIONALITY* (2012).

144. Hofer, *supra* note 5, at 421.

145. Kirgis, *supra* note 33, at 517.

146. *Special JIEL Issue: New Frontiers in Empirical Legal Research: Text-as-Data and Network Analysis of International Economic Law*, 20 J. INT’L ECON. L. 1 (C. Brummer & J. Pauwelyn eds., 2017).

necessity and proportionality are well-defined terms and trade measures are comparatively easy to quantify. This applies on similar terms to other areas such as financial market law, where harm caused to the financial system by the various breaches of banking regulations invites quantitative approaches as well as the proportionate level of pecuniary sanctions applied for such breaches.¹⁴⁷ Moreover, the study of human rights may benefit from the above approach of empirical classification of human rights by allowing a more differentiated encroachment analysis,¹⁴⁸ and investment and arbitration law applies proportionality when discussing damages and the customary international law defense of necessity¹⁴⁹—there remain various fields of international law on which to explore the potential contribution of empirical analysis.

147. Rodopoulos, *supra* note 130, at 207.

148. For an empirical examination of awards made regarding non-pecuniary damage under ECHR Article 41, see Szilvia Altwicker-Hámori, Tilmann Altwicker & Anne Peters, *Measuring Violations of Human Rights: An Empirical Analysis of Awards in Respect of Non-Pecuniary Damage under the European Convention on Human Rights*, 76 HEIDELBERG J. INT'L. L. 1–51 (2016).

149. GEBHARD BÜCHELER, PROPORTIONALITY IN INVESTOR-STATE ARBITRATION 253–300 (2015); see generally Irmgard Marboe, *Compensation and Damages in International Law: The Limits of “Fair Market Value”*, 7 J. WORLD INV. & TRADE 723 (2006).

APPENDIX

Table A1: Human Rights Categories, Dimensions, and Important International Agreements

Basic Human Rights

Dimensions: Disappearances, Extrajudicial Killings, Political Imprisonment, Torture.

Important International Agreements: Universal Declaration of Human Rights, International Covenant on Civil and Political Rights, UN Convention Against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment and its Optional Protocol, UN Convention for the Protection of All Persons from Enforced Disappearance, UN Standard Minimum Rules for the Treatment of Prisoners, UN Standard Minimum Rules for the Administration of Juvenile Justice, UN Rules for the Protection of Juveniles Deprived of their Liberty, UN Standard Minimum Rules for Non-Custodial Measures.

Economic Rights

Dimensions: Legal Structure and Property Rights, Regulation, Freedom to Trade Internationally.

Important International Agreements: Universal Declaration on Human Rights, International Covenant on Economic, Social and Cultural Rights, Regional agreements (e.g., African Charter on Human and Peoples' Rights, European Social Charter, European Convention on Human Rights).

Women's Rights

Dimensions: Women's Economic Rights, Women's Political Rights, Women's Social Rights.

Important International Agreements: Universal Declaration of Human Rights, International Covenant on Economic, Social, and Cultural Rights, International Covenant on Civil and Political Rights, Convention on the Elimination of All Forms of Discrimination Against Women, Declaration on the Elimination of Violence Against Women, UN Rules for the Treatment of Women Prisoners and Non-Custodial Measures for Women Offenders ('the Bangkok Rules').

Political Rights and Civil Liberties

Dimensions: Freedom of Assembly, Freedom of Foreign Movement, Freedom of Domestic Movement, Freedom of Speech, Electoral Self-Determination, Freedom of Religion, Political Rights, Civil Liberties.

Important International Agreements: Universal Declaration of Human Rights, International Covenant on Civil and Political Rights, Regional agreements (e.g., European Convention on Human Rights, American Convention on Human Rights, African Charter on Human and People's Rights).

Table A2: List of Sample Countries

Albania, Algeria, Argentina, Australia, Austria, Bahrain, Bangladesh, Belgium, Benin, Bolivia, Botswana, Brazil, Bulgaria, Burundi, Cameroon, Canada, Central African Republic, Chad, Chile, China, Colombia, Congo, Costa Rica, Croatia, Cyprus, Democratic Republic Congo, Denmark, Dominican Republic, Ecuador, Egypt, El Salvador, Estonia, Fiji, Finland, France, Gabon, Germany, Ghana, Greece, Guatemala, Guinea-Bissau, Guyana, Haiti, Honduras, Hungary, India, Indonesia, Iran, Ireland, Israel, Italy, Jamaica, Japan, Jordan, Kenya, Kuwait, Latvia, Lithuania, Luxembourg, Madagascar, Malawi, Malaysia, Mali, Mauritius, Mexico, Morocco, Myanmar, Namibia, Nepal, Netherlands, New Zealand, Nicaragua, Niger, Nigeria, Norway, Oman, Pakistan, Panama, Papua New Guinea, Paraguay, Peru, Philippines, Poland, Portugal, Romania, Russia, Senegal, Sierra Leone, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sri Lanka, Sweden, Switzerland, Syria, Thailand, Togo, Trinidad and Tobago, Tunisia, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, Uruguay, Venezuela, Zambia, Zimbabwe.

Table A3: Estimates of the Selection Model

	Coefficients		Marginal Effects	
Log(Geographical Distance to U.S.)	-0.190*	(0.083)	-0.018*	(0.008)
Log(Genetic Distance to U.S.)	-0.262**	(0.079)	-0.025**	(0.007)
Log(Voting Distance to U.S.)	-0.111	(0.112)	-0.011	(0.011)
Lag-Basic Human Rights	-0.586**	(0.076)	-0.056**	(0.007)
Lag-Economic Rights	-0.299**	(0.086)	-0.029**	(0.008)
Lag-Women's Rights	-0.074	(0.076)	-0.007	(0.007)
Lag-Political Rights	-0.815**	(0.099)	-0.078**	(0.009)
Lag-Log(Real GDP/Capita)	-0.090	(0.077)	-0.009	(0.007)
Lag-Real GDP/Capita Growth	-0.009	(0.009)	-0.001	(0.001)
Lag-Log(Population)	-0.117*	(0.048)	-0.011*	(0.005)
Lag-Openness	-0.005*	(0.002)	-0.000*	(0.000)
Lag-Trade with the U.S.	0.005	(0.007)	0.000	(0.001)
Lag-Log(Economic Aid/Capita)	0.128*	(0.064)	0.012*	(0.006)
Lag-Log(Military Aid/Capita)	-0.308**	(0.075)	-0.029**	(0.007)
Lag-Log(FDI/Capita)	0.040	(0.037)	0.004	(0.003)
Polity2	0.009	(0.013)	0.001	(0.001)
Minor Conflict	-0.212	(0.128)	-0.020	(0.012)
Major Conflict	-0.849**	(0.211)	-0.081**	(0.020)
Reagan	Ref.		Ref.	
Bush Sr.	0.583**	(0.182)	0.064**	(0.019)
Clinton	0.642**	(0.199)	0.072**	(0.020)
Bush Jr.	-0.275	(0.208)	-0.021	(0.017)
Obama	-0.537*	(0.242)	-0.037*	(0.017)
Constant	0.485	(1.171)		
Observations		2,594		
Pseudo R-squared		0.44		
Exclusion Test Instruments		$\chi^2(3) = 19.36**$		

Note: The table shows coefficients and average marginal effects of the selection model. ** and * indicate significance at the one and five percent level, respectively. The corresponding F-test exclusion statistic when estimating a linear probability model for the selection stage is $F(3,2571) = 13.10**$, which exceeds the threshold for non-weak instruments in 2SLS estimations.