

Economic Sanctions and Human Rights:
Quantifying the Legal Proportionality Principle

Jerg Gutmann

Matthias Neuenkirch

Florian Neumeier

Armin Steinbach



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Jerg Gutmann*, Matthias Neuenkirch†, Florian Neumeier‡ and Armin Steinbach§

Abstract

The proportionality principle, as the cardinal principle of international law, includes a necessity and a proportionality test, both of which rest on empirical premises. The necessity test involves an assessment of whether a legal sanction is well-suited to achieve its objective. The proportionality test questions the causal link between the sanction and the human rights situation in the country against which the sanction is aimed. This study analyzes the empirical basis of the proportionality principle by examining the consequences of economic sanctions for the target country's human rights situation. We use endogenous treatment-regression models to test the empirical basis of the proportionality principle by estimating the causal average treatment effect of US economic sanctions on different types of human rights within a uniform empirical framework. We find that economic sanctions do not pass the legal necessity test in cases where the purpose of the sanctions is to improve the human rights situation. On the contrary, we find that such sanctions actually lead to a deterioration of the human rights situation. Moreover, our finding that the sanctions have no effect on basic, economic, and emancipatory human rights calls into question the dominant view that economic sanctions are disproportionate. On a general note, our study underscores the empirical contingencies of a core legal principle under international and national law.

*University of Hamburg, jerg.gutmann@uni-hamburg.de.

†University of Trier, neuenkirch@uni-trier.de.

‡ifo Institute Munich, neumeier@ifo.de.

§European University Institute (Florence), armin.steinbach@eui.eu.

1 Introduction

Economic sanctions theory claims that economic pressure on civilians translates into pressure on the government for policy change (Hafner-Burton 2014). However, a widely held criticism of this claim is that economic sanctions frequently fail to achieve desired policy changes, while still harming the civilian population (de Waart 2015; Peksen 2011). In legal scholarship, there are various strands of literature touching upon the subject of economic sanctions. One strand focuses on the lawfulness of economic sanctions, adopted either by the United Nations (UN) (Reinisch 2001; O’Connell 2002, 64ff.; Davidsson 2003; Happold 2016; Kondoch 2001, 281), the European Union (EU) (Orakhelashvili 2015) or the United States (US) (Hernández-Truyol 2009; Baek 2008). Those contributions deal with issues such as the legal basis for economic sanctions under the UN framework of collective security (O’Connell 2002, 70ff.; Davidsson 2003), or under the law governing countermeasures as part of state responsibility (Kern 2009, 60). Another strand of legal literature deals with the adverse effects of economic sanctions on civilians. These contributions question the legality of economic sanctions given the observation that in many cases the continuation of economic sanctions would have led to a humanitarian disaster (O’Connell 2002, 69; Fausey 1994; Cortright/Lopez 1999). In essence, the illegality claim typically rests on two grounds: the violation of human rights (Reinisch 2001, 851ff.; Marossi/Bassett 2015) and the non-compliance with the principle of proportionality (Reisman/Stevick 1998, 126).

The latter strand of legal literature has been echoed by contributions in political science and economic literature 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 (de Waart 2015; Pape 1997; Peksen 2011; Cortright/Lopez, 2000; Andreas 2005). Some empirical studies suggest that sanctions may lead to discrimination against marginalized groups in society (Peksen 2016a) and wide-spread infringements of human rights (Peksen/Drury 2009; Escriba-Folch 2012). Other studies even go so far as to compare the effects of sanctions on human rights to those resulting from military interventions (Allen/Lektzian 2013).

This paper contributes to the literature in an interdisciplinary manner by incorporating a quantitative analysis of the effect of economic sanctions into the legality judgment. The goal is to verify the empirical premise underlying the judicial assessment of economic sanctions. More specifically, the proportionality principle – the “cardinal principle” of international law (International Court of Justice 1996, 257, para. 78) – relies on assumptions about empirical regularities that the legal discipline implicitly draws as a basis for the normative judgement. We aim at highlighting the dependency of the proportionality judgment on empirical insights gained about the relationship between economic sanctions and human rights. On a more general note, this paper seeks to refine our understanding of the interaction of normative and empirical aspects when applying the cardinal principle of international (and national) law. The empirical assumptions linked with the proportionality principle materialize on two

levels. First, the issue of effectiveness is associated with the necessity test derived from the proportionality principle. The necessity test involves an assessment of 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 on the achievement of their objectives. Our analysis addresses the empirical and normative interaction in the necessity test by studying economic sanctions that are explicitly aimed at improving the human rights situation in the targeted country and, on that basis, the effectiveness of these sanctions in improving human rights is assessed. Methodologically, our approach offers an improvement compared to previous studies (Carneiro/Apolinário 2016; Drury/Li 2006; Drury/Peksen 2014; Escribà-Folch 2012; Gutmann et al 2016; Peksen 2009; Peksen 2016a; Peksen 2016b; Peksen and Drury 2010; Pond 2017; Soest and Wahman 2015a; Wood 2008) to the extent that it connects the effectiveness analysis to the specific policy goals driving the sanctions.

Second, we extend the analysis by Gutmann et al (2016) and offer novel empirical insights for conducting the proportionality test by examining the causality claim between sanctions and the human rights situation. Both legal and political science literature typically presume the existence of a causal relationship between sanctions and human rights deteriorations. Empirically, the question is whether the human rights situation is worsened as a consequence of the imposition of the sanction. The literature that has tried to confirm this, however, suffers from several drawbacks hindering such a causality assessment, particularly by ignoring the endogeneity of the imposition of sanctions to the human rights situation. In a nutshell, a careful empirical analysis of the human rights consequences of economic sanctions has to disentangle the *treatment effect*, that is, the consequences of economic sanctions themselves, from the *selection effect*, that is, the reasons for why sanctions have been imposed in the first place. We aim at addressing this endogeneity issue of measuring human rights consequences, and the legal question then becomes how the proportionality judgment can be informed by accounting for endogeneity. We find that once the endogeneity of treatment assignment is taken into account, the adverse human rights consequences of sanctions expressed in large parts of the literature are no longer unambiguously supported by the data. Our analysis focuses on the US, since we are able to credibly address the endogeneity problem specifically for US sanctions. However, as an extension, we distinguish sanctions where the US has been joined by other nations or international organizations.

The results of our empirical analysis inform the legal interpretation on three levels. First, because we find no evidence that sanctions actually lead to human rights improvements, economic sanctions do not pass the necessity test in those cases in which sanctions aim at an improvement of human rights in the target country. On the contrary, we find that sanctions which aim specifically at improving human rights protection in the target country lead to a deterioration of said rights, even when the endogeneity of the imposition of sanctions is accounted for. Second, because economic sanctions can have very different effects on different categories of human rights, the proportionality analysis has to include an assessment of the

impact of sanctions on different categories of human rights (basic, economic, emancipatory, and political) rather than confounding them in one overall effect. This finding calls for a refinement of the legal proportionality analysis. Third, accounting for causality for the purpose of assessing proportionality reveals a differential effect of sanctions on human rights. More specifically, disproportionality cannot be found for the effect of sanctions on basic, economic, and emancipatory human rights, unlike for their effect on political and civil rights. This finding calls into question the dominant narrative of disproportionate economic sanctions. Lastly, this contribution highlights the dependency of the proportionality principle on empirical insights, rather than assumptions, thereby suggesting that the application of such core legal principles should make use of the research methods offered by other disciplines to gain such insights.

The paper is structured as follows. Section 2 introduces the legal background, that is, the necessity and proportionality tests. Section 3 presents the empirical analysis and its results. Section 4 re-visits the legal analysis in light of the empirical results. Section 5 concludes.

2 Legal analysis – Necessity test and proportionality test as legality benchmarks

There is little doubt that economic sanctions may have a detrimental effect on human rights. There are numerous anecdotes illustrating the harmful effects of economic sanctions on civilians (Happold 2016, 88). Because there are multiple dimensions of human rights, violations can materialize in different forms. In line with international human rights agreements, we distinguish four human rights categories: basic human rights (e.g. political imprisonment, torture), economic rights (e.g. property rights, freedom to trade), emancipatory rights (e.g. women’s economic and political rights) and political rights and civil liberties (e.g. freedom of assembly and speech). For example, the right to life is threatened by execution, disappearance or torture. All of these human rights have been addressed and protected by international agreements, both on the global and regional level (see Table A1 in the Appendix), and states are required to take positive measures to protect the recognized rights (Reinisch 2001, 862).

Although the potential of sanctions for an adverse effect on human rights does not seem controversial on a theoretical level, the legality of specific economic sanctions still depends on two questions. First, the legal benchmark against which the lawfulness of economic sanctions can be assessed must be clarified – this is an exercise of legal interpretation as it concerns determining the applicable substantial law standard (Marossi/Bassett 2015). Second (and more relevant for the purpose of this analysis), the degree to which quantitative analysis can inform the legal judgment depends on the extent to which the legal assessment is contingent on a precise understanding of the empirical facts. This particularly relates to the humanitarian impact of sanctions and the causality between sanctions and changes

in the human rights situation. To that end, the legal standard must be examined as to the extent to which it incorporates empirical contingencies and how they interact with the normative analysis.

The applicable legal standard for states to impose economic sanctions does not rest solely in the framework of the UN Chapter VII. States enjoy freedom under the rules of state responsibility in customary international law to impose unilateral sanctions (Kern 2009, 57). However, this freedom granted under international law does not release the sanctioning state from legal restrictions, as the implementation of sanctions is bound by fundamental norms of international humanitarian law and international law of human rights (Reisman/Stevisick 1998, 86-141). Some controversies surrounding the direct effect of human rights notwithstanding (O'Connell 2002, 63-79), it is widely acknowledged that at least necessity, proportionality, and discrimination standards apply to any party imposing sanctions. In the particular case when sanctions are associated with collateral damages occurring to non-dispute parties, the international humanitarian law principles of necessity and proportionality constitute the legal yardsticks for determining the extent of permissible collateral damage (Owen 2013, 117).

Thus, irrespective of the applicable substantive law (international humanitarian law or countermeasure law), the principles of necessity and proportionality determine the legality of economic sanctions on the basis of social goals, costs, and alternative consequences (Reisman/Stevisick 1998, 129). For the purpose of this analysis both tests – necessity and proportionality – invite empirical verification.

2.1 The necessity test

The principle of necessity requires that the imposing state limits itself to those measures that can reasonably be expected to achieve its objective (Owen 2013, 118; Geiss 2005, 175). Necessity thus involves a weighing and balancing of the sanction's measure in question and whether it is likely to achieve the sanction's objective (e.g., changing the target country's policies). The necessity test does not give unconditional discretion to the state as to the choice of the measure it considers necessary to attain the objective. Rather, the measure concerned should be subject to an empirical assessment regarding the prospective effect on achieving the objective (Kern 2009, 65).

Therefore, there should be an initial comparative test, assessing the proposed measure regarding its effects in comparison to all other alternatives (Reisman/Stevisick 1998, 130; Owen 2013, 118). That is, economic sanctions pass the necessity test only if they plausibly generate economic impact on the target country's economy, which in turn could have some effect on political groups that could induce a policy change by the regime (Kern 2009, 65). This effect of sanctions, however, may be questionable in many cases. For example, sanctions imposed on the Haitian government benefitted some wealthy individuals in Haiti, while large parts of society had to suffer from hunger as a consequence of the sanctions

(Tsagourias/White 2013, 231). In such cases, the effect of sanctions is, at best, unclear. Consequently, in cases where an initial evaluation suggests that sanctions are likely to be effective in an economic and political sense, the sending country should still have in place a set of contingency plans to abandon sanctions when they are shown to lack proportionality, or to be ineffective in meeting their objectives (Kern 2009, 65).

2.2 The proportionality test

The proportionality test prescribes a limit on the damage permitted under the necessity inquiry (Owen 2013, 118). It restricts the magnitude of damage that may be found by the necessity test. Even if necessary, a sanction may not exceed the bounds of proportionality (Reisman/Stevick 1998, 131). The central function of the proportionality principle is to keep countermeasures from spiraling out of control (Franck 2008, 763).

The International Court of Justice (ICJ) has specified the somewhat construed term of proportionality in relation to the use of armed force, which can also inform judgements in the context of the collateral impact of economic sanctions on civilians. The ICJ interprets proportionality to prohibit the infliction of unnecessary suffering on combatants, that is, to cause “a harm greater than that unavoidable to achieve legitimate military objectives” (ICJ 1996, 257, para. 78). This also implies “never [to] use weapons that are incapable of distinguishing between civilian and military targets” (ibid.). While jurisprudence has not offered a precise “exchange rate” for weighing measure and collateral damage, it still generally imposes limitations on the implementation of sanctions in order to minimize the losses to those not responsible for the initial unlawful act. These restrictions are further manifested in the concept of indiscriminate attacks codified in Article 51(5)(b) of Additional Protocol I, according to which an attack is indiscriminate and hence prohibited if it can be expected to cause incidental loss of civilian life, injury to civilians, or damage to civilians.

While the weighing of interests and rights concerned is a genuine normative and legal exercise, there is an empirical dimension to assessing proportionality of the sanction to the effect – this is so because the amount of permissible collateral damage can only be determined in light of the actual degree and durability of the injury posed to the public (Owen 2013, 118). The proportionality assessment rests on empirical parameters, because it requires a sanctioning state to assess the prospective economic, social, and political effect of the sanction. Since the referential point of evaluation for proportionality is the immediate or prospective consequences of the act that triggered the contingency (Kern 2009, 64; Reisman/Stevick 1998, 131), the legal proportionality judgment depends on investigating the actual effects and their relationship with the sanctions imposed.

Against this background, the legal benchmark applicable under public international law to judge the lawfulness of economic sanctions rests on several empirical premises. First, the necessity test invites an effectiveness analysis – the goal of the imposition of sanctions must be compared to their actual impact, that is, whether the goal (e.g. improvement

of the human rights situation) can be achieved by virtue of the envisaged means. Some aspects of the legal necessity (e.g. the impact of sanctions on the compliance of the initial wrongdoer) have been addressed in the political science literature. Studies show somewhat ambiguous results, because, on the one hand, sanctions can entail an improvement in human rights in cases where sanctions increase pressure on the regime and thus undermine the regime's resources (Martin 1992; Blanchard/Ripsman, 1999; Hovi et al 2005). On the other hand, a number of studies find adverse effects of sanctions leading to a deterioration of the human rights situation and increased government repression (de Waart 2015; Peksen 2011; Hufbauer/Oegg 2000, 11; Pape 1997; Weiss et al 1997; Cortright/Lopez 2000; Li/Drury 2004; Andreas 2005). Thus, while a consensus regarding the impact of sanctions on human rights is lacking, the legal necessity test may contribute to this literature by offering a more sophisticated approach. Under the necessity test, a legitimate goal pursued by the sanctioning party is evaluated against the prospective effects. The necessity test thus limits the analysis to those cases in which the sanctioning party explicitly seeks to improve the human rights situation and precludes sanctions aimed at other goals (e.g. suppression of dictators or ending wars). Hence, the assessment requires, in a first step, the identification of sanctions that are explicitly aimed at improving the human rights situation and, secondly, to study the effect of the measure towards this goal. By adapting the approach typically chosen in the political science and economics literature to the peculiarities of the legal necessity test, we may gain an enriched analytical perspective.

Second, and in relation to the proportionality test, it is essential to evaluate whether economic sanctions actually lead to adverse effects on the human rights situation, as is often presumed in the legal literature to justify concerns with respect to proportionality. More specifically, causality in the relationship between sanctions and human rights has to be determined. There are two ways to structure the empirical part of the proportionality analysis. One mirrors the general approach in the legal literature, according to which proportionality is determined by considering all dimensions of human rights (basic, economic, emancipatory, and political) as one uniform body of human rights. Legal studies typically do not differentiate in their analysis the distinct effects of sanctions on various dimensions of human rights. Another more sophisticated approach allows for differentiation between the kinds of human rights concerned in order to detect potentially ambiguous effects on human rights. Hence, the contribution of an empirical assessment of proportionality should proceed in two directions: To study the causal impact of sanctions on human rights as one uniform category and, alternatively, to distinguish between types of human rights in order to gain a more differentiated picture of the (adverse or positive) impact of sanctions on specific human rights dimensions.

3 Empirical assessment

3.1 Data on human rights and economic sanctions

In order to demonstrate how the empirical premises of the proportionality principle can be tested, we build on the analysis by Gutmann et al (2016) who study the human rights consequences of economic sanctions imposed by the US. 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 dependent variables in our empirical analysis capture the human rights consequences of economic sanctions in terms of the overall human rights situation and four different human rights dimensions (basic, economic, emancipatory, and political rights). Indicators reflecting these dimensions are taken from Gutmann and Voigt (2015), who apply principal component analysis to 19 well-established human rights indicators covering 121 countries over the period 1981–2011. In our analysis, we standardize the five indicators such that each of them has a mean of 0 and a standard deviation of 1 in order to facilitate the interpretation of our coefficient estimates. Higher values indicate a better protection of human rights. Our main explanatory variable, a sanction indicator, takes the value 1 if country i is subject to US economic sanctions in year t , and 0 otherwise. We rely on a unique dataset by Neuenkirch and Neumeier (2015) covering all US sanction episodes between 1976 and 2012. After combining the data on economic sanctions with the smaller human rights dataset, 235 country-year observations with US sanctions in place remain. The list of countries in our sample can be found in Table A2 in the Appendix. In total, 34 out of these 111 countries were subject to US sanctions.

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**
Emancipatory Rights	0.085	-0.850	0.935**
Political Rights	0.117	-1.178	1.295**
Observations	2,359	235	

Notes: 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 1 and 5 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?

3.2 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 (Hufbauer et al, 2009): (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 average 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 simple two-way fixed effects panel model:

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

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 a global non-linear time trend, as well as time-invariant unobserved heterogeneity in human rights protection between countries. 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 US (exports to plus imports from the US divided by the country’s total exports plus imports), economic and military aid per capita received from the US (both in logs), and foreign direct investment per capita from the US (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. Indeed, the indicator for economic sanctions might be systematically related to unobservables – e.g., the economic, political, and social environment in targeted countries beyond the set of covariates employed in the regression

analysis – leading to biased estimates. To account for this potential endogeneity problem and to identify the causal influence of US economic sanctions on the target states’ respect for human rights, we employ an endogenous treatment model. Endogenous treatment models allow identification of the causal treatment effect when selection into treatment is based on unobservable factors 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 least squares model in Equation (1):

$$y_{it} = \tilde{\alpha}_i + x'_{it}\tilde{\beta} + \tilde{\delta}sanctions_{it} + \tilde{\lambda}_t + \tilde{\varepsilon}_{it} \quad (2)$$

All variables are defined as in the OLS case. The second part, the *selection model*, is a probit model explaining the selection into treatment:

$$d_{it}^* = z'_{it} + v_{it} \quad (3)$$

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

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

and 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). Assume that the vector of error terms $(\tilde{\varepsilon}_{it}, v_{it})$ 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. For identification, the variance of v 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 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 (positive) value of ρ implies that unobservables that negatively affect a country’s human rights situation tend to concur with unobservables that increase (decrease) the likelihood of being subject to US economic sanctions. As a consequence, the standard OLS estimates would be biased.

Estimating the treatment effect presupposes the identification of ρ 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.

3.3 Treatment instruments

Following Gutmann et al (2016), we employ three different treatment instruments in our analysis. 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. (Bell et al 2017). There are several reasons to believe that countries that are close to the US are, *ceteris paribus*, more likely to become targets of US economic sanctions. First, internal conflict in a country that is close to the US may represent a greater threat to the US itself. Moreover, human rights violations that cause safety-seeking refugee flows are more threatening to US interests when the country of origin is close to the US (Nielsen 2013). Second, the closer a country is to the US, the greater the awareness of its political and social situation among the general public in the US, thus increasing the pressure on US politicians to intervene (Nielsen 2013; Peksen et al 2014). Finally, sanctions may be considered more effective if the prospective target nation is close (Neuenkirch and Neumeier 2015).

Our second treatment instrument is an indicator of genetic distance by Spolaore and Wacziarg (2009). Underlying this instrument is the same logic used for the geographic distance indicator. Giuliano et al (2014) 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 across populations, mostly in the Neolithic Period. 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 genetic distance to the US are less likely to be targeted by US sanctions.

Using data taken from Bailey et al (2017), our third treatment instrument measures the alignment of a country's votes in the United Nations General Assembly with US votes in the UNGA. Arguably, a country that tends to vote in line with the US (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 US sanctions (Dreher and Jensen 2013; Nielsen 2013; Soest and Wahman 2015b).

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 US President-specific and time-specific influences, such as differences in foreign policy positions between US 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 US President-fixed effects.

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 overidentifying 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.

3.4 Empirical results

The OLS estimates from the two-way fixed effects model are presented in Table 2. These results suggest that US economic sanctions have an adverse effect on the target state’s respect for human rights in general and basic human rights as well as political rights and civil liberties in particular. This finding is well in line with the evidence provided by Peksen (2009) and Wood (2008). Quantitatively, the effects 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 do not find a significant association between economic sanctions and the level of economic rights or emancipatory rights.

Table 2: OLS Estimates

	Overall	Basic	Economic	Emancipatory	Political
(1) US Sanctions	-0.081**	-0.099*	0.000	-0.048	-0.117**
	(0.021)	(0.040)	(0.016)	(0.042)	(0.026)

Notes: Table shows effects of US 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 3.2, as well as country-fixed effects and year-fixed effects. ** and * indicate significance at the 1 and 5 percent level, respectively.

As mentioned before, 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 not only look at the effects of sanctions in general (row 1), but also on specific subgroups of sanctions. We distinguish between sanction episodes imposed because of human rights violations (113 observations; row 2) and those imposed for other reasons (122 observations; row 3), as well as between unilateral sanctions imposed only by the US (133 observations; row 4) and multilateral sanctions where the US was joined by other nations or international organizations (102 observations; row 5).

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 (making the human rights situation worse) is 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) as well as due to multilateral sanctions where the US was joined by other countries or international organizations. In contrast, we find a strong and significantly positive influence of US economic sanctions on the target state’s respect for emancipatory rights. The positive effect on emancipatory rights is particularly driven by US non-human rights sanctions (row 3) and unilateral US sanctions (row 4) and has been discussed extensively in Gutmann et al (2016).

Table 3: Endogenous Treatment Estimates

	Overall	Basic	Economic	Emancipatory	Political
(1) US Sanctions	-0.040 (0.039)	-0.064 (0.056)	-0.015 (0.024)	0.285** (0.093)	-0.094** (0.035)
(2) US HR Sanctions	-0.049 (0.044)	-0.198** (0.066)	0.003 (0.027)	0.106 (0.121)	-0.095* (0.042)
(3) US Non-HR Sanctions	0.008 (0.055)	0.115 (0.076)	-0.028 (0.036)	0.456** (0.082)	-0.119* (0.047)
(4) Unilateral US Sanctions	-0.019 (0.046)	-0.096 (0.067)	-0.035 (0.031)	0.358** (0.084)	-0.063 (0.043)
(5) Multilateral US Sanctions	-0.071 (0.052)	-0.043 (0.073)	0.001 (0.030)	-0.179 (0.140)	-0.116** (0.045)

Notes: Table shows effects of US 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 3.2, as well as country-fixed effects and year-fixed effects. ** and * indicate significance at the 1 and 5 percent level, respectively. The results of the selection stage can be found in Table A3 in the Appendix.

4 Re-visited legal analysis incorporating the empirical results

The proportionality judgment on economic sanctions rests on empirical premises connected to both the necessity test and the proportionality test. Our empirical results offer insights that are relevant to the legal assessment in several regards. First, on the level of the ne-

cessity test, the empirical results feed into the assessment of whether economic sanctions can reasonably be expected to achieve their objective. In fact, economic sanctions can be imposed in pursuit of different objectives, which requires an assessment of the effectiveness of sanctions based on their contribution to achieving their specific objective. In this regard, the empirical analysis offers a differentiated assessment for those economic sanctions explicitly aiming at improving the human rights situation (Table 3, row 2). We find that those sanctions do not produce improvements in any dimension of human rights and that a strong deterioration of the protection of basic rights occurs. The legal implication of this result is the unlawfulness of the sanction, as economic sanctions not passing the necessity test are to be considered disproportionate and thus illegal. While our results cannot generally rule out the necessity of future economic sanctions indenting 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.

Second, on the level of the proportionality test the results inform the legal analysis by allowing us to determine the effect of sanctions on human rights and thus to ascertain the actual degree and durability of the injury posed to the public. The empirical results reveal significant ambiguity in the effects on human rights, which speaks against treating human rights as a single homogenous category. Indeed, effect heterogeneity is 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 (Table 3, columns “Basic, Economic, Emancipatory, Political”). For the legal analysis, this ambiguity offers input for the “weighing and balancing” exercise that is genuinely associated with the proportionality test (Franck 2008). That is, the divergent effects on different human rights feed into an overall proportionality assessment of the imposition of economic sanctions. For the purpose of further refining the overall proportionality test, recourse can be taken to criteria such as the gravity, duration, number of victims concerned, irreversibility of the injury, etc. However, these parameters would require additional information about the actual human rights situation.

Third, the proportionality analysis must be concerned about endogeneity and take the determination of the causal effect of economic sanctions seriously. In particular, a simple “before-after-comparison” of human rights is not sufficient for a legal analysis. More specifically, reliance on descriptive statistics as shown in Table 1, which taken by itself would suggest a dramatic deterioration of human rights due to economic sanctions, would render the legal analysis empirically ill-founded. However, accounting for endogeneity casts doubt on the prevailing view of the disproportionality of economic sanctions. In fact, we find no worsening of basic, economic, and emancipatory human rights, while sanctions indeed have an adverse effect on political rights. Without prejudice to the individual case, this indicates that economic sanctions typically cannot be claimed to lack proportionality.

Fourth, the discussion above has implications for the legal assessment of necessity and proportionality in two different directions. As demonstrated, the necessity test is likely to

fail in cases where sanctions primarily serve to force improvements in human rights. This, as such, suffices to render these sanctions unlawful. In contrast, our empirical findings raise less legality concerns with respect to the proportionality test of such measures, because we do not find a consistent pattern of causality between sanctions and human rights deterioration. The implication of these findings must be assessed on a case-by-case basis. Yet, if sanctions cannot be considered necessary, the proportionality test will not take effect, as its application presupposes the necessity of the measure. For the legality judgment, the necessity test is more likely to indicate the unlawfulness of sanctions, while proportionality is less likely to pose insurmountable hurdles once necessity is affirmed.

5 Conclusions

Detrimental effects resulting from economic sanctions that harm the civilian population are a widely lamented phenomenon in the legal and social science literature. Both empirical and legal analyses tend to claim a causal effect of the imposition of economic sanctions on the worsening of human rights in targeted countries. Legally, this translates into a finding of disproportionality, rendering economic sanctions unlawful under international law. We have challenged this view through integrating an empirical analysis into the legal proportionality assessment. Our interdisciplinary contribution highlights how decisively the proportionality judgment rests on empirical premises and our analysis further underscores the extent to which this empirical insight can inform the legal analysis. Hence, this paper refines our understanding of the interaction of normative and empirical aspects. We infer the general claim that the proportionality analysis, as the cardinal principle of international (and national) law, should be held open for integrating empirical insight. This claim holds on all stages of law-making and in the application of law, where it is governed by the proportionality principle. In other words, a judge assessing the legality of a public measure, or a law-maker drafting a law, are obliged to observe the proportionality principle and should care about its empirical foundation.

Finally, it should be acknowledged that producing and integrating an empirical analysis poses challenges to lawyers when dealing with sanctions. It also defies practical intuition to expect law-makers and judges to develop an empirical analysis employing high (though desirable) methodological standards. However, the above analysis suggests at least a few rules of thumb that could be used by policy-makers and practitioners in conducting a proportionality assessment. First, verification of the objective of the sanctions matters. Since human rights improvements are unlikely to be attained through sanctions (and thus fail to pass the necessity test), it appears more suitable that policy-makers pursue other objectives. Second, the differential effects of sanctions on different dimensions of human rights have to be taken into account. For example, our analysis shows that for US sanctions pursuing non-human rights goals, emancipatory rights are improved while political rights suffer (Table 3, row 3). Knowledge about such patterns of effects can be valuable for policy-makers. Third,

the main hurdle for legality is the necessity rather than the proportionality test, at least where sanctions aim at an improvement in human rights. Hence, the potentially adverse effects sanctions have on human rights tend to be less of a concern, and over-restraint of sanctions is, thus, not warranted on the basis of proportionality.

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Appendix

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

Basic Human Rights (Disappearances, Extrajudicial Killings, Political Imprisonment, Torture): 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 (Legal Structure and Property Rights, Regulation, Freedom to Trade Internationally): 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).

Emancipatory Rights (Women's Economic Rights, Women's Political Rights, Women's Social Rights): 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 (Freedom of Assembly, Freedom of Foreign Movement, Freedom of Domestic Movement, Freedom of Speech, Electoral Self-Determination, Freedom of Religion, Political Rights, Civil Liberties): 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).

Notes: Table shows the four human rights categories considered in this paper alongside the covered dimensions (in parentheses) and important international agreements protecting these.

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 US)	-0.190*	(0.083)	-0.018*	(0.008)
Log(Genetic Distance to US)	-0.262**	(0.079)	-0.025**	(0.007)
Log(Voting Distance to US)	-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 Emancipatory 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 US)	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)
Polity 2	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	2594			
Pseudo R-squared	0.44			
Exclusion Test Instruments	$\chi^2(3) = 19.36^{**}$			

Notes: Table shows coefficients and average marginal effects of the selection model. ** and * indicate significance at the 1 and 5 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.