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The Effects of US Economic Sanctions on Human Rights

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Precision-Guided or Blunt?
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Abstract

We use endogenous treatment-regression models to estimate the causal average treatment effect of US economic sanctions on four types of human rights. In contrast to previous studies, we find no support for adverse effects of sanctions on economic rights, political and civil rights, and basic human rights. With respect to women's rights, our findings even indicate a positive relationship. Emancipatory rights are, on average, strengthened when a country faces sanctions by the US. Our findings are robust when applying various changes to the empirical specification. Most importantly, this study provides strong evidence that the endogeneity of treatment assignment must be modelled when the consequences of sanctions are studied empirically.

Keywords: Democratization, Discrimination, Economic Sanctions, Endogenous Treatment Model, Human Rights, Interventionism, Protectionism, Repression, United States.

JEL: F51, F52, F53, K10, K11, P14, P16, P26.

1. Introduction

A growing body of economic and political science literature deals with the use of economic sanctions as an instrument in international politics to coerce states to comply with the rules set out by international law. A recent example is the implementation of sanctions by the United States and the European Union following the 2014 annexation of Crimea by the Russian Federation. Sanctions are not only employed as a response to infringements of international law, but also to address human rights violations. The United States, for example, imposed sanctions on dozens of Russian officials for their involvement in the 2009 death of an imprisoned Russian lawyer who fought against government corruption. Relying on sanctions instead of alternative means of coercion raises hopes that international military conflicts might be avoided. However, the use of sanctions has been criticized because of the potential damage the sanctions may inflict on an innocent civil population (de Waart 2015; Peksen 2011). Allen and Lektzian (2012) even argue that economic sanctions can have severe public health consequences for the population of a targeted country. Their empirical findings indicate that highly effective sanctions may have adverse health effects that are comparable to those resulting from major military conflicts. Indeed, negatively affecting the target country's population is not only an unfortunate side effect of sanctions, but a central element of the causal mechanism, which ideally results in a compliant reaction by the targeted country's political regime.

Hafner-Burton (2014) stresses the theoretically more ambiguous relationship between sanctions and the protection of human rights. On the one hand, sanctions can motivate concessions to improve human rights if a political regime is starved of the resources it needs to oppress disobedient groups within its population. On the other hand, sanctions may escalate a tense human rights situation if the population is incentivized to dissent and political leaders are deprived of the economic means to compensate them for their loyalty.

The extant empirical evidence tends to support the notion that economic sanctions are associated with a deterioration of human rights. Table A1 in the Appendix surveys 15 papers that empirically evaluate the effect of economic sanctions on the human rights situation and political transition in the target state. The majority of the studies report dispiriting results. The adverse economic shock on a country targeted by sanctions can motivate infringements of not only economic rights and political rights through

confiscation of private property (Peksen 2016b) and political repression (Peksen and Drury 2009; 2010), but infringement of human rights as well (Escribà-Folch 2012; Peksen 2009; Wood 2008). These effects appear to be the same for both broad and targeted sanctions (Carneiro and Apolinário 2015). Moreover, sanctions may amplify discrimination against unprivileged groups in society, especially ethnic minorities (Peksen 2016a). However, there are opposing findings as well. In contrast to Peksen and Drury (2010), Soest and Wahman (2015) do not find any statistically significant relationship between economic sanctions in general and the degree of political repression. On the contrary, they report a positive association between sanctions aimed at promoting democratization and democratic transition. Moreover, Drury and Peksen (2014) provide results that indicate a positive effect of economic sanctions directed at improving a country's human rights situation, as well as women's political and economic rights.

The extant empirical literature not only exhibits contradictory results, but also contains several methodological drawbacks. First, the potential endogeneity of economic sanctions is ignored. In many cases, the imposition of economic sanctions is motivated by the existence of an unfavorable human rights situation, or coincides with political and social transition. Given this reality, taking the endogeneity of sanctions into account is of particular importance. Forty-eight percent (113 out of 235) of the country-year observations in our sample of US imposed sanctions were justified because of the human rights situation in the target country. Second, empirical studies typically rely on single, narrowly defined indicators for a country's human rights situation. This limited perspective neglects the multi-dimensionality of human rights and the interdependence between these dimensions. Finally, the effect of sanctions on different measures of human rights (economic rights, political rights, basic human rights, and emancipatory rights) are tested separately using different empirical methods and specifications, making comparisons across studies very difficult.

This study offers a number of improvements to the literature dealing with the consequences of economic sanctions on human rights. First, we build upon a well-established political economy model to explain the political regime's reaction to economic shocks caused by the imposition of sanctions. Based on this theoretical framework, we derive empirically testable hypotheses linking economic sanctions to four different human rights dimensions; economic rights, political & civil rights, basic

human rights, and emancipatory rights. Second, we evaluate the effect of US economic sanctions on each of these four human rights dimensions within a uniform empirical framework. To do so, we draw on two novel datasets that address human rights protection (Gutmann and Voigt 2015) and US economic sanctions (Neuenkirch and Neumeier 2015; 2016). Third, we take the endogeneity of US economic sanctions into account by using endogenous treatment-regression models. More precisely, we use the potential target country's geographical distance from the US, as well as its voting alignment with the US in the UN General Assembly, as instruments for our sanctions indicator. In addition, we account for potential heterogeneity across sanctioned countries and non-sanctioned countries by allowing the parameters of our empirical model to differ across both groups. This flexibility gives us confidence that our estimates have a causal interpretation. Our key finding is that once the endogeneity of treatment assignment is accounted for, the adverse human rights consequences of sanctions expressed in significant parts of the literature are not supported by the data. Emancipatory rights are, on average, even strengthened when a country faces sanctions imposed by the US.

Understanding the human rights consequences of economic sanctions is of fundamental importance for evaluating sanctions as a policy instrument. As noted by Simonen (2015, p. 192): "The discussion, by the judiciary and by the general public, on human casualties and humanitarian suffering, *in numbers*, is an absolute necessity for the definition of *what is acceptable damage* in the light of various human rights commitments assumed by states."

In the next section, we develop our theoretical arguments and derive a set of hypotheses. Section 3 describes the data set and the methodology used to estimate causal average treatment effects. Section 4 discusses our empirical findings and Section 5 concludes.

2. Theoretical Considerations and Hypotheses

2.1 Economic Sanctions in the Acemoglu and Robinson Framework

We start this section by explaining how economic sanctions can be integrated into a standard political economy model as described by Acemoglu and Robinson (2006, hereafter A&R). Such a model may give clear predictions regarding the direction of the

effect that economic sanctions have on human rights protection in different dimensions. In Section 2.2, we discuss possible consequences of sanctions for human rights beyond those considered in the A&R framework. The most important arguments in the literature are summarized and a set of hypotheses is derived for the empirical analysis.

Here we are particularly interested in the institutional consequences of two economic effects that have been linked to the use of economic sanctions: (1) An increase in poverty and income inequality in the target country (Choi and Luo 2013; Neuenkirch and Neumeier 2016); and (2) an adverse effect on economic growth (Hufbauer et al. 2009; Neuenkirch and Neumeier 2015). These are the two essential economic effects of sanctions that have been established in the empirical literature. Next, we show how these effects translate into the A&R framework.

The political economy models of A&R start by assuming a stylized society that consists of two social groups, rich elites and poor citizens. The elites are the minority with $0 < \delta < ½$ describing their population share. For simplicity it is assumed that all members of a social group have the same income and that the income share of the elites θ (with $0 < \theta < 1$) is higher than that of the citizens, i.e., $\theta > \delta$. An increase in θ signifies an increase in inequality. Here we assume that the political process is best described by A&R's (2006) theory of non-democratic politics. Allen (2008a) has, for example, argued that 80% of all sanctions are directed against non-democracies.[1] Fully democratic countries are hardly ever targeted. As the elites are assumed to be in power, they can set a proportional income tax rate of $0 \leq \tau \leq 1$. The tax revenues are used to finance an equal lump-sum transfer to all members of society. The state serves only this purpose, that is, the redistribution of income between the members of society, which favors the citizens, who pay lower taxes and receive the same transfers. If the elites can choose, their preferred tax rate $\tau^r = 0$ is implemented, whereas the poor would like to implement $\tau^p > 0$.[2]

Although the elites hold all *de jure* political power, the citizens have *de facto* power and influence political decision-making by virtue of their ability to organize a revolution, that is, overthrow and expropriate the elites. A&R (2006, p. 122) formulate a revolution constraint $\theta > \mu$, which specifies the condition under which the citizens prefer revolution over the status quo. It states that the benefits of a revolution outweigh the costs if the

[1] In our sample, 195 out of 235 (78%) country-year observations where sanctions are in place belong to the group of countries that were non-democracies before the imposition of sanctions.

[2] Note that τ^p is not simply 100%, since taxes are distortionary and these distortions increase over-proportionally in the tax rate.

elites do not credibly promise to improve the status quo of the citizens. The parameter μ expresses how costly a revolution would be in terms of the overall portion of a society's resources that would be destroyed in the process. μ depends on the revolution technology at the disposal of the citizens and their capacity to overcome the collective action problem, which is inherent in every revolution (Tullock 1971). If income inequality (θ) rises sharply as a result of economic sanctions, the likelihood increases that the citizens will constitute a threat to the political regime. Analogously, it has been argued that negative income shocks help citizens coordinate resistance against the elites (e.g. A&R 2006, p. 31; Knutsen 2014), thereby reducing μ. Allen (2008b) shows that anti-government activities do increase under economic sanctions. Thus, the economic effects of imposing sanctions increase the conflict between citizens and elites. Marinov (2005) provides empirical evidence that sanctions also destabilize political leaders, although Licht (2015) finds the effect to be more moderate. Obviously, political leaders who take the threats caused by economic sanctions serious are acting appropriately.

In the models of A&R, the elites have three alternatives to deal with the threat of a revolution. They can redistribute resources just in the right amount to buy the loyalty of the citizens, or they can use repression, which may stop the citizens from revolting. However, repression is costly and if it fails, revolution might ensue anyway. These two strategies are the key components of Wintrobe's (2000) political economy model of dictatorship. The choice between them is determined by their relative costliness and their effectiveness in preventing revolution. On average, an increase in inequality and decreasing growth rates due to sanctions will increase both redistribution and the use of repression, although individual countries may well rely primarily on one or the other of these two strategies.

The third alternative the elites may use to deal with the threat of revolution is to democratize. The central difference between democratization and setting the tax rate to τ^p, which is the tax rate that would be preferred by the median voter in democracy, is the fact that democratization constitutes a durable institutional reform. After democratization the majority of the population, that is, the poor, can permanently set the tax rate. However, an increase in tax rates in non-democracy could be reversed quickly if the citizens no longer pose a threat of revolution. In other words, the elites cannot credibly commit to permanent redistributive policies as long as non-democratic institutions persist and the *de facto* political power of citizens is highly transitory. Given

that democratization is an alternative to redistribution and repression, democratization should become more likely if a country is under economic sanctions. This, however, is only one side of the coin. Haggard and Kaufman (1995) stress that economic crises destabilize not only non-democratic, but also democratic regimes. They create a window of opportunity for the elites to overthrow a democratic government at relatively low cost. Likewise, high inequality is conducive to coups by the elites against a democratic regime, as more unequal democracies tend to be more redistributive. In conclusion, the A&R framework does not clearly show if democratic rights will on average be expanded or pushed back by economic sanctions.

2.2 The Effect of Economic Sanctions on Different Types of Human Rights

The preceding section outlined different rational political reactions to economic shocks caused by the imposition of sanctions. Next, we address the question of how these insights matter for the protection of four dimensions of human rights; economic rights, political & civil rights, basic human rights, and emancipatory rights. Beyond the expectations we can derive from the A&R framework, we also discuss complementary arguments from the literature and formulate testable hypotheses based on both.

One important effect of sanctions concerns economic rights. Acemoglu and Robinson (2006) argue that redistribution is the only way to address adverse economic shocks such as a decrease in per capita income and an increase in income inequality. In their model, this is done via proportional taxation and lump-sum transfers to the population. In reality, redistribution is achieved not only by using monetary transfers, but also from government interference in economic rights. This type of interference is discussed in the literature on rent-seeking (Drezner 2011, p. 100; Krueger 1974). Reduced property rights protection and other restrictions on economic liberties can be used to lower the risk of a revolution by appeasing the majority of the general population, or powerful groups within the population. As Peksen (2016b) points out, the ruling elite may not only overtly violate property rights and direct these violations against the political opposition, but they might also tacitly condone predatory actions of their key supporters by ignoring laws that protect private property. Pond (2015) claims that the negative effects of sanctions on economic liberties will persist even after sanctions are lifted, because industries shielded from international competition will lobby to maintain market entry barriers. While market interventions may shield citizens and politically

connected business people from the adverse consequences of sanctions, politicians may use the scarcity created by sanctions to appropriate rents for themselves. Rowe (2001), for example, explains how scarcity exacerbated by economic sanctions led the government of Rhodesia to organize a public distribution cartel for tobacco (see Kaempfer and Lowenberg (1999) for a more general discussion). Regrettably, the sorts of considerations articulated by political economy models are likely to be more significant than the insight that economies targeted by sanctions may need additional protections of economic rights to facilitate market adjustments.

H1: Economic sanctions have a negative effect on the level of economic rights in the target country.

As outlined in Section 2.1, the effect of economic sanctions on political and civil rights is ambiguous. On the one hand, a transfer of *de jure* political power to the citizens might be the *ultima ratio* to stop discontented citizens from revolting. On the other hand, governments targeted by economic sanctions face strong incentives to consolidate non-democratic leadership. Thus, theoretically, either a democratic or a non-democratic transition may occur when sanctions are implemented and it is unclear which of the two effects prevails. Peksen and Drury (2009; 2010) disagree with this explanation derived from the A&R framework. They argue that opposition groups may gain momentum when the government is put under pressure by external actors and that the government will react by limiting political rights to signal its willingness to go against active political dissent. This effect is amplified if the grievances caused by sanctions lead to anti-government violence. Although the argumentation of Peksen and Drury (2009) is somewhat contradictory (opposition groups, for example, are at the same time weakened and better mobilized due to sanctions), it highlights that the theoretical association between sanctions and political rights is evidently inconclusive. Oechslin (2014) introduces a political economy model to explain why sanctions may fail to bring about regime change. Soest and Wahman (2015) argue that sanctions specifically aimed at inducing democratic change, so-called democratic sanctions, may also lead to more extensive political liberties. Taking the above arguments together we arrive at two opposing hypotheses regarding the relationship between sanctions and political rights:

H2a: Economic sanctions have a negative effect on the level of political rights in the target country.

H2b: Economic sanctions have a positive effect on the level of political rights in the target country.

In the A&R framework, a logical reaction of an incumbent regime to an increased revolutionary threat as a result of economic sanctions is the use of repression. Verwimp's (2003) political-economic analysis of the genocide in Rwanda shows how desperately a regime can react to threats resulting from economic hardship. Furthermore, Acemoglu and Robinson (2000) argue that under asymmetric information about the elite's strength, the citizens might interpret economic concessions by the elites as a sign of weakness, which makes the use of repression relatively more attractive. Wood (2008) points out that a regime under economic sanctions may simply lack the necessary resources to placate its citizens and hence fall back on repressive measures. This, however, presupposes that repression is cheaper than buying loyalty. The use of repression as a response to economic sanctions may indeed be cheap, as they are perceived to be an external threat to national unity and could legitimize harsh reactions by the regime (Peksen 2009).

H3a: Economic sanctions lead to more extensive violations of basic human rights in the target country.

Although sanctions may exacerbate human rights violations by instigating repressive measures by the ruling elite, sanctions are frequently employed to put pressure on countries to refrain from these very violations of basic human rights. Hence, target countries face incentives to improve their human rights situation and to end at least the more visible forms of rights violations. Moreover, Peksen (2009) argues that sanctions may weaken the target regime's coercive capacity—by denying them economic and military resources required for maintaining political stability—and thereby reduce the intensity of basic human rights violations. This would imply the following hypothesis, which is diametrically opposed to H3a.

H3b: Economic sanctions lead to less severe violations of basic human rights in the target country.

A limitation of A&R's model (2006) is its emphasis on the rights of the economic elites and of the revolutionary threat posed by a well-organized majority of the population. The question of what leads to (non-)discrimination against powerless minorities is outside the scope of their model (Mukand and Rodrik 2015). The literature on the economics of discrimination suggests that discrimination, for example, in the labor market, is less costly for those who discriminate during economic downturns, as there will be a temporary excess supply of labor (see, e.g., Becker 1971). Drury and Peksen (2014) add the argument that economic grievances caused by sanctions lead to increased violations of women's rights. To make things worse, women are more likely employed in export-oriented industries, which are disproportionately affected by sanctions.

H4a: Economic sanctions have a negative effect on the level of women's rights in the target country.

If, however, economic conditions force non-working women to take up a job and contribute to the household income, the opposite effect regarding the rights of women could arise (the so-called added worker effect), which may lead to pressure against gender discrimination. Neumark and Postlewaite (1998) argue that the entry of some women could incentivize other women to also join the workforce. Alesina et al. (2013) show, in a very different context, that incentivized gender roles can have important consequences for the role of women in society. Doepke et al. (2012) summarize the literature on culture and women's rights as follows: "the ultimate cause of political reform was economic change that altered attitudes toward women" (p. 355).

Geddes and Lueck (2002) offer a very straightforward explanation of the extension of women's rights based on property rights theory. When women's labor market opportunities improve, husbands initially hold all legal power but are unable to control the effort level exerted by women at work. The family income could, thus, be increased by endowing women with economic rights to incentivize them to exert higher effort. Similarly, Bertocchi (2011) explains the extension of women's political rights by their

labor market opportunities and the resulting reduction in the gender wage gap. If, as a consequence, the gap between the tax rates preferred by male and female voters declines, men are more likely to support the extension of women's political rights.

H4b: Economic sanctions have a positive effect on the level of women's rights in the target country.

3. Empirical Methodology and Data

3.1 Human Rights and Sanctions Indicators

As dependent variables, we employ four different human rights indicators. These come from a new dataset that measures human rights protection in four empirically distinguishable dimensions as proposed by Blume and Voigt (2007); basic human rights, economic rights, civil & political rights, and emancipatory & social rights. Blume and Voigt (2007) apply principal component analysis (PCA) to 24 human rights indicators from different data sources covering a cross-section of 137 countries. Their PCA identifies four distinct latent variables representing each of the theoretically predicted categories of human rights. Gutmann and Voigt (2015) replicate the original PCA of Blume and Voigt (2007) using a panel dataset comprising 19 well-established human rights indicators. The indicators are taken from the CIRI dataset, the Fraser Institute, as well as Freedom House.[3] Table 1 shows the varimax rotated factor loadings with Kaiser normalization as in Gutmann and Voigt (2015).

The results of Gutmann and Voigt (2015) are even more clear-cut regarding the empirical distinction of the theoretically prescribed human rights dimensions. The four principal components cover up to 121 countries over the period from 1981 to 2011. The bivariate correlations among the four components are around 0.60. It should be noted that all four indicators reflect the *de facto* human rights situation in a country. This makes sense in light of our research design, as many policies adopted by a regime in reaction to US sanctions do not necessarily require legal changes or, in the case of

[3] The concrete indicators are the following. Cingranelli and Richards (2010); disappearances, political or extrajudicial killings, political imprisonment, torture, freedom of assembly and association, freedom of domestic and foreign travel, freedom of speech, electoral self-determination, freedom of religion, workers' rights, and women's political, economic, and social rights. Freedom House (2014); political rights and civil liberties. Gwartney et al. (2014); freedom in the legal system and property rights, freedom to trade internationally, and freedom from regulation.

repressive policies, are often not even legal. Property rights, for example, could be improved or weakened by rewriting parts of the constitution (however, see Gutmann and Voigt (2013) for the limitations of such an approach), but increased expropriation could just as well be based on existing laws. In our analysis, we standardize the four components so 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.

Table 1: Principal Component Analysis of Human Rights Dimensions

Variable	Comp 1	Comp 2	Comp 3	Comp 4	Unexpl.
Disappearances		0.53			0.40
Extrajudicial Killings		0.56			0.26
Political Imprisonment		0.25			0.40
Torture		0.44			0.35
Freedom of Assembly	0.38				0.27
Freedom of Foreign Movement	0.38				0.31
Freedom of Domestic	0.31				0.56
Freedom of Speech	0.32				0.42
Electoral Self-Determination	0.35				0.26
Freedom of Religion	0.32				0.49
Worker's Rights					0.47
Women's Economic Rights			0.57		0.23
Women's Political Rights			0.42		0.50
Women's Social Rights			0.56		0.21
Legal Structure and Property				0.36	0.23
Regulation				0.63	0.26
Freedom to Trade				0.60	0.20
Political Rights	–0.32				0.18
Civil Liberties	–0.29				0.14

Source: Gutmann and Voigt (2015). Factor loadings are omitted if |loading|<0.25.

Our main explanatory variable, the sanction indicator, takes on the value 1 if a certain 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. This dataset is an extension of the dataset by Hufbauer et al. (2009). After adjusting the sample of Neuenkirch and Neumeier (2015) to the smaller human rights dataset of Gutmann and Voigt (2015), we have 235 country-year observations with US sanctions in place. The countries included in our final dataset as well as the sanction episodes are listed in Table A2 in the Appendix.

In the context of our empirical analysis and following the extant empirical literature, we also estimate separate effects for different types of economic sanctions. First, following Wood (2008), we differentiate between *mild* sanctions, that is, sanctions including retractions of foreign aid, bans on grants, loans, or credits, and restrictions on the sale of specific products or technologies (129 observations), and *moderate* and *severe* sanctions, involving import or export restrictions, bans on US investment, as well as embargoes on all or most economic activity between the United States and the target nation (106 observations). Second, we evaluate the effect of sanctions that impose *low costs* versus those imposing *high costs* on the target state. To this end, we utilize estimates of the sanction-induced decline of the target state's GNP provided by Hufbauer et al. (2009), which is available for 205 sanction country-years. We consider sanctions that lead to a decline in the target state's GNP by less than 1% as *low cost* sanctions (129 observations) and sanctions associated with a decline of 1% of GNP or more as *high cost* sanctions (76 observations). Third, we differentiate between *unilateral* sanctions imposed by only the United States (133 observations) and *multilateral* sanctions where the United States was joined by other nations or international organizations (102 observations). Fourth, we differentiate between sanction episodes imposed because of *human rights violations* (113 observations) and those imposed for *other reasons* (122 observations). Reasons for why sanctions were imposed are provided by Hufbauer et al. (2009). Fifth, we distinguish between sanctions targeted against *democratic* states as measured by a Polity2 score of six or higher before the imposition of sanctions (40 observations) and against *non-democratic* states (195 observations). Finally, we examine the impact US sanctions have over time by creating three subgroups. We distinguish observations where sanctions have been in place for *less than six years* (91 observations), for *six to ten years* (58 observations), and for *eleven or more years* (86 observations), respectively.

3.2 Estimation Strategy

In our empirical analysis, we consider the imposition of US economic sanctions as a treatment. Consequently, observations on countries in years in which sanctions were in effect represent our treatment group, while country-year observations without sanctions in place are the control group. Our goal is to estimate the average treatment effect on the treated (ATT), which is defined as follows:

$$(1)\ ATT = E[y_{1it}|d_{it} = 1] - E[y_{0it}|d_{it} = 1]$$

The first term on the right-hand side of Equation (1) represents the expected outcome in the treatment group after treatment ($d_{it} = 1$), the second term is the counterfactual outcome, that is, the expected outcome subjects in the treatment group would have achieved if treatment had not been assigned ($d_{it} = 0$). The problem is that the counterfactual outcome is not observable and, thus, a suitable substitute is required to compute the ATT. If treatment is assigned randomly, then the average outcome for units not exposed to treatment constitutes a proper substitute, as selection into the treatment group is not related to factors affecting the outcome variable of interest. The imposition of economic sanctions, though, is clearly not random, making the identification of the ATT difficult.

To account for the endogeneity of the treatment, and to evaluate 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 if selection into treatment is based on unobservable factors that also affect the outcome of interest. Identification relies on the availability of at least one variable that is related to treatment assignment, but not directly to the outcome.[4]

Suppose that the outcome for the treatment and control group, respectively, can be modelled by means of the following equations, which we refer to as the outcome model:

$$(2)\ y_{0it} = x'_{it}\beta_0 + u_{0it}$$
$$(3)\ y_{1it} = x'_{it}\beta_1 + u_{1it}$$

where y_1 is the outcome with treatment, y_0 is the outcome without treatment, and x is a vector of covariates that potentially explain the outcome for both the treatment and the control group.

It is important to note that the coefficients of the covariates collected in the vectors β_0 and β_1 are allowed to vary across Equations (2) and (3). Thus, our empirical approach is characterized by a great deal of flexibility as we account for potential heterogeneity across the treatment and control group with regard to the parameters of the outcome

[4] The endogenous treatment model employed here was first introduced by Heckman (1976; 1978). See Cameron and Trivedi (2005) for a thorough discussion.

model. That is, the effect of each covariate on the outcome may vary over the treatment and control group.

To account for the endogeneity of treatment assignment, Equations (2) and (3) are complemented by a binary choice model that explains selection into treatment:

$$(4)\ d^* = z_{it}'\gamma + v_{it}$$

where d^* is a latent variable, which is assumed to be standard normally distributed such that

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

and z is a vector of covariates that affect the likelihood of being selected into treatment.

To see how the endogeneity of treatment assignment affects the outcome of interest, it is helpful to take a look at the relation between the error terms of Equations (2) to (4). Assume that the vector of error terms $(u_{0it}, u_{1it}, v_{it})$ comes from a mean zero trivariate normal distribution and has the following covariance matrix:

$$\sum = \begin{bmatrix} \sigma_0^2 & \sigma_{01} & \sigma_0\rho_0 \\ \sigma_{01} & \sigma_1^2 & \sigma_1\rho_1 \\ \sigma_0\rho_0 & \sigma_1\rho_1 & 1 \end{bmatrix}$$

Endogeneity of treatment occurs when the off-diagonal elements $\sigma_0\rho_0$ and $\sigma_1\rho_1$ are different from zero. In contrast, exogeneity of treatment implies that $\rho_0 = 0$ and $\rho_1 = 0$, i.e., the outcome of interest must not be related to unobservables affecting the likelihood of treatment assignment. ρ_0 measures the correlation between the treatment assignment errors and the outcome errors for the control group, ρ_1 the correlation between the treatment assignment errors and the outcome errors for the treatment group. Hence, these coefficients allow us to assess the importance of the selection effect on the outcome of interest. For example, a treatment group that has a negative (positive) value for ρ_1 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. For identification, the variance of v is restricted to 1.

For the endogenous treatment model, the ATT is given by:

$$(5)\ ATT = x'_{it}(\beta_1 - \beta_0) + (\sigma_0\rho_0 - \sigma_1\rho_1)\frac{\phi(z'_{it}\gamma)}{\Phi(z'_{it}\gamma)}$$

where $\phi(.)$ and $\Phi(.)$ represent the density function and the distribution function, respectively, of the standard normal distribution. Equation (5) illustrates that the size of the treatment effect depends on three factors: (i) the realizations of the covariates, i.e., the vector x; (ii) the heterogeneity of each covariate's effect on the outcome across the treatment and control group, i.e. $(\beta_1 - \beta_0)$; and (iii) the selection effect, denoted by the term $(\sigma_0\rho_0 - \sigma_1\rho_1)\phi(z'_{it}\gamma)/\Phi(z'_{it}\gamma)$. All parameters that need to be identified to compute the ATT can be estimated simultaneously by Maximum Likelihood (see Maddala (1983) for a formal derivation of the likelihood function).

In general, vector z of Equation (4) may overlap with the vector of covariates x employed in the outcome model. However, the ATT requires the identification of $\sigma_0\rho_0$ and $\sigma_1\rho_1$ and, thus, that at least one variable in vector z is not included in vector x. This non-included variable needs to be correlated with likelihood of receiving treatment, but uncorrelated with error terms in the outcome model. We may refer to a variable fulfilling these conditions as a treatment instrument.

The endogenous treatment model employed in our empirical analysis is closely related to the regime-switching regression model as well as the Heckman selection model. Since the outcome equation is regime-dependent, i.e., it varies depending on whether the (endogenously determined) treatment is 'switched' on or off, the model depicted by Equations (2) to (4) is also referred to as an endogenous switching regression model. Further, the endogenous treatment model can be interpreted as a double sample selection problem (Clougherty et al. 2015: 298), and one could alternatively estimate two separate Heckman selection models for the treated and untreated units. The main difference between estimating an endogenous treatment model versus two Heckman selection models is that in the latter approach, the parameter σ_{01}, i.e., the covariance between the error terms for the treated and untreated units, would be implicitly set to

zero. Furthermore, the latter approach is less efficient, as only the subsample of the treated and untreated units, respectively, is used to identify the parameters of interest.

As a benchmark, we also use simple OLS regression to evaluate the influence of US economic sanctions on the targeted governments' respect for human rights. For this purpose, we estimate the following equation:

$$(6)\ y_{it} = x'_{it}\tilde{\beta} + \delta\ sanctions_{it} + \tilde{u}_{it}$$

where the vector of covariates *x* is the same as in Equations (2) and (3). By comparing the findings from simple OLS regressions to those obtained from the endogenous treatment-regression model, we should be able to assess the importance of the endogeneity of the treatment for the results presented in the extant empirical literature.

3.3 Control Variables and Treatment Instruments

In our empirical analysis, the vector of covariates in the treatment model (vector z) includes factors that we expect will affect the likelihood of being targeted by US economic sanctions. According to Hufbauer et al. (2009), US sanctions have been primarily imposed for three reasons: (i) to coerce states (or militant groups within states) to stop threatening or infringing the sovereignty of another state by, for example, engaging in violence against another state or destabilizing its incumbent government; (ii) to foster democratic change in a country, protect democracy, or destabilize an autocratic regime; and (iii) to protect the citizens of a state from political repression and enforce human rights. Consequently, we include lagged realizations of our human rights indicators into vector *z*. We also account for a country's level of democracy. Further, we take into account; (i) interstate armed conflicts, (ii) internal armed conflicts without intervention from other states, and (iii) internationalized internal armed conflicts with intervention from other states. For all three types of conflict we include separate dummy variables for minor conflicts and wars, respectively. Finally, we add US President-fixed effects to control for President-specific and time-specific influences such as differences with respect to the foreign policy stance across tenures of US Presidents (Reagan, Bush Sr., Clinton, Bush Jr., and Obama) and also for changes in the global political

environment (e.g., the fall of the Iron Curtain or the adoption of the Millennium Development Goals).[5]

Vector *x* of the outcome model includes the same covariates just described for vector *z*. Additionally, we consider lagged macroeconomic variables in the outcome model; real GDP per capita in logs, real GDP per capita growth rate, population in logs, trade openness (exports plus imports divided by GDP), trade share with the US (exports to, plus imports from, the US divided by the country's total exports plus imports), and the share of investment to GDP. Finally, we include year-fixed effects in vector *x*.

In our empirical analysis, we employ three treatment instruments to identify the ATT. These variables are included in vector *z*, but not in vector *x*, because we believe that they do not directly affect the outcome variables of interest. First, we use the geographical distance between the capital of each country included in our sample and Washington, D.C. as a treatment instrument. There are several reasons to believe that countries that are close to the US are *ceteris paribus* more likely to be targets of US economic sanctions. First, internal conflicts in a country that is close to the US may represent a greater threat to the US itself. These types of conflicts may also cause direct adverse consequences for the US, such as an impairment of economic relations (Martin et al. 2008), or the danger of contagion (Weidmann and Ward 2010). 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 United States (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 for US politics to intervene. Nielsen (2013), for example, shows that the likelihood of aid sanctions against repressive states increases with the level of media coverage. Peksen et al. (2014) find the same effect specifically for the imposition of US economic sanctions. Finally, sanctions may be considered more effective if the prospective target nation is close. Neuenkirch and Neumeier (2015) show that the magnitude of the adverse effect US economic sanctions have on the target state's GDP is inversely related to the target state's distance to the US. Inasmuch as the US takes the expected effectiveness of its sanction measures into

[5] The results based on our main specifications remain robust when replacing the US President-fixed effects with year-fixed effects. However, as part of our robustness checks, we reduce our sample to glean further insights. Due to the associated decrease in the degrees of freedom, some models do not converge when employing year-fixed effects in our treatment model.

account, there should be a negative association between the likelihood of implementing sanctions and the potential target country's distance to the US.

Using data taken from Bailey et al. (2015), our second treatment instrument measures the alignment of a country's votes in the UN General Assembly (UNGA) with US votes. To construct this measure, Bailey et al. (2015) propose a dynamic ordinal spatial model to estimate state ideal points from 1946 to 2012 on a single dimension. The absolute difference between each country's ideal point per year and the US's ideal point per year is then employed as an indicator of voting distance. 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 more favorable treatment, thus reducing the likelihood of being targeted by US sanctions. Dreher and Jensen (2013), for example, argue that the United States punishes governments economically if they take opposing political positions in the UNGA. Nielsen (2013) finds that aid recipients that vote with donors in the UNGA are exempt from aid sanctions in response to human rights violations. The same holds in case of joint membership in military alliances.

Finally, as a third treatment instrument, we include an interaction term between the two variables that measure voting alignment in the UNGA and distance to Washington, D.C. This third treatment variable allows us to vary the alignment of votes in the UNGA with the effect proximity to Washington, D.C. has on the likelihood that the US will impose economic sanctions on a country. To obtain interpretable estimates, we subtract the mean value of each variable from its actual realizations before creating the interaction term of the two variables.[6]

Table A3 in the Appendix summarizes all variables as well as their definitions and sources. Table A4 provides summary statistics and detailed information on episodes of economic sanctions or conflicts.

[6] We have also tested another treatment instrument. Spolaore and Wacziarg (2009) introduce a measure of genetic distance, which represents a summary statistic for divergence in implicit beliefs, customs, habits, biases, conventions, etc. The authors argue that similarity in such traits would facilitate communication and understanding between societies. However, genetic distance does not add significantly to explaining the imposition of US sanctions when it is included alongside geographical distance and voting distance in the UNGA. Thus, it is not employed hereafter.

4. Empirical Results

4.1 Baseline Results

The results for both the OLS regressions as well as the endogenous treatment model are shown in Tables 2a-2d. The OLS estimates are presented in the upper panel and the results based on our endogenous treatment model in the lower panel. In addition to the treatment effect estimates, Tables 2a-2d contain the coefficients of the treatment covariates based on the selection model described in Equation (4). Moreover, the estimates for ρ_1 and ρ_0, that is, the coefficients of correlation between the treatment assignment errors and the outcome errors for the treatment and control group, respectively, are displayed in each table. In the context of OLS estimation, we estimate four different versions of Equation (6) for each of the human rights indicators, yielding 16 regressions; (i) a pooled panel data model, (ii) a panel difference-in-difference approach, (iii) a panel data model including region-fixed effects, and (iv) a panel data model including country-fixed effects. In the context of the endogenous treatment model, we only employ specifications (i)-(iii) and do not include country-fixed effects, as our treatment instruments show only little variation over time.

The findings based on OLS estimation suggest that US economic sanctions have an adverse effect on the target state's respect for basic human rights as well as political rights and civil liberties. This finding holds across all four specifications and is well in line with the evidence provided by Peksen (2009) and Wood (2008). In contrast, we do not find a significant association between economic sanctions and the level of economic rights and emancipatory rights. This finding stands in contrast to Peksen (2016b), who finds a negative effect of sanctions on economic freedom in terms of property rights protection and the use of contract-intensive money.

Table 2a: US Sanctions and Economic Rights

Ordinary Least Squares	**Pooled**	**DID**	**Region-FE**	**Country-FE**
US Sanctions	0.005	0.000	0.008	0.004
	[0.67]	[0.98]	[0.52]	[0.82]
Endogenous Treatment	**Pooled**	**DID**	**Region-FE**	
US Sanctions	–0.018	–0.022	–0.016	
	[0.48]	[0.41]	[0.55]	
IV: Geographical distance	–0.102	–0.102	–0.101	
	[0.00]	[0.00]	[0.00]	
IV: Voting distance	–0.044	–0.045	–0.044	
	[0.59]	[0.58]	[0.59]	
IV: Geogr. dist. · Voting dist.	0.060	0.060	0.060	
	[0.00]	[0.00]	[0.00]	
ρ_0	0.10	0.09	0.09	
ρ_1	0.09	0.08	0.09	
$\chi^2(2) \mid H_0: \rho_0=\rho_1=0$	1.55	1.33	1.55	
	[0.46]	[0.51]	[0.46]	

Notes: Top panel shows selected OLS estimates of different versions of Equation (6). Bottom panel shows the corresponding estimates of an endogenous treatment-regression model. IV: treatment instrument. p-values are in brackets. Number of observations: 2,594. Full tables are available on request.

Table 2b: US Sanctions and Political Rights

Ordinary Least Squares	**Pooled**	**DID**	**Region-FE**	**Country-FE**
US Sanctions	–0.052	–0.044	–0.073	–0.123
	[0.01]	[0.05]	[0.00]	[0.00]
Endogenous Treatment	**Pooled**	**DID**	**Region-FE**	
US Sanctions	–0.006	–0.000	–0.026	
	[0.87]	[0.99]	[0.49]	
IV: Geographical distance	–0.106	–0.106	–0.106	
	[0.00]	[0.00]	[0.00]	
IV: Voting distance	–0.044	–0.044	–0.044	
	[0.59]	[0.59]	[0.59]	
IV: Geogr. dist. · Voting dist.	0.062	0.062	0.062	
	[0.00]	[0.00]	[0.00]	
ρ_0	–0.13	–0.13	–0.13	
ρ_1	–0.06	–0.06	–0.07	
$\chi^2(2) \mid H_0: \rho_0=\rho_1=0$	2.92	2.72	3.09	
	[0.23]	[0.26]	[0.21]	

Notes: See Table 2a.

Table 2c: US Sanctions and Basic Human Rights

Ordinary Least Squares	**Pooled**	**DID**	**Region-FE**	**Country-FE**
US Sanctions	–0.095	–0.064	–0.079	–0.111
	[0.00]	[0.06]	[0.02]	[0.01]
Endogenous Treatment	**Pooled**	**DID**	**Region-FE**	
US Sanctions	–0.021	0.003	–0.011	
	[0.71]	[0.96]	[0.84]	
IV: Geographical distance	–0.092	–0.092	–0.095	
	[0.00]	[0.00]	[0.00]	
IV: Voting distance	–0.073	–0.071	–0.068	
	[0.37]	[0.38]	[0.41]	
IV: Geogr. dist. · Voting dist.	0.054	0.054	0.054	
	[0.00]	[0.00]	[0.00]	
ρ_0	–0.10	–0.09	–0.09	
ρ_1	–0.29	–0.27	–0.26	
$\chi^2(2) \mid H_0: \rho_0=\rho_1=0$	8.68	7.54	6.74	
	[0.01]	[0.02]	[0.03]	

Notes: See Table 2a.

Table 2d: US Sanctions and Emancipatory Rights

Ordinary Least Squares	**Pooled**	**DID**	**Region-FE**	**Country-FE**
US Sanctions	0.009	0.037	–0.007	–0.045
	[0.79]	[0.31]	[0.84]	[0.29]
Endogenous Treatment	**Pooled**	**DID**	**Region-FE**	
US Sanctions	0.438	0.458	0.427	
	[0.00]	[0.00]	[0.00]	
IV: Geographical distance	–0.091	–0.091	–0.097	
	[0.00]	[0.00]	[0.00]	
IV: Voting distance	–0.040	–0.041	–0.012	
	[0.62]	[0.61]	[0.89]	
IV: Geogr. dist. · Voting dist.	0.061	0.062	0.061	
	[0.00]	[0.00]	[0.00]	
ρ_0	–0.68	–0.67	–0.69	
ρ_1	–0.21	–0.19	–0.19	
$\chi^2(2) \mid H_0: \rho_0=\rho_1=0$	56.44	53.38	59.15	
	[0.00]	[0.00]	[0.00]	

Notes: See Table 2a.

The results based on the endogenous treatment model, however, draw a different picture. These findings suggest that once the endogeneity of the imposition of sanctions is accounted for, there is no significant relationship between US economic sanctions and

a country's level of basic human rights or its level of political rights and civil liberties. Compared to the OLS regressions, the treatment effect estimates based on the endogenous treatment model are notably smaller across all specifications and, in fact, close to zero. This indicates that the OLS estimates are biased downward and that the insignificance of the sanction indicator is not due to inefficient estimation. Thus, our results suggest that the widely offered criticism that economic sanctions will inevitably lead to targeted regimes becoming even more repressive, is not backed by the data. Furthermore, we find a strong and significantly positive influence of US economic sanctions on the target state's respect for women's rights. The effect appears to be quite sizeable. When sanctions are in effect, our women's rights indicator increases by almost half a standard deviation. Finally, in support of the results from OLS estimation, the endogenous treatment model suggests that there is no significant association between the imposition of economic sanctions and the target state's level of economic rights.

Clearly, our results do not provide support for the hypotheses developed in Section 2 and frequently proposed in the literature. Although the OLS estimates indicate that basic human rights, as well as political rights and civil liberties suffer under economic sanctions imposed by the US, the results from the endogenous treatment models lead us to reject hypotheses 2a and 3a. Given that after accounting for the endogeneity of selection into treatment, we only find a positive effect of US economic sanctions on emancipatory rights, we can conclude that our data does not support the widespread concern about adverse human rights consequences of US economic sanctions.

A glance at the coefficient estimates for our treatment covariates reveals that the geographical distance to Washington, D.C. is indeed strongly related to the likelihood of being targeted by US economic sanctions. Keeping in mind that the variables in the interaction term are centered at their means, the coefficient estimate suggests that, on average, a country close to the US is more likely to become subject to economic sanctions than a country far away. This effect appears to be significant at every reasonable level. The linear term of our indicator measuring voting alignment, however, is statistically insignificant, implying that the voting behavior of a country with an average distance from the US is not related to the likelihood of being hit by US sanctions. However, the interaction term suggests that the effect of voting alignment on the likelihood of being targeted by economic sanctions varies with the geographical distance

to the US (and vice versa). Countries with a distance of at least 8,398 kilometers are significantly more likely to be sanctioned if they do not vote in line with the US.

In three out of our four models, the negative estimates for ρ_1 and ρ_0 indicate that, in general, unobservables that adversely affect a country's human rights situation tend to follow a similar pattern as unobservables that increase the likelihood of being targeted by US economic sanctions, both in the treatment group as well as in the control group. This finding further strengthens the evidence for the endogeneity of US economic sanctions: The set of control variables employed in the empirical analysis do not capture the differences between countries where sanctions are imposed and countries not subject to sanctions. An analysis of the effects of sanctions that ignores the endogeneity of US economic sanctions, thus, produces biased estimates. The only exception is the model in which the dependent variable measures economic rights. Here, both ρ_1 and ρ_0 are positive, yet of negligible size and not statistically different from zero.

4.2 Extensions

To glean additional insights, we differentiate between different types of US economic sanctions and estimate separate treatment effects. First, we evaluate the effect of mild versus moderate and severe economic sanctions. To this end, we omit all moderate or severe sanctions from our sample of country-year observations. That way, the coefficient estimate for our sanction indicator provides us with an estimate for the effect of mild economic sanctions. Then, we omit country-year observations with mild sanctions in place to obtain an estimate for the effect of moderate and severe sanctions. Using this same approach we evaluate the impact of; low cost-sanctions versus high cost-sanctions, unilateral versus multilateral sanctions, sanctions imposed with the aim of improving the human rights situation versus those imposed for other reasons, sanctions targeted against democracies versus those targeted against non-democratic states, and sanctions that have been in place for 1 to 5 years versus 6 to 10 years versus 10 years or more. The results for both the OLS regressions as well as the endogenous treatment models are shown in Tables 3a-3d. The OLS estimates are presented in the left panel, the results based on our endogenous treatment model in the right panel. The top row in each Table reproduces the estimates from Tables 2a-2d.

Table 3a: US Sanctions and Economic Rights: Extensions

	Ordinary Least Squares				Endogenous Treatment		
	Pooled	**DID**	**Region-FE**	**Country-FE**	**Pooled**	**DID**	**Region-FE**
Sanctions	0.005	0.000	0.008	0.004	–0.018	–0.022	–0.016
	[0.67]	[0.98]	[0.52]	[0.82]	[0.48]	[0.41]	[0.55]
… Mild	0.010	0.005	0.014	0.008	–0.022	–0.027	–0.017
	[0.50]	[0.75]	[0.37]	[0.64]	[0.58]	[0.51]	[0.68]
… Moderate/Severe	–0.006	–0.010	–0.008	–0.029	–0.013	–0.018	–0.017
	[0.74]	[0.57]	[0.68]	[0.30]	[0.61]	[0.49]	[0.51]
... Low Costs	0.013	0.009	0.014	0.005	–0.029	–0.032	–0.027
	[0.41]	[0.60]	[0.38]	[0.80]	[0.33]	[0.29]	[0.37]
… High Costs	0.004	–0.001	0.008	0.008	–0.043	–0.046	–0.043
	[0.84]	[0.98]	[0.70]	[0.77]	[0.30]	[0.27]	[0.30]
… Unilateral	0.007	0.002	0.006	–0.014	–0.036	–0.039	–0.035
	[0.66]	[0.92]	[0.73]	[0.51]	[0.23]	[0.19]	[0.24]
… Multilateral	0.004	–0.001	0.011	0.018	–0.003	–0.006	–0.001
	[0.84]	[0.95]	[0.54]	[0.42]	[0.94]	[0.87]	[0.99]
… Human Rights	–0.005	–0.010	0.006	0.001	–0.015	–0.019	–0.008
	[0.76]	[0.57]	[0.73]	[0.96]	[0.67]	[0.60]	[0.82]
… Non-Human Rights	0.015	0.010	0.010	0.005	–0.008	–0.012	–0.015
	[0.37]	[0.57]	[0.57]	[0.81]	[0.79]	[0.70]	[0.64]
… Against Democracies	0.039	0.034	0.042	0.038	0.020	0.015	0.033
	[0.13]	[0.19]	[0.10]	[0.18]	[0.81]	[0.86]	[0.70]
… Against Non-Democracies	–0.002	–0.007	0.001	–0.008	–0.027	–0.030	–0.026
	[0.89]	[0.63]	[0.97]	[0.65]	[0.29]	[0.23]	[0.31]
… 1 to 5 Years	0.002	–0.003	0.004	0.007	–0.015	–0.019	–0.012
	[0.93]	[0.86]	[0.84]	[0.71]	[0.74]	[0.66]	[0.78]
… 6 to 10 Years	–0.012	–0.017	–0.007	–0.020	–0.043	–0.048	–0.038
	[0.58]	[0.45]	[0.77]	[0.46]	[0.29]	[0.25]	[0.36]
… 11 Years +	0.017	0.012	0.013	0.010	–0.013	–0.016	–0.019
	[0.36]	[0.53]	[0.48]	[0.73]	[0.70]	[0.65]	[0.59]

Notes: Left panel shows selected OLS estimates of different versions of Equation (6). Right panel shows the corresponding estimates of an endogenous treatment-regression model. p-values are in brackets. Full tables are available on request.

Table 3b: US Sanctions and Political Rights: Extensions

	Ordinary Least Squares				Endogenous Treatment		
	Pooled	**DID**	**Region-FE**	**Country-FE**	**Pooled**	**DID**	**Region-FE**
Sanctions	−0.052	−0.044	−0.073	−0.123	−0.006	−0.000	−0.026
	[0.01]	[0.05]	[0.00]	[0.00]	[0.87]	[0.99]	[0.49]
… Mild	−0.034	−0.026	−0.063	−0.112	0.006	0.012	−0.022
	[0.19]	[0.32]	[0.02]	[0.00]	[0.90]	[0.81]	[0.67]
… Moderate/Severe	−0.077	−0.070	−0.084	−0.135	−0.038	−0.030	−0.040
	[0.01]	[0.02]	[0.01]	[0.00]	[0.37]	[0.48]	[0.36]
... Low Costs	−0.041	−0.033	−0.055	−0.106	0.026	0.033	0.017
	[0.12]	[0.22]	[0.04]	[0.00]	[0.54]	[0.45]	[0.69]
… High Costs	−0.032	−0.026	−0.063	−0.070	0.032	0.037	−0.001
	[0.34]	[0.44]	[0.07]	[0.10]	[0.59]	[0.53]	[0.99]
… Unilateral	−0.035	−0.028	−0.055	−0.104	0.039	0.045	0.023
	[0.18]	[0.30]	[0.04]	[0.00]	[0.39]	[0.32]	[0.61]
… Multilateral	−0.074	−0.067	−0.096	−0.145	−0.050	−0.044	−0.074
	[0.01]	[0.02]	[0.00]	[0.00]	[0.33]	[0.40]	[0.16]
… Human Rights	−0.015	−0.008	−0.049	−0.113	0.029	0.035	−0.004
	[0.59]	[0.77]	[0.09]	[0.00]	[0.56]	[0.48]	[0.93]
… Non-Human Rights	−0.087	−0.078	−0.092	−0.143	−0.048	−0.041	−0.047
	[0.00]	[0.01]	[0.00]	[0.00]	[0.32]	[0.40]	[0.32]
… Against Democracies	−0.096	−0.087	−0.124	−0.195	−0.073	−0.065	−0.101
	[0.02]	[0.04]	[0.00]	[0.00]	[0.48]	[0.53]	[0.33]
… Against Non-Democracies	−0.039	−0.033	−0.058	−0.093	0.001	0.007	−0.015
	[0.09]	[0.17]	[0.01]	[0.00]	[0.98]	[0.86]	[0.68]
… 1 to 5 Years	−0.109	−0.100	−0.128	−0.170	−0.078	−0.070	−0.095
	[0.00]	[0.00]	[0.00]	[0.00]	[0.20]	[0.25]	[0.12]
… 6 to 10 Years	0.027	0.035	−0.014	−0.115	0.056	0.063	0.019
	[0.47]	[0.36]	[0.70]	[0.01]	[0.41]	[0.35]	[0.78]
… 11 Years +	−0.043	−0.037	−0.048	−0.007	0.032	0.037	0.036
	[0.17]	[0.23]	[0.12]	[0.87]	[0.49]	[0.43]	[0.45]

Notes: See Table 3a.

Table 3c: US Sanctions and Basic Human Rights: Extensions

	Ordinary Least Squares				Endogenous Treatment		
	Pooled	**DID**	**Region-FE**	**Country-FE**	**Pooled**	**DID**	**Region-FE**
Sanctions	–0.095	–0.064	–0.079	–0.111	–0.021	0.003	–0.011
	[0.00]	[0.06]	[0.02]	[0.01]	[0.71]	[0.96]	[0.84]
… Mild	–0.131	–0.101	–0.095	–0.161	–0.038	–0.011	–0.009
	[0.00]	[0.02]	[0.02]	[0.00]	[0.61]	[0.88]	[0.90]
… Moderate/Severe	–0.023	0.007	–0.030	0.015	0.010	0.041	–0.004
	[0.63]	[0.89]	[0.54]	[0.83]	[0.87]	[0.51]	[0.95]
... Low Costs	–0.117	–0.085	–0.094	–0.106	–0.066	–0.039	–0.048
	[0.01]	[0.05]	[0.03]	[0.05]	[0.32]	[0.56]	[0.46]
… High Costs	0.008	0.033	0.032	–0.070	0.103	0.126	0.121
	[0.88]	[0.53]	[0.55]	[0.29]	[0.20]	[0.12]	[0.13]
… Unilateral	–0.139	–0.109	–0.102	–0.133	–0.082	–0.057	–0.044
	[0.00]	[0.01]	[0.01]	[0.01]	[0.22]	[0.40]	[0.51]
… Multilateral	–0.023	0.006	–0.029	–0.090	0.043	0.067	0.025
	[0.61]	[0.90]	[0.52]	[0.09]	[0.55]	[0.36]	[0.73]
… Human Rights	–0.140	–0.111	–0.129	–0.271	–0.028	–0.002	–0.023
	[0.00]	[0.01]	[0.00]	[0.00]	[0.69]	[0.98]	[0.75]
… Non-Human Rights	–0.028	0.004	–0.010	0.067	0.035	0.062	0.041
	[0.51]	[0.93]	[0.82]	[0.23]	[0.62]	[0.39]	[0.56]
… Against Democracies	–0.107	–0.074	–0.067	–0.140	–0.003	0.028	0.041
	[0.11]	[0.28]	[0.32]	[0.05]	[0.98]	[0.83]	[0.76]
… Against Non-Democracies	–0.089	–0.059	–0.077	–0.112	–0.019	0.006	–0.018
	[0.01]	[0.11]	[0.03]	[0.02]	[0.73]	[0.92]	[0.75]
… 1 to 5 Years	–0.049	–0.015	–0.037	–0.045	0.056	0.088	0.054
	[0.29]	[0.75]	[0.43]	[0.36]	[0.50]	[0.30]	[0.52]
… 6 to 10 Years	–0.130	–0.100	–0.089	–0.181	–0.090	–0.061	–0.063
	[0.03]	[0.09]	[0.14]	[0.01]	[0.37]	[0.55]	[0.53]
… 11 Years +	–0.101	–0.074	–0.090	–0.136	–0.048	–0.028	–0.041
	[0.04]	[0.13]	[0.07]	[0.06]	[0.50]	[0.70]	[0.56]

Notes: See Table 3a.

Table 3d: US Sanctions and Emancipatory Rights: Extensions

	Ordinary Least Squares				Endogenous Treatment		
	Pooled	**DID**	**Region-FE**	**Country-FE**	**Pooled**	**DID**	**Region-FE**
Sanctions	0.009	0.037	–0.007	–0.045	0.438	0.458	0.427
	[0.79]	[0.31]	[0.84]	[0.29]	[0.00]	[0.00]	[0.00]
… Mild	–0.006	0.022	–0.026	–0.038	0.547	0.572	0.527
	[0.90]	[0.61]	[0.56]	[0.44]	[0.00]	[0.00]	[0.00]
… Moderate/Severe	0.036	0.063	0.028	–0.089	0.235	0.263	0.237
	[0.49]	[0.22]	[0.60]	[0.24]	[0.00]	[0.00]	[0.00]
... Low Costs	0.018	0.048	0.021	–0.002	0.438	0.465	0.450
	[0.68]	[0.30]	[0.63]	[0.97]	[0.00]	[0.00]	[0.00]
… High Costs	–0.026	–0.002	–0.060	–0.104	0.460	0.481	0.424
	[0.64]	[0.97]	[0.30]	[0.15]	[0.00]	[0.00]	[0.00]
… Unilateral	–0.013	0.014	–0.011	–0.035	0.406	0.429	0.419
	[0.76]	[0.76]	[0.80]	[0.54]	[0.00]	[0.00]	[0.00]
… Multilateral	0.040	0.068	0.004	–0.056	0.443	0.459	0.405
	[0.41]	[0.17]	[0.94]	[0.34]	[0.00]	[0.00]	[0.00]
… Human Rights	0.041	0.068	0.006	–0.035	0.510	0.530	0.484
	[0.38]	[0.15]	[0.90]	[0.54]	[0.00]	[0.00]	[0.00]
… Non-Human Rights	–0.013	0.016	–0.005	–0.043	0.451	0.473	0.469
	[0.79]	[0.74]	[0.92]	[0.48]	[0.00]	[0.00]	[0.00]
… Against Democracies	–0.033	–0.003	–0.039	–0.035	0.556	0.581	0.547
	[0.65]	[0.97]	[0.59]	[0.65]	[0.00]	[0.00]	[0.00]
… Against Non-Democracies	0.015	0.043	–0.002	–0.056	0.403	0.426	0.393
	[0.70]	[0.28]	[0.96]	[0.26]	[0.00]	[0.00]	[0.00]
… 1 to 5 Years	0.031	0.062	0.018	–0.034	0.568	0.594	0.554
	[0.54]	[0.23]	[0.72]	[0.52]	[0.00]	[0.00]	[0.00]
… 6 to 10 Years	0.049	0.079	0.017	0.001	0.460	0.488	0.444
	[0.45]	[0.22]	[0.79]	[0.99]	[0.00]	[0.00]	[0.00]
… 11 Years +	–0.043	–0.020	–0.042	–0.144	0.406	0.424	0.416
	[0.42]	[0.71]	[0.43]	[0.07]	[0.00]	[0.00]	[0.00]

Notes: See Table 3a.

In general, the results are well in line with those presented in the preceding section. Our findings using the OLS estimates, suggest that the imposition of moderate/severe sanctions have a harsher effect on the level of political rights and civil liberties than mild sanctions, and that multilateral sanctions produce more severe effects than unilateral sanctions. Both findings appear to be well in line with the extant empirical evidence (Peksen and Drury 2010). In addition, the negative effect of sanctions seems to decline over time. This result, arguably, could again reflect endogeneity; sanctions that are more effective tend to be lifted sooner. We get a somewhat different picture, however, when looking at the target countries' basic human rights situation. Here, the adverse effect of sanctions appears to be stronger for mild sanctions and unilateral sanctions. Moreover, the target government's respect for basic human rights decreases more notably when sanctions are imposed with the aim of actually improving the human rights situation. Yet again, we believe that this finding is indicative of a flaw in the extant empirical literature. The inverse association between sanctions and the human rights situation may be driven by the fact that sanctions are imposed because of particular policies adopted by the incumbent regime that result in a deterioration of basic human rights.

The results based on the OLS regression do not hold in the context of our endogenous treatment model. Economic sanctions imposed by the US (irrespective of what sanction type is considered or how long they remain in effect) do not exert a significant causal influence on the target government's respect for basic human rights, political rights and civil liberties, or economic rights. Note that again, the lack of significance of our sanction indicators is not due to inefficient estimation. Rather, when taking the endogeneity of economic sanctions into account the coefficient estimates tend to noticeably decrease (in absolute terms) and come close to zero, indicating that the estimation bias based on the OLS regression is sizeable.

When we look at the effect of sanctions on the level of emancipatory rights, we find a stronger positive effect for mild versus moderate/severe sanctions, for sanctions aimed at improving the human rights situation, and for sanctions targeted against democracies. The effect of sanctions targeted against democracies is quite intuitive. Improved emancipatory rights resulting from sanctions directed against democratic states might be because democratic governments are more accountable to the population and are more constrained in the sense that they are less able resort to violent measures and repression. Arguably, mild sanctions have a stronger positive influence because they

typically entail sanction measures targeted against particular regime members and government officials and, thus, are more precision-guided and less blunt than severe sanctions. Finally, the positive impact of sanctions on emancipatory rights is somewhat larger during the first five years after imposition.

5. Conclusions

We use endogenous treatment-regression models to estimate the causal average treatment effect of US economic sanctions on four types of human rights; basic human rights, political rights and civil liberties, emancipatory rights, and economic rights. We explicitly take the endogeneity of the imposition of economic sanctions by the US into account by using instruments that are associated with the likelihood of becoming targeted by economic sanctions, but not directly with the outcome variables of interest. Moreover, we account for potential heterogeneity across sanctioned countries and non-sanctioned countries by allowing the parameters of our empirical model to differ across both groups.

In contrast to previous studies, which ignore the endogeneity of economic sanctions, we find no support for adverse effects of sanctions on economic rights, political and civil rights, or basic human rights. With respect to women's rights, our findings even indicate a positive relationship. Emancipatory rights are, on average, strengthened when a country faces sanctions by the US. Our findings seem to hold independent of the choice of model specification or when differentiating between different types of economic sanctions. Most importantly, this study provides strong evidence that the endogeneity of treatment assignment must be modelled when the consequences of sanctions are studied empirically. Economic sanctions do not lead to a deterioration of the human rights situation in the targeted country, as indicated by the vast majority of empirical evidence. However, economic sanctions are also not associated with an improvement in basic human rights and political rights. This conclusion also holds for sanctions that are explicitly imposed with the aim of improving the human rights situation in the target country, which, arguably, is a dispiriting result.

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Appendix

Table A1: Empirical Studies on the Relationship between Economic Sanctions, Human Rights, and Political Transition

Author(s)	Subject and Data	Dependent variable(s)	Sanction indicator(s)	Method	Results
Allen (2008b)	Effect of international economic sanctions on anti-government activity (panel data covering the period 1948-1999)	Number of anti-government demonstrations and anti-government riots (data taken from the Cross-National Time-Series Archive by Banks and Wilson 2015)	Binary sanction indicator, binary indicators for financial, export, and import sanctions, continuous sanction cost measure (data taken from Marinov's (2005) update of the Hufbauer et al. data)	Pooled negative binomial regression	Economic sanctions are associated with an increase in the number of anti-government protests and anti-government riots only in democratic countries; the effects vary only little over different sanction types
Carneiro and Apolinário (2015)	Effect of targeted UN economic sanctions on human rights (data covering UN sanction episodes against African countries over the period 1992-2008)	Political terror scale (data taken from Gibney et al. 2016)	Binary UN economic sanction indicator (data taken from Morgan et al. 2014), binary indicator for targeted UN economic sanctions (data taken from Biersteker et al. 2016)	Pooled ordered logistic regression	Targeted UN economic sanctions are associated with greater political repression, non-targeted sanctions are not significantly related to political repression
Drury and Li (2006)	Effect of US sanction threats on human rights situation in China (time-series data covering the period 1989-1995 at a daily frequency)	Indicators for political unrest, repression, and accommodation	Binary indicators for US sanction threats (Congressional speeches and presidential comments related to China's MFN status) and US threatening actions (passing of an anti-MFN bill in House or Senate)	Three-equation SUR model using 28-days moving sums	US rhetorical threats and threatening actions are associated with a decrease in the level of accommodations by the Chinese government, but are not significantly related to political unrest and repression

Table A1 (cont.)

Drury and Peksen (2014)	Effect of international economic sanctions on women's rights (panel data covering 146 countries over the period 1971-2005)	Women's economic, political, and social rights (all data taken from the Cingranelli and Richards 2010), female labor participation (data taken from the World Bank's World Development Indicators)	Binary economic sanction indicator, binary indicators for multilateral sanctions and sanctions with the aim of preventing human rights violations, continuous sanction cost indicator (data taken from Hufbauer et al. 2009)	Pooled ordered logistic regression and pooled OLS regression	Economic sanctions are associated with less respect for women's economic and social rights, but only in low-income countries (per capita GDP below 1,500); no association between economic sanctions and women's political rights and female labor participation; economic sanctions with humanitarian goals are associated with an improvement of women's economic rights and female labor participation
Escribà-Folch (2012)	Effect of international sanctions on political repression in authoritarian regimes (panel data covering 90 countries over the period 1976-2001)	Political terror scale/state violations of physical integrity rights (data taken from Hafner-Burton and Tsutsui 2007)	Binary economic sanction indicator (data taken from Marinov's (2005) update of the Hufbauer et al. (2009) data)	Pooled ordered logistic regression	Economic sanctions are associated with increased political repression; the effect is larger in personalist regimes than in single-party and military regimes

Table A1 (cont.)

Hultman and Peksen (2015)	Effect of international sanctions on the intensity of civil conflict in Africa (panel data covering 73 conflicts over the period 1989-2005 at a monthly frequency)	Number of fatalities in civil conflicts (data taken from the UCDP Georeferenced Event Dataset)	Binary indicator for imposed economic sanctions and continuous measure of sanction costs, binary indicator for threatened sanctions and continuous measure of anticipated sanction costs (all data taken from Morgan et al. 2014), binary indicator for arms embargoes (data taken from Erickson 2013)	Pooled negative binomial regression with conflict fixed effects	Imposed, threatened economic sanctions, sanction costs and anticipated sanction costs are associated with an increase in the number of fatalities, arms embargoes are associated with a decrease in the number of fatalities
Licht (2015)	Effect of international economic sanctions on leader survival (data covering 125 leaders over the period 1971-2004)	Length of leaders' tenure in years (data taken from Goemans et al. 2009)	Binary indicators for imposed economic sanctions and threatened economic sanctions (data taken from Morgan et al. 2014)	Cox proportional hazard model combined with a matching approach	In general, economic sanctions do not destabilize political leaders; this finding holds for both democratic and autocratic leaders
Marinov (2005)	Effect of international economic sanctions on leader survival (panel data covering 160 countries over the period 1947-1999)	Binary variable taking the value 1 when there was a leader transition in a given country-year (data taken from Goemans et al. 2009)	Binary economic sanction indicator (data taken from Hufbauer et al. 2009)	Pooled binary logistic regression with country-fixed effects	Leader transition is more likely when economic sanctions are in place; the effect is larger for democratic leaders

Table A1 (cont.)

Peksen (2016a)	Effect of international economic sanctions on discriminatory practices against ethnic groups (panel data covering more than 900 ethnic groups over the period 1950-2003)	Binary indicators for economic discrimination and political discrimination against an ethnic group (data taken from Gurr 2000)	Binary economic sanction indicator, ordinal economic sanction indicator (0-3) accounting for the severity of sanctions, binary indicators for multilateral sanctions and sanctions with the aim of preventing human rights violations (data taken from Hufbauer et al. 2009)	Heckman-selection probit model that accounts for the fact that only ethnic groups with more than 100,000 people are included in the main dataset	Economic sanctions are associated with an increase in the level of economic and political discrimination against ethnic groups; the effect tends to increase with the severity of sanctions and is stronger for multilateral sanctions than for unilateral sanctions
Peksen (2016b)	Effect of international economic sanctions on private property and wealth (panel data covering countries over the period 1960-2005)	Contract intensive money (monetary aggregate M2 minus currency in circulation as a share of M2), country investment profile taken from the International Country Risk Guide (Knack and Keefer 1995)	Binary indicators for partial economic sanctions vs. extensive sanctions, high-cost sanctions vs. low-cost sanctions, US sanctions vs. multilateral sanctions (data taken from Hufbauer et al. 2009)	Panel fixed-effects vector decomposition regression with AR(1) disturbances	Economic sanctions are associated with a decrease in contract intensive money and the country investment profile indicator; the effects tend to be larger for high-cost sanctions and extensive sanctions

Table A1 (cont.)

Peksen (2009)	Effect of international economic sanctions on physical integrity rights (panel data covering 95 countries over the period 1981-2000)	Extrajudicial killings, disappearances, political imprisonment, torture (all data taken from Cingranelli and Richards 2010), political terror scale (data taken from Gibney et al. 2016)	Ordinal economic sanction indicator (0-2) accounting for the severity of sanctions, binary indicators for unilateral vs. multilateral economic sanctions, as well as sanctions with vs. without the aim of preventing human rights violations (data taken from Hufbauer et al. 2009)	Pooled ordered probit regression	Economic sanctions are associated with more human rights violations (i.e., an increase in each of the four human rights indicators); the effect tends to be stronger for multilateral sanctions and for sanctions that aim at preventing human rights violations
Peksen and Drury (2010)	Effect of international economic sanctions on the level of democracy (panel data covering 102 countries over the period 1972-2000)	Freedom House (2014) index of political rights and civil liberties	Binary economic sanction indicator, ordinal sanction indicator (0-2) accounting for the severity of sanctions, count variable indicating the duration of sanctions (data taken from Hufbauer et al. (2009) and from Morgan et al. 2014)	Panel fixed-effects vector decomposition regression	Economic sanctions are associated with a decrease in political rights and civil liberties; the effect is stronger for extensive sanctions than for limited sanctions and decreases with the number of years sanctions are in place
Pond (2015)	Effect of international economic sanctions on protectionism (panel data covering the period 1988-2012)	Average tariff rate (data taken from the World Bank's World Development Indicators)	Binary trade sanction indicator, number of trade sanctions in place in a given target country-year (data taken from Morgan et al. 2014)	Pooled OLS regression, FGLS regression, autoregressive distributed lag model	Number of trade sanctions in place is associated with an increase in the average tariff rate

Table A1 (cont.)

Soest and Wahman (2015)	Effect of UN, US, and EU economic sanctions on the level of democracy (panel data covering 117 authoritarian countries over the period 1990-2010)	Democracy measure combining the Freedom House (2014) index for political and civil rights and polity2 by Marshall et al. (2016)	Separate binary indicators for economic sanctions with the aim of promoting democratization, peace, preventing human rights violations, fighting terrorism, and other sanctions (data taken from Hufbauer et al. 2009)	Pooled OLS regression	Economic sanctions aiming at promoting democratization are associated with an increase in the level of democracy; other sanction types do not have a significant effect
Wood (2008)	Effect of UN and US economic sanctions on human rights (panel data covering 157 countries over the period 1976-2001)	Political terror scale (data taken from Gibney et al. 2016)	Ordinal indicators (0-3) for UN and US economic sanctions accounting for the severity of sanctions (data taken from Hufbauer et al. 2009)	Pooled ordered probit regression	UN and US economic sanctions are associated with an increase in political repression; the effect is stronger for UN sanctions than for US sanctions and increasing with the severity of sanctions

Table A2: List of Countries in Sample

Albania (16/0), Algeria (21/0), Argentina (27/0), Australia (28/0), Austria (29/0), Bahrain (26/0), Bangladesh (29/0), Belgium (14/0), Benin (11/0), Bolivia (18/0), Botswana (26/0), Brazil (27/2), Bulgaria (21/0), Burundi (11/0), Cameroon (20/1), Canada (29/0), Central African Republic (6/3), Chad (11/0), Chile (16/8), China (14/12), Colombia (22/3), Congo (21/0), Costa Rica (29/0), Croatia (16/0), Cyprus (26/0), Democratic Republic Congo (14/0), Denmark (29/0), Dominican Republic (27/0), Ecuador (24/5), Egypt (29/0), El Salvador (20/6), Estonia (16/0), Fiji (10/6), Finland (29/0), France (29/0), Gabon (11/0), Germany (29/0), Ghana (25/0), Greece (29/0), Guatemala (11/16), Guinea-Bissau (8/2), Guyana (11/0), Haiti (5/6), Honduras (20/1), Hungary (26/0), India (24/3), Indonesia (20/9), Iran (0/24), Ireland (29/0), Israel (28/1), Italy (29/0), Jamaica (29/0), Japan (29/0), Jordan (24/5), Kenya (25/4), Kuwait (20/0), Latvia (16/0), Lithuania (16/0), Luxembourg (14/0), Madagascar (26/0), Malawi (27/2), Malaysia (28/0), Mali (29/0), Mauritius (26/0), Mexico (29/0), Morocco (29/0), Myanmar (3/23), Namibia (17/0), Nepal (11/0), Netherlands (29/0), New Zealand (29/0), Nicaragua (16/10), Niger (9/0), Nigeria (21/8), Norway (29/0), Oman (26/0), Pakistan (11/18), Panama (25/4), Papua New Guinea (26/0), Paraguay (20/1), Peru (24/5), Philippines (27/0), Poland (22/2), Portugal (29/0), Romania (18/3), Russia (16/0), Senegal (29/0), Sierra Leone (19/0), Singapore (29/0), Slovakia (16/0), Slovenia (16/0), South Africa (15/1), South Korea (21/0), Spain (29/0), Sri Lanka (29/0), Sweden (29/0), Switzerland (10/0), Syria (3/25), Thailand (27/2), Togo (11/0), Trinidad and Tobago (29/0), Tunisia (28/0), Turkey (29/0), Uganda (20/0), Ukraine (16/0), United Arab Emirates (11/0), United Kingdom (29/0), Uruguay (29/0), Venezuela (27/0), Zambia (26/3), Zimbabwe (11/11) .

Notes: The first figure in parentheses indicates the number of non-sanctioned observations for a particular country; the second figure indicates the number of years with US sanctions against that country in place.

Table A3: Variable Definitions and Sources

Basic Human Rights, Economic Rights, Emancipatory Rights, Political Rights. Principal component scores predicted after varimax rotation of a matrix with Kaiser normalized rows resulting from 19 rights indicators, standardized to mean of 0 and standard deviation of 1. *Source*: Gutmann and Voigt (2015).

Log Real GDP/Capita. Natural logarithm of real GDP per capita in 2005 US dollars. *Source*: United Nations.

Real GDP/Capita Growth. First difference of natural logarithm of real GDP per capita in 2005 US dollars. *Source*: United Nations.

Log Population. Natural logarithm of total population size. *Source*: United Nations.

Openness. Sum of exports and imports over GDP. *Source*: United Nations.

Trade with the US. Sum of exports to the US and imports from the US, expressed as percentage of GDP. *Source*: IMF.

Investment Share. Gross capital formation, expressed as percentage of GDP. *Source*: United Nations.

Polity2. Polity scale variable; ranges from strongly democratic (+10) to strongly autocratic (–10). *Source*: Marshall et al. (2016).

Minor/Major Interstate Conflict. Interstate armed conflict between two or more states; indicator variables for minor conflicts (between 25 and 999 battle-related deaths in a given year) and wars (at least 1,000 battle-related deaths in a given year). *Source*: Gleditsch et al. (2002).

Table A3 (cont.)

Minor/Major Internal Conflict. Internal armed conflict between the government of a state and one or more internal opposition group(s) without intervention from other states; indicator variables for minor conflicts and wars. *Source*: Gleditsch et al. (2002).

Minor/Major Internat. Internal Conflict. Internationalized internal armed conflict between the government of a state and one or more internal opposition group(s) with intervention from other states on one or both sides; indicator variables for minor conflicts and wars. *Source*: Gleditsch et al. (2002).

US sanctions. As defined in Table 1. *Source*: Wood (2008), Hufbauer et al. (2009), Neuenkirch and Neumeier (2015).

Distance to US. Distance of the target country's capital from Washington, DC in 1,000 kilometers. *Source*: Gleditsch and Ward (2001).

Voting distance to US. Distance of the target country's voting in the UN General Assembly (UNGA) to US votes, based on a dynamic ordinal spatial. *Source*: Bailey et al. (2015).

Table A4: Descriptive Statistics

	Mean	Std. Dev.	Min	Max
Basic Human Rights	0.00	1.00	–2.43	1.57
Economic Rights	0.00	1.00	–3.05	1.94
Emancipatory Rights	0.00	1.00	–2.62	2.49
Political Rights	0.00	1.00	–2.52	1.30
Lag(Log Real GDP/Capita)	8.21	1.57	4.31	11.38
Lag(Real GDP/Capita	2.02	4.57	–39.23	59.47
Lag(Log Population)	16.38	1.51	12.94	21.03
Lag(Openness)	74.99	49.00	0.18	444.10
Lag(Trade with the US)	8.98	11.32	0.00	80.30
Lag(Investment Share)	21.43	7.44	1.19	65.81
Polity2	4.59	6.33	–10.00	10.00
Distance to US	8.40	3.55	0.73	16.34
Voting Distance to US	2.79	1.04	0.03	5.47

	Freq.(X = 1)		Freq.(X = 1)
US Sanctions	235	Conflicts	479
… Mild	129	… Minor Interstate	37
… Moderate/Severe	106	… Major Interstate	10
… Low Costs to Target	129	… Minor Internal	342
… High Costs to Target	76	… Major Internal	93
… Unilateral	133	… Minor Internat. Internal	20
… Multilateral	102	… Major Internat. Internal	3
… Human Rights	113		
… Non-Human Rights	122		
… Against Democracies	40		
… Against Non-Democracies	195		
… Duration: 1 to 5 Years	91		
… Duration: 6 to 10 Years	58		
… Duration: 11 Years +	86		

Notes: Number of observations: 2,594.