ORIGINAL ARTICLE

International sanctions and development: Evidence from Latin America and the Caribbean (1950–2019)

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Abstract

This article examines the impact of international sanctions on the economic development of sanctioned countries in the Latin American and Caribbean regions over seven decades (1950–2019). The estimates arise from a two-way fixed effects model that combines data from the Global Sanctions Database and the World Development Indicators Database to examine outcomes in terms of economic growth, income inequality, and the incidence and gap of poverty. The findings confirm a significant worsening of development in sanctioned countries. This includes lower growth (−0.6 percentage points) and higher inequality (+1.5 Gini coefficient points). Reduced investment as well as reduced access to credit in the private sector are the mechanisms through which the above effects take place. The results are robust to multiple specifications and have important implications for international sanctions policies. If the sanctioning country seeks to minimise the consequences for the poorest in the sanctioned country, military sanctions appear to be the most appropriate, while if the objective is to maximise these consequences, sanctions on mobility are optimal.

KEYWORDS

growth, inequality, international sanctions, Latin America, poverty

1 | INTRODUCTION

Since the end of World War II, the use of international sanctions as a means of deterring undesirable behaviour in sanctioned countries or as an exemplary punishment for other countries has increased (Daoudi & Dajani, 1983; Hufbauer et al., 2009; Neuenkirch & Neumeier, 2016). Sanctioning countries attempt to impose their interests or views without resorting to armed conflict. Other reasons for imposing sanctions involve territorial disputes, protection of allied countries, demonstration of leadership[1] and domestic political objectives, among others (Hufbauer et al., 2009). Typically, sanctions include restrictions on trade (especially military trade) and on the mobility of people and financial flows (Felbermayr, Syropoulos et al., 2020).

This article focuses on the impact of these restrictions (international sanctions) on the economic development of sanctioned countries. In particular, it investigates the types of sanction that impose the greatest negative consequences on outcomes such as growth, inequality, and poverty in the sanctioned country. This is especially relevant if the sanctioning country seeks to minimise the consequences on the poorest (which it may well not). In addition, the article sheds light on the mechanisms whereby international sanctions affect the economic development of the sanctioned country.

The existing literature reports the negative consequences of international sanctions. These include a broad reduction in economic growth (Neuenkirch & Neumeier, 2015), an increase in income inequality (Afesorgbor & Mahadevan, 2016) and also an increase in the incidence of poverty (Neuenkirch & Neumeier, 2016). In all cases the results arise from a broad group of developed and developing countries in multiple regions. Some of the literature explores the impact of international sanctions on dimensions such as respect for human rights and democracy (Carneiro, 2014; Liou et al., 2021), labour informality (Eatly & Peksen, 2019), population health (Aloosh et al., 2019; Gutmann et al., 2021) or environmental performance (Fu et al., 2020).

Currently, certain specific cases of international sanctions have become widely publicised: Russia (for annexing territory) and North Korea and Iran (for their nuclear programmes). Latin America and the Caribbean has not been exempted from these sanctions. In addition to Cuba (sanctioned for becoming a socialist country in the context of the cold war), the country with the most years with sanctions to date (62 years, Table 1), other countries in the region have faced frequent sanctions. This includes sanctions on Argentina, motivated by the armed conflict with the United Kingdom in 1982 over the Malvinas Islands,[2] or on Brazil and Chile in the context of the cold war and in response to the inauguration of presidents considered close to socialist ideas (Joao Goulart and Salvador Allende, respectively). In other episodes (e.g. Argentina, Uruguay or Paraguay in the 1970s) sanctions were aimed at improving the protection of human rights in the context of military governments (Hufbauer et al., 2009). Venezuela, a country suffering from extensive sanctions at present (Barlett & Ophel, 2021), presents a complex picture: although it has a popularly elected government, multiple complaints of human rights violations that led to the sanctions have been reported. Furthermore, a wide group of countries do not recognise Venezuela's president (Nicolás Maduro) as such.

TABLE 1 International sanctions in Latin America and the Caribbean, 1950–2019

Country	Years with sanctions	Most frequent sanctioner
Antigua and Barbuda	8	United States
Argentina	20	United States
Barbados	7	United States
Belize	20	United States
Bolivia	12	United States
Brazil	15	United States
Chile	29	United States
Colombia	21	United States
Costa Rica	16	United States
Cuba	62	United States
Dominica	2	United States
Dominican Republic	19	United States
Ecuador	17	United States
El Salvador	13	United States
Grenada	1	Antigua and Barbuda, Dominica, Montserrat, Saint Kitts and Nevis, Saint Lucia and Saint Vincent
Guatemala	36	United States
Guyana	7	United States
Haiti	37	United States
Honduras	12	United States
Jamaica	9	United States
Mexico	7	United States
Nicaragua	17	United States
Panama	11	United States
Paraguay	14	United States
Peru	23	United States
St. Lucia	7	United States
Suriname	12	Netherlands
Trinidad and Tobago	7	United States
Uruguay	12	United States
Venezuela	18	United States

Note: Countries not listed in the table have not been subjected to international sanctions (Aruba, Bahamas, British Virgin Islands, Cayman Islands, Curacao, Puerto Rico, Saint Kitts and Nevis, Saint Martin, Saint Vincent and the Grenadines, Turks and Caicos Islands, Virgin Islands).
Source: Author's elaboration based on the Global Sanctions Database.

This article analyses the different sanction regimes that have been applied in the Latin American and Caribbean region and assesses their impact on the economic development of the sanctioned countries. This includes the consequences for economic growth, income inequality and the incidence and gap of poverty. The econometric identification strategy is based on the

construction of a panel of countries and estimation using a two-way fixed effects model, which controls for unobserved geographical and temporal heterogeneity. I combine data from the World Development Indicators (World Bank, 2021) with those from the Global Sanctions Database (Felbermayr, Kirilakha, et al., 2020), for the period 1950–2019.

The results show that sanctioned countries experience a significant worsening in their economic development over the duration of sanctions. This includes a reduction in growth (minus 0.6 percentage points, pp), an increase in inequality (1.5 points in the Gini coefficient), as well as an increase in the incidence and gap of monetary poverty (1 pp and 0.7 pp, respectively). Exploring the mechanisms through which these effects take place, I find that the reduction in gross capital formation (investment) and access to credit in the private sector are two relevant mechanisms. The results are robust to multiple specifications (exclusion of control variables and fixed effects, countries with more years with sanctions, Caribbean countries, disaggregation by type of sanction and to control by type of political regime in each country and year).

The results shed light on the optimal type of sanctions for minimising the impact among the poorest in the sanctioned country (i.e. less impact on growth and poverty). Military sanctions appear as those with the least effect on these indicators, while sanctions on the mobility of people are the most severe. Thus, a poor implementation of sanctions can lead to a paradoxical situation: given that many sanctions are implemented after systematic human rights violations in the sanctioned country, the sanctioning country may end up worsening the living conditions of those it claims to protect.

However, it is not obvious that the sanctioning country does not want to reduce the wellbeing of the poorest in the sanctioned country, thereby reducing popular support for the sanctioned government. Thus, the different types of sanctions could also be combined to achieve this undisclosed objective.

The added value of this article lies in four aspects. First, the article examines the consequences of sanctions in a specific developing region (Latin America and the Caribbean), excluding developed countries and minimising the heterogeneity that arises when multiple regions are considered at the global level. Second, recent evidence is provided on the impact of international sanctions (up to 2019). The most recent literature has not incorporated developments in the last decade (Afesorgbor & Mahadevan, 2016; Neuenkirch & Neumeier, 2015, 2016). Third, results are disaggregated by type of sanction to identify the differential impact of each type. Fourth, evidence is provided on the channels through which the observed development effects of sanctioned countries emerge.

Section 2 describes the main theoretical considerations on sanctions and its consequences. Section 3 presents the sources of information used. Section 4 describes the identification strategy used and the multiple robustness checks implemented. Section 5 presents the results and, finally, section 6 presents the conclusions.

2 | THEORETICAL CONSIDERATIONS AND HYPOTHESIS

The literature has proposed multiple theoretical considerations by which the presence of international sanctions can affect inequality or growth and, ultimately, poverty (Afesorgbor & Mahadevan, 2016). Cooper (1989) shows, based on the Stolper–Samuelson theorem, that the imposition of sanctions can worsen inequality and delay the changes expected by sanctions. Thus, if sanctions act as a prohibitive tariff for imports, domestic producers of goods that compete with imports will experience a price increase. This results in an increase in the

remuneration of the productive factor used intensively in its production (e.g., the return rate of capital). This can increase the lobbying power of capitalists against politicians, delaying expected changes and worsening income distribution. The foregoing can be deepened in the case of non-democratic governments that are less sensitive to the demands of the people.

From a public choice perspective, Kaempfer and Lowenberg (1988) depart from the typical conception of sanctions having an *instrumental* objective (to induce changes in the sanctioned country's policy from causing the greatest possible economic damage) and instead discuss an *expressive* objective: to serve the interests of pressure groups in the sanctioning country. These interests can be economic (producers of goods that compete with goods imported from the sanctioned country) or respond to other motivations (e.g. moral). According to the authors, even sanctions that generate minimal economic damage (in terms of growth or inequality) can be effective if they represent a signalling or threat. In addition, they argue that sanctions will arise according to the effectiveness of pressure groups in the sanctioning country and that this explains why sanctions typically limit imports from the sanctioned country but not exports to the same destination. In this case, sanctions will be more effective against governments that are more open to international trade.

Kaempfer and Lowenberg (1988) report that sanctions will be more effective when income losses are concentrated in groups that benefit from the sanctioned country's policy, signal political support for opposition groups, and generate a threat of greater losses to future. This is reinforced when opposition pressure groups from the sanctioned country ally with the sanctioning country to achieve policy changes.

Adopting a microeconomic approach, Kirshner (1997) argues that the consequences of sanctions depend on their differential effect on pressure groups in the sanctioned country. Thus, sanctions can weaken the government of the sanctioned country by affecting the interests of pressure groups such as the middle class, large companies, and so forth. The reduction in income faced by these groups, which can result in lower growth or greater inequality and poverty, encourages them to press for changes in the sanctioned government's policy. Kirshner argues that the purpose of sanctions may be broader than to achieve a change in the policy of the sanctioned country. This includes communicating preferences, supporting allies, and preventing other countries from doing the same. The effectiveness of a sanction depends on factors such as relative size (the larger the economy of the sanctioning country in relation to that of the sanctioned country, the more effective is the sanction), exposure (openness to trade) and cooperation (number of countries that sanction). Kirshner argues that the different types of sanctions generate consequences in different terms and that this should be considered in their implementation according to the objective pursued. Thus, monetary and financial sanctions have short-term consequences, while trade sanctions take longer to produce results.

3 | SOURCES OF INFORMATION

This article combines two sources of information. First, information on international sanctions comes from the Global Sanctions Database (Felbermayr, Kirilakha, et al., 2020; Kirilakha et al., 2021), which provides detailed information on sanctions of all types implemented between 1950 and 2019. This information makes it possible to identify the years with sanctions in force, the sanctioning country or countries and the sanctioned country, the type of sanction (trade, mobility, financial or military) and its target. This source of information provides updated coverage (up to and including 2019) and by country for the entire Latin American and

Caribbean region. It also allows for disaggregation by type of sanction. The sanctions contemplated here may involve one or more sanctioning countries and one or more sanctioned countries. One of the limitations of this source of information is that it does not indicate the specific duration in months of each sanction.

As Table 1 shows, Cuba has experienced the most years with sanctions to date. Among the sanctioning countries, the United States appears to have imposed the greatest number of sanctions, at 69 per cent of all sanctions (Table A.7 in the Appendix). In addition, military and arms sanctions are the most frequent type of sanction (51 per cent of cases), while the least frequent type is on mobility (3 per cent of cases) (Table A.6).

The second source of information is the World Bank's World Development Indicators database (World Bank, 2021). From this source, annual information is extracted on the main development indicators for each country. This includes measures of GDP growth rate, inequality (Gini coefficient), poverty incidence (percentage of people living on less than US\$1.9 per day), poverty gap, population growth, GDP per capita, and trade openness (share of exports and imports in GDP). Table A.1 in the Appendix presents basic descriptive statistics by country for the variables of interest.

4 | METHODOLOGY

Based on the sources of information detailed above, a panel of countries is constructed for the period 1950–2019. In particular, the relationship between development and international sanctions is estimated from the following two-way fixed effects specification. This is consistent with the proposal of Neuenkirch and Neumeier (2015).

$$l_{c,t} = \partial + \beta S_{c,t} + X_{c,t} + \gamma_c + \rho_t + \varepsilon_{c,t} \tag{1}$$

where $l_{c,t}$ is the outcome of interest for country c in year t; $S_{c,t}$ is the variable of interest and captures the presence of sanctions in force in country c in year t ($= 1$), while it takes a value of 0 in the absence of sanctions; γ_c is country fixed effects that control for those factors not observed and that differ between observational units; ρ_t is time fixed effects; $X_{c,t}$ is a vector of covariates (includes population growth, degree of trade openness – the ratio exports plus imports to GDP – and per capita GDP) and $\varepsilon_{d,t}$ is the error term of the model.

The outcomes of interest ($l_{c,t}$) include GDP growth (between years t and $t − 1$), income inequality measured by the Gini coefficient, and the incidence of monetary poverty (proportion of people living on less than US\$ 1.9 a day) and the monetary poverty gap (considering the same poverty line of US\$ 1.9 a day). The imposition of international sanctions is expected to worsen the economic development of the sanctioned country. Thus, it is expected that the interest coefficient (β) is negative in the case of economic growth and positive in the other outcomes of interest.

For each outcome of interest, the existence of heterogeneous effects is explored by disaggregating by type of sanction. The classification, as it emerges from the main source of information, includes trade, financial, mobility of people, and military assistance and arms sales sanctions.

Additionally, a battery of robustness checks is carried out. First, the estimates are reiterated by considering more parsimonious models that exclude control variables and fixed effects. Second, equation 1 is re-estimated by excluding the country with the longest number of years with

sanctions (Cuba). Third, equation 1 is re-estimated by excluding the Caribbean islands. Fourth, the channels through which the imposition of sanctions results in a worsening of development are explored. Fifth, controls for the type of political regime in force in each country and year are incorporated into the regressions. This makes it possible to distinguish the effect of the implementation of sanctions from those that arise from national political transitions. To do this, the database of Cheibub et al. (2010), which considers the Latin American and Caribbean region between 1940 and 2008.

5 | RESULTS

Table 2 presents the results that arise from estimating equation 1 for each outcome of interest. It is observed that international sanctions in place significantly reduce the economic growth of the sanctioned countries (minus 0.6 points) in relation to their non-sanctioned peers. International sanctions also increase income inequality in the sanctioned countries (1.5 points of the Gini coefficient). These results are robust to the exclusion of socioeconomic controls and geographic and temporal fixed effects. In addition, marginally significant effects are observed on the incidence and the poverty gap (considering a poverty line of US$1.9 per day).

The results in Table 2 suggest that international sanctions significantly worsen the development of sanctioned countries. These results are robust to multiple specifications. Table A.3 shows that the results hold when the country with the most years with sanctions (Cuba) is excluded, while Table A.4 shows that the results are robust to the exclusion of the Caribbean islands. Tables A.8 and A.9 show that the results are robust when the type of political regime in force in each country and year are controlled for.

Table 3 presents the results of disaggregating by type of sanction. It is observed that mobility, financial and trade sanctions have the largest negative effects on the economic growth of

TABLE 2 International sanctions and development, 1950–2019

Outcome of interest	1	2	3
Economic growth	− 0.636009**	− 0.651720**	− 0.427071*
	(0.293564)	(0.278978)	(0.253571)
Inequality	1.519947***	1.518213***	1.792120***
	(0.409497)	(0.430039)	(0.40613)
Poverty incidence (US$1.9)	1.119887*	1.152346*	0.315513
	(0.64984)	(0.654128)	(0.663042)
Poverty gap (US$1.9)	0.754905*	0.795030**	0.041465
	(0.393069)	(0.386162)	(0.354017)
Fixed effects	Yes	Yes	No
Control variables	Yes	No	No

Notes: Standard errors in brackets. The R^2 values and number of observations for each cell are presented in Table A.2. The complete results (including control variables) are presented in Table A.10.

*significant at 10%, **significant at 5%, ***significant at 1%.

Source: Author's elaboration based on Global Sanctions Database and World Development Indicators.

TABLE 3   Types of international sanctions and development

Outcome of interest	Military and arms	Commercial	Mobility	Financial
Economic growth	− 0.7481019*	− 1.543190***	− 3.807292***	− 1.624474***
	(0.343035)	(0.468941)	(1.827502)	(0.358211)
Inequality	2.042285***	0.1617578	− 1.944990	0.157175
	(0.534087)	(0.57977)	(2.626389)	(0.655859)
Poverty incidence (US$1.9)	1.095694	0.204758	− 4.163837	0.318243
	(0.855282)	(0.909433)	(3.041931)	(1.028217)
Poverty gap (US$1.9)	0.681979	0.356675	− 3.576958	0.278067
	(0.510737)	(0.551168)	(2.493101)	(0.622534)
Fixed effects	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes

Notes: Standard errors in brackets. The R^2 values and number of observations for each cell are presented in Table A.5.
*significant at 10%, **significant at 5%, ***significant at 1%.
Source: Author's elaboration based on Global Sanctions Database and World Development Indicators.

TABLE 4   Mechanisms for international sanctions effects, 1950–2019

Outcome of interest	Foreign direct investment	Gross capital formation	Credit to the private sector	Credit to central government
Sanctions in force	− 0.155738	− 0.762708**	− 2.394428**	3.078892**
	(0.244833)	(0.365932)	(0.824636)	(1.341288)
Fixed effects	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
N of observations	1,315	1,465	1,485	1,482
N of groups	32	30	30	30
R^2	0.4688	0.4999	0.6651	0.4573

Notes: Standard errors in brackets. In all four estimations, the dependent variable is measured as a percentage of GDP.
*significant at 10%, **significant at 5%, ***significant at 1%.
Source: Author's elaboration based on Global Sanctions Database and World Development Indicators.

the sanctioned country. This suggests that barriers to the mobility of people, capital and goods significantly reduce economic growth. Strikingly, military and arms sanctions are the only sanctions that have a significant effect on income inequality.

So far, it has been observed that the imposition of international sanctions significantly worsens the economic development of sanctioned countries. The question that arises next is through which channels or mechanisms these development effects take place. Table 4 shows that sanctions reduce gross capital formation in the sanctioned country. At the same time, credit to the private sector decreases and credit to the public sector (central government) increases. In other words, sanctions reduce investment (capital formation), which in turn may be due to a widespread tightening of access to credit by the private sector.

The results reported in this article are consistent with previous evidence. International sanctions reduce economic growth in sanctioned countries, in line with Neuenkirch and Neumeier (2015). The estimates presented here are consistent (0.6 pp) with those reported by Neuenkirch and Neumeier (2015) for the case of sanctions imposed by the United States (the main sanctioning country in Latin America and the Caribbean) (0.5–0.9 pp). In terms of the effects on inequality – measured by the Gini coefficient – the estimates presented here (1.5 points of increase) are in line with the findings of Afesorgbor and Mahadevan (2016) for a group of 68 countries from different regions (between 1.5 and 1.7 points of increase). Finally, the reported in terms of poverty gap, although not robust to all specifications, is significantly smaller than that reported by Neuenkirch and Neumeir (2016) (0.75 percentage points versus 3.8 percentage points).

In all cases, the differences may arise from different geographical coverage (this article focuses on the Latin American and Caribbean region while the others examine multiple regions), from different temporal coverage (the period considered here is somewhat longer than those in the previous literature), and also from differences in estimation strategies and inclusion of controls. While Neuenkirch and Neumeir (2015) and Afesorgbor and Mahadevan (2016) use a similar estimation strategy to this article (two-way fixed effects estimation), Neuenkirch and Neumeir (2016) use a matching estimation approach that controls for observable factors to determine groups of similar countries that constitute a good counterfactual.

6 | CONCLUSIONS

This article has estimated the impact of international sanctions on the economic development of sanctioned countries. The findings show that international sanctions significantly worsen development in Latin America and the Caribbean by reducing economic growth and increasing income inequality. The United States is the country that has most frequently sanctioned countries in the region, while Cuba has faced the most years with sanctions.

The results reported here are worrying, for several reasons. First, Latin America and the Caribbean is the most unequal region in the world, along with sub-Saharan Africa (Alvaredo & Gasparini, 2013). Disparities can also be wide and persistent within countries (González & Santos, 2020). That is, the already high levels of inequality present in the region are amplified by the existence of sanctions. Second, the impact of sanctions appears not to be evenly distributed across the population. Indeed, the poorest are more affected. This is reflected in the increase in inequality and in the incidence of poverty. Third, certain countries have faced persistent sanctions, and this seems to have no certain end. Cuba, which has faced sanctions from the United States for more than six decades, is the most emblematic case.

Given the strong relationship, widely studied in the literature, between poverty and growth, and given that the sanctioning country would like to minimise the negative impact on lower-income households, military and arms sanctions seem the most appropriate type. At the same time, sanctions on the mobility of people would be the less desirable type for this purpose.

However, it could also be the case that the sanctioning country actively seeks to reduce support for the government of the sanctioned country by worsening the living conditions of the poorest. In this sense, the positive relationship between economic conditions and popular support is clear. In any case, whether this reduction in popular support for the sanctioned country's government is an undisclosed goal is difficult to determine. If it is assumed that the sanctioning countries know what types of sanctions impose more severe consequences on the poorest, the

Global Sanctions Database offers no empirical support for this undisclosed goal (Table A.6). Military and arms sanctions are the most frequent type of sanction, while restrictions on the mobility of people are the least frequent type. It should be noted, however, that the possibility of assessing the disaggregated impact by type of sanction is limited given that multiple types of sanctions are often implemented.

It would be relevant to deepen future analysis by using new development indicators. First, it is relevant to examine the impact of international sanctions on gender gaps, which are already wide in the region (González & Virdis, 2021). In fact, these gaps could widen if women are more affected by the loss of income and jobs. Second, given the current context of climate change and the global community's quest for sustainability, it is crucial to inquire into the impact of international sanctions on key sustainability parameters in sanctioned countries.

NOTES

[1] These types of demonstration, which frequently fall on the United States, can involve sanctions that are known to be ineffective. Rather, its objective responds to avoiding the cost of inaction: the loss of confidence at home and abroad regarding the ability or willingness to act.

[2] In particular, the United Kingdom banned imports from Argentina, froze Argentine assets in British banks and banned arms sales (Felbermayr et al., 2020a). These sanctions were extended after the end of the armed conflict and other countries adhered to the measures (Belgium, Canada, Denmark, France, Germany, and Italy, among others).

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APPENDIX

TABLE A.1 Descriptive statistics by country, 1950–2019

Country	GDP growth	Gini coefficient	Poverty incidence	Poverty gap	Population growth	Openness to trade	Annual per capita GDP (US$)
Antigua and Barbuda	3.88	n/a	n/a	n/a	0.99	172	11,491
Argentina	2.42	46.2	3.61	1.71	1.33	21	7,908
Aruba	3.60	n/a	n/a	n/a	1.14	150	25,414
Bahamas	3.24	n/a	n/a	n/a	2.15	98	26,483
Barbados	1.22	n/a	n/a	n/a	0.37	95	14,470
Belize	4.92	58	12.87	5.75	2.45	110	2,810
Bolivia	3.64	51.7	13.07	6.77	1.94	54	1,612
Brazil	3.97	57	12.17	4.99	1.82	20	7,935
British Virgin Islands	n/a	n/a	n/a	n/a	2.23	n/a	n/a
Cayman Islands	1.04	n/a	n/a	n/a	3.58	n/a	77,404
Chile	4.03	51	3.46	1.26	1.43	50	7,775
Colombia	4.09	53.95	9.61	4.52	1.94	32	4,582
Costa Rica	4.50	48	5.56	2.72	2.26	71	5,639
Cuba	3.07	n/a	n/a	n/a	0.78	52	4,109
Curacao	−0.14	n/a	n/a	n/a	0.39	154	n/a
Dominica	2.41	n/a	n/a	n/a	0.30	93	5,133
Dominican Republic	5.30	48.3	4.12	1.27	2.00	58	3,443
Ecuador	3.78	50	8.94	3.61	2.27	40	3,709
El Salvador	2.15	47	9.06	4.02	1.44	63	2,678
Grenada	3.36	n/a	n/a	n/a	0.37	89	5,752
Guatemala	3.86	55	21.32	9.35	2.36	45	2,409
Guyana	2.14	44.6	20.35	7.25	0.53	153	3,411
Haiti	1.57	41.1	24.50	8.0	1.81	38	1,357
Honduras	3.98	55	23.46	10.10	2.65	85	1,588
Jamaica	1.51	43	4.40	1.1	1.01	87	4,478
Mexico	3.83	51	6.66	2.59	2.06	38	7,698
Nicaragua	2.70	50.6	16.23	7	2.21	69	1,655
Panama	5.37	53.8	8.81	4.58	2.24	124	5,413

(Continues)

TABLE A.1 *(Continued)*

Country	GDP growth	Gini coefficient	Poverty incidence	Poverty gap	Population growth	Openness to trade	Annual per capita GDP (US$)
Paraguay	4.68	51	5.27	1.87	2.22	62	3,195
Peru	3.65	48	9.59	3.49	1.97	39	3,818
Puerto Rico	3.27	n/a	n/a	n/a	0.51	104	18,234
Sint Maarten	0.06	n/a	n/a	n/a	1.26	198	n/a
Saint Kitts and Nevis	3.89	n/a	n/a	n/a	0.05	n/a	11,843
Saint Lucia	3.56	46.9	19.65	7.65	1.21	n/a	7,099
Saint Martin	n/a	n/a	n/a	n/a	3.86	n/a	n/a
Saint Vincent and the Grenadines	3.04	n/a	n/a	n/a	0.53	102	3,816
Suriname	2.84	57.6	21.1	16.6	1.19	98	6,354
Trinidad and Tobago	3.26	41.45	1.8	0.4	0.84	n/a	9,239
Turks and Caicos Islands	4.48	n/a	n/a	n/a	3.19	n/a	21,028
Uruguay	2.30	43	0.34	0.10	0.53	40	8,194
Venezuela	2.81	49	10.15	7.02	2.12	50	13,344
Virgin Islands	−1.42	n/a	n/a	n/a	2.01	39	35,629

Source: Author's elaboration based on World Development Indicators.

TABLE A.2 R^2 and number of observations in regressions of Table 2

Outcome of interest		1	2	3
Economic growth	N of groups	33	40	40
	N of observations	1,593	1,974	1,974
	R^2	0.2356	0.2063	0.0006
Inequality	N of groups	22	25	25
	N of observations	395	400	400
	R^2	0.8300	0.8052	0.0362
Poverty incidence (US$1.9)	N of groups	22	25	25
	N of observations	411	416	416
	R^2	0.8035	0.7961	0.0002
Poverty gap (US$1.9)	N of groups	22	25	25
	N of observations	398	403	403
	R^2	0.7192	0.7241	0.0001

Source: Author's elaboration based on Global Sanctions Database and World Development Indicators.

TABLE A.3 International sanctions and development when excluding Cuba

Outcome of interest	Economic growth	Inequality	Poverty incidence	Poverty gap
Sanctions in force	−0.5714175**	1.519947***	1.119887*	0.754905*
	(0.288786)	(0.409497)	(0.64984)	(0.393069)
Fixed effects	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
N of groups	32	22	22	22
N of observations	1,545	395	411	398
R^2	0.2513	0.8300	0.8035	0.7192

Note: Standard errors in brackets.
*significant at 10%, **significant at 5%, ***significant at 1%.
Source: Author's elaboration based on Global Sanctions Database and World Development Indicators.

TABLE A.4 International sanctions and development when excluding the Caribbean countries

Outcome of interest	Economic growth	Inequality	Poverty incidence	Poverty gap
Sanctions in force	−0.783204***	2.061711***	0.748594	0.614933
	(0.319004)	(0.445574)	(0.743372)	(0.448760)
Fixed effects	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
N of groups	21	18	18	18
N of observations	1,116	357	372	360
R^2	0.2825	0.8334	0.8002	0.7155

Note: Standard errors in brackets.
*significant at 10%, **significant at 5%, ***significant at 1%.
Source: Author's elaboration based on Global Sanctions Database and World Development Indicators

TABLE A.5 R^2 and number of observations in regressions of Table 3

Outcome of interest		Military and arms	Commercial	Mobility	Financial
Economic growth	N of groups	33	33	33	33
	N of observations	1,593	1,593	1,593	1,593
	R^2	0.2356	0.2387	0.2354	0.2436
Inequality	N of groups	22	22	22	22
	N of observations	395	395	395	395
	R^2	0.8304	0.8229	0.8232	0.8229
Poverty incidence (U$S 1.9)	N of groups	22	22	22	22
	N of observations	411	411	411	411
	R^2	0.8027	0.8018	0.8028	0.8018
Poverty gap (U$S 1.9)	N of groups	22	22	22	22
	N of observations	398	398	398	398
	R^2	0.7176	0.7165	0.7179	0.7163

Source: Author's elaboration based on Global Sanctions Database and World Development Indicators.

TABLE A.6 International sanctions by type

Type of sanction	Frequency (%)
Military and arms	51.4
Commercial	15.6
Mobility	3.9
Financial	29.1
N	642

Source: Author's elaboration based on Global Sanctions Database.

TABLE A.7 International sanctions by sanctioning country

Sanctioning country	Frequency (%)
United States	69.6
Antigua and Barbuda	8.4
Austria	5.1
Argentina	4.7
Belgium	3.9
Netherlands	2.4
Others*	5.9

*Others includes Afghanistan, Albania, Australia, Canada, Colombia, Germany, Iran and United Kingdom.
Source: Author's elaboration based on Global Sanctions Database.

TABLE A.8 International sanctions and development when controlling by the presence of a democratic regime

Outcome of interest	Economic growth	Inequality	Poverty incidence	Poverty gap
Sanctions in force	−0.811048**	1.24770**	1.47044	1.20697*
	(0.376805)	(0.606742)	(1.06425)	(0.628810)
Democracy	−0.016599	−1.75219**	−1.84422	−0.902909
	(0.404666)	(0.99161)	(1.76191)	(1.04103)
Fixed effects	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
N of groups	30	21	21	21
N of observations	1,203	254	257	257
R^2	0.2155	0.8139	0.7851	0.7052

Notes: Standard errors in brackets. Democracy is a dummy variable (1 if democracy, 0 otherwise).
*significant at 10%, **significant at 5%, ***significant at 1%.
Source: Author's elaboration based on Global Sanctions Database and World Development Indicators.

TABLE A.9 International sanctions and development when controlling by type of political regime

Outcome of interest	Economic growth	Inequality	Poverty incidence	Poverty gap
Sanctions in force	−0.827686**	1.533686*	1.521183	1.217168*
	(0.377744)	(0.607101)	(1.083456)	(0.640261)
Type of Regime control	Yes	Yes	Yes	Yes
Fixed effects	Yes	Yes	Yes	Yes
Control variables	Yes	Yes	Yes	Yes
N of groups	30	21	21	21
N of observations	1,203	254	257	257
R^2	0.2163	0.8203	0.7852	0.7052

Notes: Standard errors in brackets. Type of Regime is a categorical variable (0 if parliamentary democracy, 1 if semi-presidential democracy, 2 if presidential democracy, 3 if civilian dictatorship, 4 if military dictatorship and 5 if royal dictatorship).
*significant at 10%, **significant at 5%, ***significant at 1%.
Source: Authors elaboration based on Global Sanctions Database and World Development Indicators.

TABLE A.10 Results for control variables in Table 2

Control variable	Economic growth	Inequality	Poverty incidence	Poverty gap
Population growth	0.255449	−3.584142***	1.815953*	0.8082341
	(0.2493126)	(0.6387564)	(1.00565)	(0.6139028)
Trade openness	0.0147062***	−0.0109814	−0.0297281	−0.0132841
	(0.0038604)	(0.0135433)	(0.020966)	(0.0126889)
GDP per capita	−0.0000408	0.0003673**	0.0003795	0.0000876
	(0.000068)	(0.0001651)	(0.00026)	(0.0001592)

Note: Standard errors in brackets.
*significant at 10%, **significant at 5%, ***significant at 1%.
Source: Author's elaboration based on Global Sanctions Database and World Development Indicators.