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Author(s): Abel Escribà-Folch

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Economic sanctions and the duration of civil conflicts

Abel Escribà-Folch

Universitat Pompeu Fabra

Abstract

This article studies the impact of economic sanctions on the duration and outcome of intrastate conflicts. Sanctions are argued to foster the convergence of beliefs over parties' capacity, to reduce the utility of victory and to increase the costs of continuing fighting. Using a sample of 87 wars and new data on sanctions and sanction types, the author shows that sanctions and their durations are statistically associated with shorter intrastate conflicts. It is also shown that total economic embargoes are the most effective type of coercive measure in these cases and that sanctions imposed either by international organizations or by other actors have similar negative effects on war duration. In the second part of the article, the dependent variable is disaggregated, and I demonstrate that sanctions imposed by international institutions increase the likelihood of conflict resolution, whereas those sanctions not imposed by such institutions tend to increase the probability of a military victory. Moreover, if the targeted state is a member of the international institution imposing the sanctions, the effect of such coercion is even greater. Economic embargoes are also proven to increase the likelihoods of a military and a negotiated end, whereas international arms embargoes reduce the likelihood of a military victory.

Keywords

civil war, duration, sanctions, sanctions types, war outcome

Introduction

Although economic sanctions are among the most commonly used instruments of international relations, their usefulness is constantly under debate and, quite often, doubted (Pape, 1997, 1998; Nurnberger, 2003). Sanction episodes have been motivated by a multiplicity of factors, among which civil conflicts and political violence are two of the most prominent. To cite some examples, sanctions have targeted countries experiencing civil war, such as Liberia, Yugoslavia, Sudan, Rwanda, Lebanon and Cambodia. As the controversy continues, the number of sanctions imposed has sharply increased over the last two decades, especially those imposed by the United Nations. Assessing whether these instruments of international relations have had any significant effect in bringing about war termination is thus especially relevant.

The existing literature on civil war duration has already emphasized the important role that external actors may play. Sanctions constitute a rather specific method of intervention based on coercive measures imposed by one country, an international organization or a coalition of countries against another country – the government or any group within the country – with the aim of bringing about a change in a specific policy or behaviour. The debate about sanctions revolves around not only their efficacy, but also whether some types of sanction are more successful than others.

The aim of this article is to analyze the effect of economic sanctions on the likelihood of civil war termination, in order to aid our understanding of the usefulness of third-party interventions and their modalities. We also study the effects of different types of sanction and how they affect the war outcomes (i.e. military victory versus negotiated settlement). To do so, I use a dataset including 87 intrastate conflicts occurring between 1959 and 1999. The results show that international sanctions and their duration are negatively and significantly associated with civil war length. Further refinements of both the main independent and dependent variables serve to show also that the most effective measure is a total economic embargo against the target country. Regarding multilateral sanctions, we show that sanctions imposed by multilateral international institutions increase the likelihood of a negotiated settlement, while those not conducted through such institutions enhance the likelihood of military victories.

The article proceeds as follows. First, we summarize the literature on civil war duration and external interventions. Next, we deal with the potential effects of economic sanctions and their types on the durability of civil wars and the mode of conflict termination, paying attention to the mechanisms that may

Corresponding author:
abel.escriba@upf.edu

link both variables. In the following sections, we present the data and the methods employed and discuss the empirical results. The last section summarizes the main findings.

External interventions and civil war duration: A review

The growing literature studying the expected duration of civil wars bases its explanations fundamentally on the costs of war, forecast errors and actors' capabilities, which can be altered by the involvement of third parties. Just as in the case of international sanctions, the efficacy and convenience of external interventions are subject to constant debate. Given that sanctions are a particular form of outside intervention, it is worth briefly reviewing the main insights drawn from the literature relating external interventions and war duration.

In practice, third-party interventions predominantly rely on the manipulation of the expectations of victory and the costs associated with continued warfare in order to influence the war process (Regan, 2002). Interventions may be directed toward assisting the government, supporting the rebellion or remaining neutral. The existing evidence is rather mixed and inconclusive, owing to the different samples and techniques employed.

According to Elbadawi & Sambanis (2000), outside interventions tend to reduce the cost of coordinating a rebellion. Taking Regan's data on interventions and covering the period 1960–1999, they estimate the predicted probability that an external intervention will take place in a given civil conflict and find that this measure is associated with longer wars. Balch-Lindsay & Enterline (2000) use Correlates of War (COW) Intrastate War Data on outside interventions and conflict and show that biased interventions increase war duration and that balanced interventions result in extremely long civil wars. Similarly, after incorporating some refinements to his data, which incorporate 150 conflicts between 1945 and 1999, Regan (2002) reports that both economic and military interventions have a strong positive impact on intrastate war length. Buhaug, Gates & Lujala (2002) find that interventions on the government's side increase the time until a civil war ends. All these findings are consistent with Cunningham's (2006) finding that multiple veto players are related to longer conflicts. Conversely, Collier, Hoeffler & Söderbom (2004) use Regan's data on outside interventions but instead of considering contemporaneous effects, they use a measure that cumulates the number of months of each type of external intervention. Their results, using a sample of 55 wars between 1960 and 2000, show that economic interventions have a positive effect on war length but are wholly insignificant, and that only military interventions on the side of the rebels result in shorter civil wars.

The study of the likelihood of war end may overlook the alternative ways in which a conflict can actually terminate. Consequently, simple duration models have the disadvantage that they do not differentiate the different effects of a given covariate on the alternative war outcomes, because the coefficients would be reflecting an average effect of how factors affect different outcomes (such as a military victory or a negotiated settlement). So, for instance, one may find that a covariate is not significant because it has opposing effects on a government military victory and an opposition military victory. The distinction between war outcomes has permitted scholars to yield new insights concerning the precise role of third-party interventions. Mason, Weingarten & Fett (1999) use COW data (including 57 civil conflicts between 1945 and 1992) and report that third-party interventions make a negotiated settlement more unlikely. Yet, they also show that as the conflict becomes protracted, interventions increase the likelihood of a settlement. Similarly, analyzing a sample containing 213 wars and outside interventions compiled from the COW database covering the period 1816–1997, Balch-Lindsay, Enterline & Joyce (2008) find that a third-party intervention supporting one of the sides reduces the time until that group achieves military victory, but it makes a negotiated settlement more unlikely. In contrast, DeRouen & Sobek (2004) report that UN interventions increase the probability of a treaty or a truce and decrease the likelihood of one side's victory.

International sanctions and conflict resolution

The first comprehensive empirical study revealed a low success rate of imposed sanctions (Hufbauer, Schott & Elliott, 1990; Hufbauer et al., 2007).[1] Later research tended to increase scepticism contending that sanctions basically do not work and that any policy effect observed is due to the use of force that frequently accompanies them (Pape, 1997, 1998). Further studies then moved to investigate what kind of sanctions were more effective, under what conditions could sanctions be expected to work, and the impact of sanction threats.

Concretely and concerning threats, it is argued that, as economic coercion is the result of strategic interaction, those sanctions that are likely to be effective will succeed at the mere threat stage (Drezner, 2003; Lacy & Niou, 2004). As for imposed sanctions, some conditions have been identified that make sanctions more likely to work: the sender's perceptions of the salience of the issue (Ang & Peksen, 2007), the initial stability of the target and the cost to the target country (Dashti-Gibson, Davis & Radcliff, 1997), the political regime of the targeted country (Nooruddin, 2002; Lektzian & Souva, 2007), and future conflict expectations (Drezner, 1998). Finally, scholars have also sought to measure and explain coercion effectiveness from the perspective of the type of measures applied or according to the senders' characteristics. One part of the debate revolves around whether unilateral or multilateral sanctions are more effective (Bapat & Morgan, 2007; Drezner, 1999; Hufbauer, Schott & Elliott, 1990; Kaempfer & Lowenberg, 1999), as well as around the role of international organizations (Drezner, 2000) and the involvement of

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[1] The updated version of the book reports the same rate of success, about one-third. See Hufbauer et al. (2007).

superpowers (Davis & Engerman, 2003). The second branch of the debate seeks to establish the efficacy of targeted measures vis-à-vis comprehensive sanctions. Some evidence suggests that financial sanctions increase the success rate of sanctions seeking to yield a policy change. On the contrary, Cortright & Lopez (2002), albeit being in favour of smart sanctions, find evidence supporting the greater effectiveness of comprehensive sanctions, as they maximize the economic and social impact on the target.

Economic sanctions constitute a concrete type of external intervention relying on coercive measures consisting of different types of intended economic damage with the aim of triggering a policy change in the target government. The main motivations for such measures are intrastate conflicts, human rights violations and political violence. Therefore, an appropriate way to assess their success is to analyze whether sanctions have been of any help in shortening civil wars (and fostering conflict resolution). However, the studies of external interventions reviewed above have not considered sanctions separately; rather, they consider only 'economic interventions', which may include aid, grants, loans and restrictions. Thus, we know little about the specific impact – if any – of economic sanctions in the specific context of civil war. So far, sanctions, interpreted as a type of costly signal from an external actor, have been shown to exert no significant impact on the probability of civil war onset (Thyne, 2006), while concerning war duration, the existing evidence is only partial and based on an extremely limited number of cases (Strandow, 2006).

The potential impact of sanctions on war length can be simply approached from the existing third-party intervention perspective. Sanctions can be thought of as constituting one particular form – economic – of external intervention into a civil conflict and, thus, involving the problems associated with such interventions. Accordingly, external interventions may make it difficult to reach an agreement or a military victory by entailing the involvement in the conflict of a new veto player, which might reduce the range of acceptable agreements (Cunningham, 2006), by reducing the costs of rebellion coordination (Elbadawi & Sambanis, 2000), or by shifting the balance of parties' capabilities toward parity (Regan, 2002). Consequently, and according to the existing evidence on external interventions reviewed in the previous section, economic sanctions would tend to lengthen the duration of civil wars, as indeed suggested by many of the empirical findings, such as Regan's (2002) study, which shows that economic interventions tend to prolong civil wars.

In contrast, sanctions can be argued to decrease civil war duration through various, more specific, mechanisms. In simple formal terms, and somewhat following Mason, Weingarten & Fett's (1999) setting, each party's expected utility of continued fighting at a given time can be expressed as follows:

$$EU_F = p_e U_V + (1 - p_e) U_D - EC_F, \qquad (1)$$

where p_e is that party's subjective estimate of the probability of winning, U_V is the utility of victory, U_D is the utility of being defeated, and EC_F stands for the estimated costs of fighting.[2] The other possible outcome is that both parties reach an agreement from which utility EU_S is derived.[3] Hence, a party will continue fighting unless

$$EU_S > EU_F, \qquad (2)$$

that is, if the utility of a settlement exceeds the expected utility of fighting; or unless the expected costs of fighting exceed the overall expected utility of victory, so one party gives up conflict and accepts defeat:

$$p_e U_V + (1 - p_e) U_D < EC_F. \qquad (3)$$

Following this simple scheme, sanctions may operate in the context of civil war (i) by altering the parties' beliefs about the relative distribution of power (which affect the combatants' estimations of the probability of victory, p_e), (ii) by affecting the structure of the incentives of the contending parties (so reducing the expected payoff from victory and the benefits of continuing fighting, U_V), or (iii) by reducing the amount of financial resources and arms necessary to sustain warfare, thereby increasing the costs of fighting, EC_F.

On the one hand, sanctions can be placed in the context of the general uncertainty that wars involve, which affects the estimated probability of victory, p_e. Hence, one set of arguments contends that the parties in a conflict will continue to fight if they are uncertain about the actual distribution of power, which makes the demands of the other side generally unacceptable (Filson & Werner, 2002). In other words, war duration can be understood as the result of forecast error – usually over-optimistic – on the part of one of the actors or both (Elbadawi & Sambanis, 2000). This view coincides with the rebellion-as-mistake approach, which stresses the role of misperceptions about the military capability and, hence, about the probability of victory (p_e) as a key determinant of war persistence (Hirshleifer, 2001; Collier, Hoeffler & Söderbom, 2004). Indeed, Cunningham, Gleditsch & Salehyan (2005) show that civil wars tend to last longer when rebel groups are weaker vis-à-vis the government. Under such conditions, a settlement is clearly implausible. All in all, as Strandow (2006) claims, conflict resolution is the result of convergence of the parties' beliefs over their relative power distribution, which sanctions can help to promote by influencing private information, thereby making the each side's estimated probability of winning, p_e, progressively approach the real probability of victory, $p_e \rightarrow p_r$. This makes possible that one side's

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[2] According to Mason, Weingarten & Fett (1999: 242), these costs 'must be summed from the present until that point in time in the future, when the party in question estimates that it will be able to achieve victory', so they could also be modelled just as $\sum_{t=0}^{t=victory} C_F$.

[3] We treat it, albeit without disaggregating it, as an expected utility, because settlements involve uncertainty due to implementation difficulties, potential cheating and lack of confidence between parties.

demands can be accepted by the other as they reflect its real power. For instance, sanctions are argued to have been successful in stabilizing the Liberian conflict. The arms embargo (imposed in 1992) made the acquisition and delivery of weapons more difficult and less predictable (Wallensteen, Eriksson & Strandow, 2006). Charles Taylor even declared 'we are hands-tied as a result of the arms embargo' (cited in Strandow, 2006: 11). A comprehensive peace agreement was reached in August 2003. The settlement prompted the resignation of former president Charles Taylor. The National Transitional Government of Liberia (NTGL) – which included both rebel and government groups – took over two months later.

On the other hand, sanctions may shorten conflict through their impact on the parties' incentives to continue the fight, that is, the expected utility a party would derive from victory (U_V) and the utility of sustained conflict. If some civil wars effectively contain a greed component (Collier & Hoeffler, 2004), then, as Collier Hoeffler & Söderbom (2004: 254) propose, 'a key prediction is that the higher the payoff from victory, the longer would be the warranted rebellion'. Rebellion is seen as an investment in this case, and economic sanctions, by restricting the expected benefits of resource control and export, may alter parties' incentives to prolong a conflict. Likewise, in the conceptualization of rebellion as business, groups have an incentive to continue fighting when the general state of lawlessness makes contraband and other illegal activities possible and highly profitable (Collier, 2000). Indeed, Fearon (2004) shows that contraband by rebels increases war duration, especially given the presence of *lootable* goods like diamonds and gemstones (Buhaug, Gates & Lujala, 2002). Perhaps the clearest examples of measures seeking to limit such incentives are diamond sanctions and other export restrictions. These seek to control illicit trade and limit the funding of rebel groups and, thus, the expected utility of controlling the extraction and trade of natural resources and other commodities. For example, the export ban and the oil embargo imposed by the UN against the Khmer Rouge seriously limited many gem-mining operations around Pailin (Cambodia). Then, if S stands for sanctions, we have that $\frac{\partial U_V}{\partial S} < 0$. So, as a result, both the right-hand side in (2) and the left-hand side in (3) decrease, as the expected utility of continued fighting shrinks.

Finally, independently of the underlying motivations for continuing a war, its durability is going to be crucially influenced in the short term by both financial and military feasibility (Buhaug, Gates & Lujala, 2002; Fearon, 2004; Humphreys, 2005). This is the main mechanism through which sanctions are supposed to operate, as they are especially designed to try to limit such viability by curtailing contending parties' arms procurements, illicit flows and the collection of public revenues from trade and foreign aid, so increasing the expected costs of conflict, $\frac{\partial EC_F}{\partial S} > 0$. Therefore, according to our setting, this makes the right-hand side in (2) decrease and the right-hand side in (3) increase, making war termination more likely. For instance, a trade embargo may decrease the exports of goods, thereby affecting the resources available to

the government. As for the rebel side, sanctions are usually aimed at limiting the funding that some of these groups obtain through contraband. For example, it is argued that the Lancaster House agreement (1979) that put an end to the conflict in Rhodesia was in part made possible by the extensive UN sanctions, imposed in 1966, that forbade trade (the insuring of commodities or goods, exports and imports from Rhodesia) as well as financial exchange with the target country, and so weakened Ian Smith's government and forces. The diamond embargo recently imposed on Ivory Coast (2005) is intended to reduce the revenues raised from export and production by the rebels of the New Forces (Wallensteen, Eriksson & Strandow, 2006). Diamond sanctions have been imposed against UNITA in Angola (along with petroleum sanctions), Sierra Leone and Liberia. It is argued that the 2001 diamond sanctions on Liberia were effective in reducing government revenues and, consequently, shortening the conflict (Wallensteen, Eriksson & Strandow, 2006). If properly enforced, all of them are principally designed to cut to some extent the flow of monetary and military resources into the hands of the contending parties (especially the rebels).

So let us frame the following guiding hypotheses, relying on both the arguments against the usefulness of sanctions and on the three basic mechanisms just mentioned above in favour of sanctions' role in shortening conflicts:

H1a: Sanctions, as a sort of external intervention, are negatively related to the probability of war end.
H1b: The duration of civil war is decreased by the imposition of sanctions.

The debate over sanctions does not only revolve around whether they are effective or not. The apparent reliance for sanctions' success on the costs they impose on targets compelled governments and scholars to discuss and assess the type of cost that should be inflicted, and on what actor or group those costs should be concentrated in order to maximize effectiveness. In this case, comprehensive sanctions must be distinguished from the so-called smart – or targeted – sanctions. The former are intended to maximize general costs on target. Advocates of smart sanctions assert that instead, targeted measures maximize the cost on the specific group whose obedience is sought while avoiding causing the general population to suffer. Kaempfer & Lowenberg state that 'the sanctions which are most likely to precipitate the desired political change in the target country are those which concentrate income losses on groups benefiting from the target government's policy' (1988: 792). For instance, Dashti-Gibson, Davis & Radcliff (1997) find that when senders seek to achieve policy changes, the imposition of financial sanctions is an important determinant of success. On the contrary, Gershenson (2002) formally shows that it is the strength of sanctions that affects the allocation of resources to conflict and the utility of the contending parties. In fact, the existing evidence suggests that comprehensive sanctions are more effective (Cortright & Lopez, 2002),

and many studies have identified that the higher the costs imposed on the target, the higher the rate of success of the coercion episodes (Hufbauer, Schott & Elliott, 1990; Hufbauer et al., 2007; Dashti-Gibson, Davis & Radcliff, 1997; Drury, 1998; Nooruddin, 2002). Furthermore, some partial evidence on some specific types of smart sanctions tends to support the more pessimistic view about their lack of effectiveness. For instance, following a comparative assessment of some UN arms embargoes, such measures are argued to be largely irrelevant (Tierney, 2005). The reasons exposed for this failure include the exemption of Security Council members from the restrictions, the incentives to free-riding suppliers, weak enforcement, late application and the reinforcing of power asymmetries between parties (Tostensen & Bull, 2002; Tierney, 2005). In clear contrast, Strandow (2006) contends that arms embargoes, given that they directly target actors' military power, should be the most effective type of targeted measure – if properly implemented – in increasing the likelihood of conflict resolution by, as mentioned, favouring the convergence of beliefs over each party capacity. Strandow offers quantitative evidence of the positive role of UN sanctions on two cases, Liberia and Ivory Coast. In this article, I attempt to evaluate the relationship between different types of measures – such as total economic embargoes, arms embargoes, trade restrictions and aid cuts (most generally contained in sanction episodes) – and the duration of civil war. The above statements are summarized in the following hypothesis:

> *H2:* Sanctions that maximize costs on the target (total embargoes) should decrease the duration of civil conflicts.

Another way of studying and classifying sanctions consists of focusing on the senders. International sanctions are either multilateral or unilateral or, more specifically, are imposed either by international institutions or by just one state (or a small coalition of them). Some evidence tends to support the view that unilateral sanctions tend to be more effective than multilateral ones (Drezner, 1999; Hufbauer, Schott & Elliott, 1990; Kaempfer & Lowenberg, 1999), precisely because of the above-mentioned problems in targeted measures such as arms embargoes – namely, free-riding and enforcement difficulties. Nevertheless, a more recent study, relying on a new dataset, finds that multilateral sanctions have actually been more effective (Bapat & Morgan, 2007).[4] Drezner (2000) points to the possibility that the key variable is not whether sanctions are multilateral or not but whether those multilateral sanctions are imposed by an international organization, which prevents backsliding and ensures the maintenance of the commitment to cooperate with the sanctioning collation.[5] This, in turn, increases the senders' capability of imposing a greater cost

on the target country, which seems to be the main underlying cause of the success or failure of multilateral sanction episodes. Apart from this capacity to impose bigger costs, the involvement of an international organization in an internal conflict has other implications, as it is argued to provide parties with a signal that an outside actor is willing to step in to guarantee the terms of a potential settlement (Walter, 1997). This has been true of some sanctions episodes imposed by the UN, which have been followed by or combined with multilateral peacekeeping operations to assist the parties in implementing the peace agreements and monitor the peace process, such as the UNOMSIL in Sierra Leone and the UNTAC in Cambodia. The reduction of uncertainty prevents the expected utility of a settlement (EU_S) from decreasing because of the potential failure to fulfil the terms, so Expression (2), $EU_S > EU_F$, can hold. In the light of these last claims reviewed above, we hypothesize:

> *H3:* Sanctions that are imposed by some multilateral international organization should be more effective in decreasing internal conflict duration than those that are not.

Furthermore, I will investigate the impact of both types of sanction senders on the type of civil war termination (military victory vs. negotiated settlement). This will allow us to partially assess the role of international institutions in promoting peace. The same will be done with different sanction types.

Data and methods

In order to answer the questions posed above, I use a dataset on civil wars covering the period from 1959 to 1999. Data on intrastate conflict have been compiled from Fearon & Laitin (2003), Humphreys (2005) and Fearon (2004, 2005) and include 87 civil war episodes occurring in 63 countries.[6] Since the data have a time-series cross-section format, we can better control for the variability in the years in which a country is under economic sanctions and a civil conflict is ongoing. With regard to the dependent variable, in the first part of the analysis I use a binary variable that indicates whether the war ends in a given year. Hence, the variable, 'civil war end', is coded 1 if the war ends and 0 if the war is ongoing in a given year. For the second part of the analysis, I take the variable used by Humphreys (2005),[7] which codes the mode of conflict termination and can take three values: 0 if the conflict is ongoing in that year, 1 if the conflict is resolved through

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[4] Most of the analyses of sanction duration and effectiveness are based on Hufbauer, Schott & Elliott's (1990) dataset.

[5] Bapat & Morgan (2007) also find that the success rate of sanctions increases if they are conducted through an international institution.

[6] The list constructed by Fearon & Laitin (2003) covers those conflicts that meet the following primary criteria: (i) they involved fighting between agents of the state and organized non-state groups; (ii) the conflict killed at least 1,000 over its course, with a yearly average of at least 100; (iii) at least 100 were killed on both sides. For the secondary criteria, see Fearon & Laitin (2003).

[7] Humphreys compiled it from Walter (2002).

military means, and 2 if the war ends through a negotiated settlement.

Data on sanction episodes are taken from Marinov's (2005) dataset, which recast Hufbauer, Schott & Elliott's (1990) dataset in country-year format and updated it. These data have been contrasted and widened using the Threat and Imposition of Sanctions (TIES henceforth) dataset, which collected data on threats and sanction implementation during the period 1971–2000 (Morgan, Krustev & Bapat, 2006). Hufbauer, Schott & Elliott's (1990) dataset covers 116 cases of sanctions (between 1914 and 1990), whereas the TIES dataset includes 529 instances of sanctions imposition (Bapat & Morgan, 2007). Moreover, the TIES dataset classifies episodes according the type of measure applied. Thus, I have constructed two more variables: The first, 'Institutional sanction', takes the value 0 if no sanction is imposed, 1 if a country is under sanctions not imposed by an international institution, and 2 if a country is under sanctions imposed by an international institution in a given year. The second variable distinguishes between the main types of measure adopted: total economic embargoes, multilateral arms embargoes (UN, EU and other multilateral embargoes),[8] restrictions on imports and exports, the termination of foreign aid and other measures (such as asset freezes, travel bans, suspension of agreements and blockades). Finally, I have also constructed a variable that distinguishes between threats of sanctions and imposed sanctions. As mentioned above, the analyses on sanctions effectiveness may suffer from selection bias, which lies in the fact that threats of sanctions might be more successful than imposed ones but they are generally not observed. So, following Drezner (2003), to test the selection argument, we need to study those cases in which sanctions are threatened but not implemented. Fortunately, the new TIES data set contains information on threat episodes that did not end up with the imposition of sanctions. Therefore, our variable 'sanction threat' is coded 0 if no threat or sanction is applied, 1 if a country is threatened but eventually sanctions are not imposed, and 2 if sanctions are imposed. We consider a number of control variables that refer to commonly identified factors included in recent studies on civil war duration.

Geographical characteristics of the country are argued to influence war viability and actors' capacity (DeRouen & Sobek, 2004; Buhaug, Gates & Lujala, 2005). Both the percentage of the terrain that is mountainous and forested and the number of bordering states are frequently argued to increase the ability of the rebels to resist. As for the government's capacity, we include the size of the army (per 1,000 inhabitants),

obtained by dividing the size of the army by the total population.[9]

Some researchers point to the potential polarizing effect of ethnic fractionalization (Montalvo & Reynal-Querol, 2007), and a high degree of fractionalization may hamper cooperation on the rebel side. Collier, Hoeffler & Söderbom (2004) and Elbadawi & Sambanis (2000) find a non-linear relationship between ethnic diversity and war duration. Therefore, I control for the degree of ethnic diversity and this potential curvilinear pattern using Fearon's (2003) variable, which measures the probability that two randomly selected persons from a given country will not belong to the same ethnic group.

On the socio-economic side, I include the logarithm of the country's population and per capita GDP. The presence of natural resources and primary commodities has been shown to have an effect on both the onset and the duration of civil war (Collier, Hoeffler & Söderbom, 2004; Ross, 2004). I use several measures: first, 'mineral resources', which takes the value 1 if the average ratio of ore and mineral exports in any year for which a country has data exceeded 50% of total merchandise exports, and 0 otherwise.[10] The second variable, 'oil-producing country', is coded 1 for those country-years in which fuel exports exceeded one-third of total export revenues, and 0 otherwise.[11] I have also used the variables on oil production and reserves and diamond production (expressed both in total production and in per capita terms) developed by Humphreys (2005).

To capture the possibility of financing through contraband, the dummy variable constructed by Fearon is included. It is coded 1 if there is 'evidence of major reliance by the rebels on income from production or trafficking in contraband' (2004: 284), and 0 otherwise.

As stressed above, Pape (1997, 1998) argues that sanctions do not work, since any policy effect observed so far is actually due to the use of force that sometimes accompanies sanctions. To control for this possibility, I include the dummy variable 'military intervention', which is coded 1 for each country-year in which some sort of military intervention, as categorized by Regan (2000), takes place.

Other relevant controls are: the logarithm of the average number of deaths per year as compiled by Fearon (2004). And, also compiled from Fearon (2004), some dummies capturing the type of ongoing civil war are considered. The first is 'ethnic war', which takes value 1 if the ongoing war is of an ethnic nature.[12] The second dummy takes value 1 if the war is classified as a 'sons of the soil' conflict. These are wars in which the state is dominated by an ethnic group facing population pressure. When members of this group migrate to less populated areas, often with the support of the state, the ethnic

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[8] The TIES dataset does not include a category for arms embargoes, so given the policy relevance of international arms embargoes, I have constructed a dummy for arms embargoes imposed by international organizations. Data have been taken from Fruchart et al. (2007) and the SIPRI website: www.sipri.org/contents/armstrad/embargoes.html.

[9] These variables have all been compiled from DeRouen & Sobek (2004).

[10] Variable compiled from Gandhi & Przeworski (2006).

[11] Compiled from Fearon & Laitin (2003).

[12] We have coded as 1 only those cases with value 3, excluding those considered by Fearon to be mixed or ambiguous.
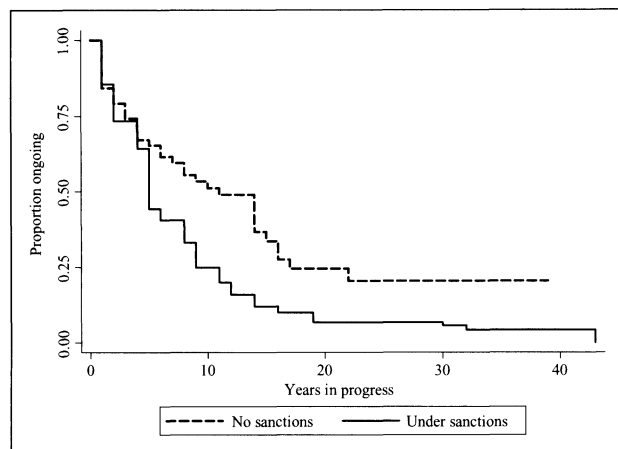
Figure 1. Proportion of civil wars ongoing by year

minorities living in those regions often take up arms against the migrants and the state.

The methodology employed consists basically in logistical regressions, both binary, to analyze the likelihood of conflict termination, and multinomial, to analyse the mode in which the war ends (military victory or negotiated settlement). As usual when duration is analysed using discrete-time data, the potential time dependence in the data is corrected by including natural cubic splines on the right-hand side of the equation to be estimated (Beck, Katz & Tucker, 1998). Errors have been clustered.

Analyses and results

Civil war termination and economic sanctions

I begin by enquiring whether sanctions have any effect on the length of intrastate conflicts in a simple manner. Figure 1 portrays, using the non-parametric Kaplan–Meier estimate, the survival curves of those conflicts under sanctions versus those not under sanctions. The differences between the groups are substantial and suggest a significant correlation between the two variables. As the plot reveals, the proportion of ongoing wars is clearly smaller for those cases targeted by international economic sanctions.[13] This preliminary evidence suggests that international sanctions are related to the decline of the survival rate of intrastate wars.

Moving on to the multivariate analyses, Table I reports the estimated coefficients of the binary logistic regressions used to estimate the impact of economic sanctions with the aim of testing our first hypotheses. In Columns 1–3, I include the sanctions dummy, while in Columns 4 and 5, I include the variable 'sanctions duration', which is a measure that

cumulates the number of years a country has been under sanctions in a given year.[14] The results serve to reject Hypothesis 1a and confirm Hypothesis 1b: both sanctions and their duration (in years) are significantly associated with a higher likelihood of civil war termination. These results are robust to the inclusion of the variable 'military intervention' and to the use of alternative measures of natural resource availability. Note that the effect of a military intervention is negative, as previous research had already indicated, but not significant. Being under sanctions involves an increase of 0.044 in the probability of conflict termination (according to the estimates in Column 1), while a one-unit change in the time a country has been targeted by sanctions increases the probability of war termination by 0.0041 points (Column 4).[15] The computed probability of civil war termination when a country has been just one year under coercive sanctions is 0.0384, whereas the probability of termination for a country that has been targeted for five years is 0.0572.

Column 6 includes the distinction between sanction threats and effectively imposed sanctions. The number of observations is reduced in this case, as the sample is restricted to the TIES data, so it starts in 1971. Threats that did not end with the imposition of sanctions have an important positive effect on the likelihood of conflict end, but the relationship is not statistically significant, probably due to the reduced number of such instances in our sample.

I now move on to examine the effects of different types of sanctions. In the first column of Table II, the estimates use the categorization of sanctions according to the kind of measure adopted against the target. This model is restricted to the TIES sample (from 1971), so the number of observations is lower. The results tend to confirm Hypothesis 2 and make clear that it is basically comprehensive sanctions directed towards cutting the total flow of funds to the rival parties that have significant and negative effects on the duration of intrastate conflicts. The examination of the marginal effects of each of the types included in the regression reveals that comprehensive sanctions (total embargoes) are the most effective measure in shortening civil wars, followed by trade restrictions (of exports and imports), which include commodity sanctions.[16] Concretely, the increases in the probability of war termination when those dummies change from 0 to 1 are 0.30 and 0.075, respectively. Multilateral arms embargoes do not appear to have any significant effect on civil war duration.

With regard to whether sanctions are imposed by an international institution, the results in Column 2 reveal that, when no further distinction is introduced in the dependent variable, the impacts of both kinds of sanctions are almost identical in size. The changes in the likelihood of war termination are 0.050 and 0.057 when these two dummy variables increase

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[13] The variable 'sanction' includes only sanctions actually imposed, not threats.

[14] Therefore, in this case, sanctions are not considered just as a constant variable, but as a steadily increasing value over time, as it is assumed that the higher the number of years a given country is targeted, the higher are the accumulated costs. See Collier, Hoeffler & Söderbom (2004) for a similar methodology applied to outside interventions.

[15] The rest of the variables are held constant at their means.

[16] Trade restrictions are almost significant; the p-value of this variable is just 0.105.

Table I. Sanctions and civil war duration (logistic regression)

Independent variables	Event: Civil war end = 1					
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	2.32	2.59	2.23	3.87*	3.53	2.34
	(1.86)	(1.65)	(2.15)	(2.33)	(2.65)	(2.18)
Mountains	−0.007	−0.003	−0.009	−0.008	−0.009	−0.017*
	(0.006)	(0.007)	(0.007)	(0.007)	(0.008)	(0.009)
Forests	−0.001	0.006	0.003	−0.003	0.002	−0.004
	(0.009)	(0.009)	(0.011)	(0.010)	(0.011)	(0.012)
Log population	−0.119	−0.070	−0.202	−0.120	−0.225	−0.383
	(0.231)	(0.236)	(0.263)	(0.244)	(0.285)	(0.289)
Log GDP per capita	−0.546**	−0.635**	−0.398	−0.794**	−0.608*	−0.304
	(0.250)	(0.287)	(0.292)	(0.315)	(0.328)	(0.328)
Mineral exporting	2.13***		2.73**	2.97***	3.65***	2.83**
	(0.789)		(1.19)	(1.01)	(1.41)	(1.30)
Oil exporting	0.285		0.245	0.603	0.557	−0.161
	(0.419)		(0.436)	(0.484)	(0.499)	(0.521)
Oil production		6.32				
		(6.33)				
Diamond production		1.67**				
		(0.845)				
Ethnic fractionalization	7.09***	5.45*	6.44*	10.48***	10.24**	9.19**
	(2.52)	(2.94)	(3.40)	(0.343)	(4.81)	(4.22)
(Ethnic fractionalization)^2	−8.02***	−6.28**	7.42**	−11.99***	−11.77**	−10.48**
	(2.65)	(3.14)	(3.36)	(3.68)	(4.83)	(4.27)
Contraband	−1.65***	−1.44**	−1.68***	−1.77***	−1.79**	−1.45**
	(0.527)	(0.583)	(0.614)	(0.624)	(0.717)	(0.604)
Number of borders	−0.066	−0.094	−0.033	−0.112	−0.069	0.099
	(0.078)	(0.085)	(0.082)	(0.090)	(0.095)	(0.084)
Army size (log)	−0.353*	−0.338*	−0.393*	−0.334*	−0.405*	−0.336
	(0.184)	(0.195)	(0.226)	(0.202)	(0.238)	(0.290)
Deaths/year	4.13e−06*	3.93e−06*	6.21e−06**	4.10e−06*	6.24e−06**	0.00001***
	(2.18e−06)	(2.17e−06)	(2.54e−06)	(2.26e−06)	(2.67e−06)	(4.14e−06)
Ethnic war	0.563	0.540	0.512	0.598	0.636	0.619
	(0.470)	(0.463)	(0.580)	(0.503)	(0.595)	(0.614)
Sons of soil war	−2.11***	−2.08***	−2.06***	−2.32***	−2.24***	−1.85***
	(0.730)	(0.740)	(0.750)	(0.662)	(0.679)	(0.533)
Military intervention			−0.606		−0.566	−0.563
			(0.541)		(0.565)	(0.529)
Economic sanctions	0.847***	0.885***	0.883***			
	(0.293)	(0.291)	(0.316)			
Sanction duration				0.104***	0.096***	
				(0.028)	(0.029)	
Threat						1.34
						(1.06)
Imposed sanction						0.921***
						(0.341)
Duration splines	yes	yes	yes	yes	yes	yes
Observations	663	619	638	663	638	565
Log-pseudolikelihood	−151.90	−148.01	−138.34	−150.34	−137.46	−123.27
Pseudo R-squared	0.1309	0.1232	0.1359	0.1398	0.1414	0.1615

Robust standard errors in parentheses.
***$p < .01$; **$p < .05$; *$p < .10$.

from 0 to 1, respectively. Although it is true that the effect of those sanctions imposed by international institutions is bigger, the negligible differences in the sizes of both effects give little support to Hypothesis 3. In the next section, I examine whether these sanctions are associated with different war outcomes.

Table II. Sanction types and the duration of civil war (logit)

Independent variables	Event: Civil war end = 1	
	(1)	(2)
Intercept	3.04	2.73
	(2.33)	(2.07)
Mountains	–0.013	–0.010
	(0.011)	(0.007)
Forests	–0.011	0.001
	(0.015)	(0.012)
Log population	–0.212	–0.197
	(0.303)	(0.268)
Log GDP per capita	–0.487	–0.438
	(0.317)	(0.315)
Mineral exporting	3.65***	2.64**
	(1.33)	(1.20)
Oil exporting	0.593	0.437
	(0.580)	(0.432)
Ethnic fractionalization	7.84*	6.38*
	(4.36)	(3.58)
(Ethnic fractionalization)^2	–9.54**	–7.45**
	(4.67)	(3.56)
Contraband	–1.84***	–1.76***
	(0.631)	(0.628)
Number of borders	0.144	–0.022
	(0.095)	(0.088)
Army size (log)	–0.537*	–0.403*
	(0.307)	(0.232)
Deaths/year	9.04e–06*	4.26e–06
	(4.87e–06)	(3.11e–06)
Ethnic war	0.418	0.372
	(0.579)	(0.580)
Sons of soil war	–2.28***	–2.12***
	(0.675)	(0.828)
Military intervention	–0.645	–0.608
	(0.540)	(0.532)
Non-institutional sanction		0.940**
		(0.390)
International institution sanction		1.01*
		(0.607)
Total embargo	2.70***	
	(0.730)	
Aid termination	0.546	
	(0.479)	
Trade restrictions	1.25	
	(0.773)	
Multilateral arms embargo	–0.627	
	(1.07)	
Other sanctions	0.584	
	(0.922)	
Duration splines	yes	yes
Observations	565	631
Log-pseudolikelihood	–119.23	–136.25
Pseudo R-squared	0.1596	0.1322

Robust standard errors in parentheses.
***$p < .01$; **$p < .05$; *$p < .10$.

As for the rest of the variables, their estimated patterns conform to some of the evidence already provided by previous research. In line with Humphreys's (2005) results, the production of diamonds and the export of minerals tend to shorten civil wars. Confirming Fearon's (2004) findings, I also find that contraband hinders conflict resolution and that 'sons of the soil' wars tend to last longer than other types of conflict. Ethnic wars are slightly shorter, but the effect is not significant. Furthermore, the size of the army is related to longer wars (as already observed by DeRouen & Sobek, 2004), while the number of fatalities, as well as the GDP per capita, tend to shorten wars. I find a curvilinear relationship between ethnic fractionalization and conflict duration, too. The geographic characteristics of the country do not have any significant effect in these pooled regressions (only mountainous terrain in Column 6).

Civil war outcomes and the effect of sanctions

Not all civil wars end in the same way, so outcomes may need to be treated as competing risks. According to our sample, and following the codification developed by Walter (2002), 49 of the 66 civil conflicts that finished within the period under study ended because of a military victory of one of the sides, while 17 ended through a negotiated settlement. I want to investigate whether sanctions imposed by an international institution are more conductive to negotiated settlements, whereas those that do not involve an international organization are more prone to lead to military victories. The method employed to test this proposal is, in this case, multinomial logit.

The estimates are reported in Table III. The likelihood of each war outcome is strongly influenced by the existence of sanctions in the direction pointed out (see Models 1 and 2). As is clearly revealed, although sanctions generally help to reduce conflict length, they do so with varying consequences. Sanctions imposed by international institutions significantly increase the probability of reaching a negotiated settlement that brings the conflict to an end. Increased cooperation between senders augments the costs and efficacy of sanctions episodes. Moreover, the intervention of an international organization signals the parties that an outside actor may intervene to guarantee the terms of a potential settlement (Walter, 1997), so the utility of a pact increases as the likelihood of a unilateral defection is diminished by a third actor. On the other hand, those sanctions unilaterally imposed by individual countries or a small coalition have an important impact on the probability of a civil war ending through military means. One possible reason (needing further study) may be that those sanctions not under the direction of an international multilateral institution may be biased and possibly inspired by the domestic interests of the primary sender.

In Model 3, a further refinement to our variable on multilateral sanctions has been introduced. It can be argued that sanctions imposed by international institutions will tend to be more effective if the target country is itself a member of the multilateral institution. Greater diplomatic contact, military

Table III. Civil war outcome and international sanctions (multinomial logit)

Independent variables	y = 1, conflict resolved through military means			y = 2, conflict resolved through negotiated settlement		
	(1)	(2)	(3)	(1)	(2)	(3)
Intercept	2.03	1.22	1.27	5.25	7.19	6.00
	(1.76)	(2.12)	(2.13)	(4.43)	(6.05)	(6.32)
Mountains	0.008	0.004	0.004	−0.044	−0.046	−0.045
	(0.010)	(0.010)	(0.010)	(0.038)	(0.046)	(0.048)
Forests	0.020*	0.023*	0.023*	−0.030	−0.047**	−0.056*
	(0.012)	(0.012)	(0.012)	(0.022)	(0.019)	(0.029)
Log population	0.006	−0.073	−0.074	−0.816	−1.02	−1.17
	(0.270)	(0.292)	(0.289)	(0.504)	(0.749)	(0.827)
Log GDP per capita	−0.705**	−0.539	−0.542	−0.222	−0.060	0.331
	(0.331)	(0.368)	(0.369)	(0.559)	(0.686)	(0.696)
Oil production	14.78**	12.72*	12.79*	−25.45	−34.33	−80.32
	(6.51)	(6.86)	(6.85)	(23.13)	(34.49)	(54.75)
Diamond production	1.55	1.80	1.89	3.16*	2.67	10.93
	(1.05)	(4.44)	(4.59)	(1.66)	(5.29)	(7.17)
Ethnic fractionalization	4.84	6.25	6.25	6.01	2.57	3.51
	(4.61)	(8.35)	(8.31)	(7.30)	(11.49)	(14.31)
(Ethnic fractionalization)^2	−4.96	−6.19	−6.20	−10.16	−7.86	−9.96
	(4.69)	(7.88)	(7.84)	(8.29)	(13.37)	(16.75)
Contraband	−1.42**	−1.37**	−1.38**	−0.954	−0.701	−1.01
	(0.633)	(0.684)	(0.689)	(0.841)	(0.904)	(0.978)
Number of borders	−0.235*	−0.186	−0.187	0.382*	0.489*	0.708**
	(0.122)	(0.126)	(0.128)	(0.232)	(0.294)	(0.351)
Army size (log)	−0.283	−0.319	−0.322	−0.744**	−0.836*	−1.20*
	(0.273)	(0.324)	(0.322)	(0.380)	(0.440)	(0.687)
Deaths/year	2.08e−06	3.89e−06	3.88e−06	−6.13e−06	−2.36e−06	−8.90e−06
	(3.11e−06)	(3.96e−06)	(3.96e−06)	(0.00002)	(0.00003)	(0.00004)
Ethnic war	0.516	0.598	0.601	0.784	0.366	0.197
	(0.570)	(0.674)	(0.672)	(0.893)	(1.18)	(1.34)
Sons of soil war	−2.56**	−2.45**	−2.45**	−1.97	−1.93	−2.49
	(1.20)	(1.19)	(1.17)	(2.02)	(2.51)	(3.11)
Military intervention		−0.293	−0.292		−1.63*	−1.67*
		(0.588)	(0.587)		(0.865)	(0.896)
Non-institutional sanction	1.17***	1.19***	1.19***	0.374	0.566	0.645
	(0.367)	(0.385)	(0.381)	(0.600)	(0.557)	(0.451)
International institution sanction	0.654	0.582		1.84**	2.32*	
	(0.761)	(0.935)		(0.922)	(1.23)	
Int. institution sanction (no member)			0.553			0.116
			(1.49)			(0.883)
Int. institution sanction (member)			0.561			3.45**
			(0.981)			(1.59)
Model	1			2		3
Duration splines	yes			yes		yes
Observations	612			589		589
Log-pseudolikelihood	−159.91			−142.65		−141.64
Pseudo R-squared	0.1692			0.1873		0.1931

Robust standard errors in parentheses.
***p < .01; **p < .05; *p < .10.

cooperation and commercial interdependence are likely to be found among the members of some multilateral organizations. To test this straightforward proposition, I have recoded the variable used in Model 1 by dividing the sanctions imposed by an international institution into two extra dummy variables: the first is coded 1 if the country is being sanctioned by an international institution but is not member of that institution, and the second is coded 1 if the country is being sanctioned by an international institution to which it belongs. The coefficients of the newly created dummies largely confirm our

expectations. Note first that the strong positive impact of 'non-institutional' sanctions on military victory is not altered. In contrast, for those countries belonging to the institution imposing the sanctions, the impact of such coercive measures is great and significant. The estimated probability of a negotiated settlement is 0.0008 when no sanction is present; if the country is targeted by sanctions of an international institution it belongs to, the probability of a negotiated termination is 0.024. On the other hand, a country under non-institutional sanctions faces a probability of 0.074 of having the conflict resolved through military means, while if no sanction is imposed, the likelihood is just 0.023.

Table IV shows the results of the effects of the types of measure sanctions involve on war outcome. These results should be carefully interpreted as they are quite sensitive to sample size, which in this case is restricted to the TIES data (from 1971). To increase the number of observations, the variable 'log GDP per capita' has been ruled out, since it was not significant anyway, and we use the natural resources dummies. The evidence suggests that the only measures effective in shortening conflicts are total embargoes, which increase the likelihood of both a military victory and a settlement. In contrast, international arms embargoes have a negative and significant impact on the probability of a military victory. This result gives credit to those arguing that this type of sanction has been irrelevant at best, and even counterproductive (Tierney, 2005). Multilateral arms embargoes may rebalance the power between parties, thereby making victory less likely. On the other hand, multilateral arms embargoes have had a positive, albeit not significant, effect on the likelihood of a settlement.[17] This latter finding supports to some extent the proposition that arms embargoes decrease uncertainty over each party's power.

Other results of these tables merit comment: military interventions significantly reduce the likelihood of a settlement. The inclusion of this variable reduces the sample somewhat and slightly alters some of the results. Again, contraband reduces the prospects of conflict termination, especially those of a military victory, as it allows the rebels to finance their activities. The number of borders has contradictory effects. On the one hand, it serves to hinder a military victory (arguably, by government forces), since it eases the maintenance of rebel bases outside the boundaries of the state; but, on the other hand, it increases the likelihood of a negotiated resolution, as in DeRouen & Sobek (2004). The size of the army also represents a significant obstacle to a negotiated resolution of conflicts, as it may tend to make the government overestimate its relative strength, p_e, and the probability of winning (Mason & Fett, 1996). Natural resources, both diamonds and oil, are again related to shorter wars, although through different mechanisms. Abundant forest areas increase the likelihood of a military victory and hinder negotiated settlements.

Table IV. Types of sanction and civil war outcome (multinomial logit)

	Event: Civil war outcome $= j$	
Independent variables	Military victory	Negotiated settlement
Intercept	−0.167	9.09
	(0.278)	(6.15)
Mountains	−0.012	−0.041
	(0.012)	(0.043)
Forests	0.003	−0.081*
	(0.015)	(0.043)
Log population	−0.481*	−1.12**
	(0.261)	(0.568)
Mineral exporting	4.71***	6.45**
	(1.81)	(2.60)
Oil exporting	0.257	0.441
	(0.566)	(1.57)
Ethnic fractionalization	14.68	0.739
	(9.53)	(14.06)
(Ethnic fractionalization)^2	−15.84*	−5.58
	(9.27)	(15.22)
Contraband	−1.53**	−3.08
	(0.748)	(2.14)
Number of borders	0.141	0.665**
	(0.114)	(0.302)
Army size (log)	−0.663*	−1.56***
	(0.372)	(0.498)
Deaths/year	0.00001**	1.15e−06
	(5.64e−06)	(0.00004)
Ethnic war	1.16	−0.373
	(0.761)	(1.25)
Sons of soil war	−2.36***	−2.56
	(0.666)	(2.34)
Military intervention	−0.656	−1.34***
	(0.629)	(0.490)
Total embargo	2.04***	6.03***
	(0.634)	(1.98)
Aid termination	0.781	0.692
	(0.479)	(1.42)
Trade restrictions	0.508	1.60
	(0.671)	(2.08)
Multilateral arms embargo	−1.48**	1.71
	(0.673)	(1.05)
Other sanctions	0.538	1.02
	(1.10)	(1.45)
Duration splines	Yes	
Observations	592	
Log-pseudolikelihood	−141.65	
Pseudo R-squared	0.2152	

Robust standard errors in parentheses.
***$p < .01$; **$p < .05$; *$p < .10$.

Concluding remarks

Studies of the efficacy of economic sanctions have tended to analyze it in a rather general way and have used constructed variables that often assess the success of a sanction episode

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[17] The coefficient is almost significant at the 0.10 level; the p-value is 0.105.

on an ordinal scale. In this work, I sought to explore the effect of sanctions in a very specific context, civil war duration, using a time-series cross-sectional dataset and a direct measure of event occurrence, civil war termination and outcome.

I hypothesized that sanctions would have a significant negative effect on intrastate conflict duration, mainly due to three basic mechanisms: convergence of parties' beliefs over power, reduced utility of victory and financial pressure that reduce parties' viability of continued fighting. Our second proposition contended that those sanctions maximizing the costs to the target would be more effective than other types of targeted measures in bringing war to an end. Finally, I further proposed that those sanctions imposed by an international institution would be more effective in augmenting the probability of intrastate conflict termination.

Our empirical evidence using new data on sanctions shows that, effectively, sanctions have had a significant and negative impact on intrastate conflict duration. Moreover, this effect grows the more years a given country is targeted. These results are robust to the inclusion of a variable controlling for external military interventions. Moreover, the empirical evidence seems to suggest that the most successful measures so far have been total economic embargoes. Such measures are shown to increase the likelihood of both military victory and negotiated settlement, while international arms embargoes are found only to significantly decrease the likelihood of a military victory by one of the parties.

Regarding the debate about the efficacy of sanctions imposed by international institutions or not, this article has shed light on the distinctive effect of both types of sanction. Although the coefficients for sanctions backed by international institutions and those which are not are extremely similar in size in the general models of war duration, I find that sanctions imposed by international institutions significantly increase the likelihood of conflict resolution, especially if the targeted country is a member of the organization. In contrast, sanctions applied by other bodies are much more conducive to military victories.

In sum, the article has several policy implications. First, it suggests that, overall, sanctions have been relatively useful in helping to shorten civil wars, as the statistical association suggests. Yet, this role needs to be improved. Concretely, our results suggest that any coercive measures should preferably be conducted by international organizations, especially if we are interested in promoting conflict resolution. Concerning the measures imposed, the evidence suggests that maximizing costs via embargoes is more effective than other sanction types. Multilateral arms embargoes can also result in increased chances of negotiated settlement, although implementation problems so far have limited their effectiveness, as remarked by many scholars.

Replication data
The data used in this article can be found at http:// www.prio.no/jpr/datasets.

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ABEL ESCRIBÀ-FOLCH, b. 1978, PhD in Political Science (Universidad Autónoma de Madrid, 2007, and Juan March Institute); Visiting Professor, Universitat Pompeu Fabra. Research interests: economic sanctions and authoritarian politics.