

Sanctions Effectiveness, Development and Regime Type. Are Aid Suspensions and Economic Sanctions Alike?

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ABSTRACT

The efficacy of international sanctions in bringing about compliance with the goals of the sender is of interest to both International Relations (IR) and development scholars. Yet, aid suspensions receive less attention in sanctions research than economic sanctions, which may be biasing our understanding of sanctions efficacy. Since recent research has established that different autocratic types display diverging degrees of resilience to sanctions, we ascertain whether such claims are applicable to aid suspensions. First, we look at how resilient different regime types are to sanctions and then investigate whether results for aid suspensions differ from those for sanctions in general. After that, we hypothesise that wealth protects autocracies less from aid suspensions than from other sanctions because their effects are harder to evade. With the help of econometric analysis, we test our hypotheses on original data that feature aid suspensions as a stand-alone category. Test results corroborate the superior resistance of single-party regimes and monarchies. A final test on the role of target prosperity uncovers a nuance: affluence strengthens target resistance to economic sanctions but not to aid suspensions. This confirms our evasion hypothesis: while alternative trade routes can offset a ban on trade with a set of senders, substitute donors are rare.

Keywords: Foreign Aid, Economic Sanctions, Regime Types, Sanctions Evasion.

JEL classification: F51, O19, F53, Z18, O55, F13

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NON-TECHNICAL SUMMARY

Sanctions scholarship has posited that certain types of autocracies are more vulnerable to economic sanctions than others. However, it has not investigated if the same is true of aid suspensions. The scarce attention paid to aid sanctions, despite their ubiquity in the geopolitical landscape, may be biasing our understanding of sanctions' efficacy. Sanctions targets and recipients of official development aid (ODA) are concentrated in the Global South, while the Global North dominates the group of aid donors and sanctions senders.

The present paper explores whether economic sanctions and aid suspensions behave similarly when applied to different autocratic types. To do so, we develop a purpose-made sanctions database that features aid suspensions, a recurrent omission in conventional sanctions databases. Our data comprises a total of 309 episodes, each of which is defined as a set of restrictions imposed by a sender against a target for the same violation, spanning the timeframe from 1990 to 2018.

We formulate and test three hypotheses. First, we aim to establish which autocratic types are most vulnerable to sanctions, taking both economic and aid sanctions into account. We classify autocracies into military, personalist and single-party regimes, according to the classification by autocracy expert Barbara Geddes. Scholarship ascribes the stability of autocratic regimes to their level of institutionalisation, positing that less institutionalised regimes are more reliant on narrow support groups and repression to maintain power. According to this logic, monarchies and single-party regimes should be more resilient than personalist and military regimes. Second, we examine whether these results change when only aid sanctions are considered, in order to ascertain whether they behave similarly or differently. In a final step, we inquire whether variation in the level of prosperity of the target is a better predictor of sanctions success than autocratic type.

Table: Sanctions effectiveness by regime type according to Geddes et al. (2014), controlled by GDP (in PPP)

	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)
	ALL sanctions	ALL sanctions	AID sanctions	AID sanctions
	Progress	Progress	Progress	Progress
GDP _{PPP} Per capita (constant prices)	-0.0110*** (0.00238)	-0.0154*** (0.00352)	0.0149 (0.0123)	0.0153 (0.0121)
Party regime		-0.288*** (0.0914)		-0.342** (0.152)
Personalistic regime		-0.0359 (0.0678)		-0.0339 (0.123)
Military regime		-0.226*** (0.0851)		-0.306** (0.123)
Monarchy		0.267 (0.276)		-0.837*** (0.0842)
Democracy	0.105 (0.0743)		0.0908 (0.138)	
Constant	0.553*** (0.0416)	0.699*** (0.0629)	0.550*** (0.0716)	0.712*** (0.128)
Observations	233	233	83	83
R-squared	0.067	0.127	0.027	0.171

Note: Robust standard errors are in parentheses (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$)

Source: Portela and Mora-Sanguinetti (2023)

Our findings corroborate the resistance of single-party regimes to sanctions pressure. Results using the Geddesian classification confirm institutional solidity as the determinant of regime stability under challenging economic conditions: the least institutionalised types like personalist regimes face difficulties weathering the impact of sanctions. Our tests reveal that not only are democracies more

vulnerable to sanctions pressure than non-democracies, but such vulnerability increases with the level of freedom in the target. The closer a regime moves up the democracy scale, the more vulnerable it becomes to sanctions pressure, irrespective of its type. Our second hypothesis is validated, corroborating that aid suspensions display similar effects on autocratic types as economic sanctions and highlighting that the marginal role ascribed to them in mainstream sanctions scholarship is unwarranted. Lastly, the test of our third hypothesis reveals an intriguing circumstance: Wealth exerts a shielding effect against sanctions in general, but this effect disappears when only aid sanctions are considered. This finding confirms that aid sanctions cannot be compensated by evasion as economic sanctions can. A target country's resistance to sanctions can be explained by its continued ability to generate revenue by resorting to alternative trading partners and illicit routes. By contrast, a target's affluence is not a predictor of resilience for those affected by aid suspensions because substitutes for withdrawing donors are in short supply.

Efficacité des sanctions, développement et type de régime : les suspensions d'aide et les sanctions économiques sont-elles pareilles ?

RÉSUMÉ

L'efficacité des sanctions internationales pour obtenir la conformité aux objectifs fixés par l'émetteur présente un intérêt général tant pour les spécialistes des relations internationales (IR) que pour ceux du développement. Pourtant, les suspensions d'aide reçoivent moins d'attention dans la recherche sur les sanctions que les sanctions économiques. Cela pourrait biaiser notre compréhension de l'efficacité des sanctions. Comme des travaux récents ont montré que différents types d'autocraties présentent des degrés de résilience différents face aux sanctions, nous examinons si ces constats s'appliquent également aux suspensions d'aide. Dans un premier temps, nous analysons la résilience des différents types de régime face aux sanctions, puis nous étudions si les résultats relatifs aux suspensions d'aide diffèrent de ceux des sanctions en général. Ensuite, nous formulons l'hypothèse selon laquelle la richesse protège moins les autocraties des suspensions d'aide que d'autres types de sanctions, car leurs effets sont plus difficiles à contourner. À l'aide d'une analyse économétrique, nous testons nos hypothèses sur des données originales dans lesquelles les suspensions d'aide sont une catégorie à part entière. Les résultats corroborent la résistance supérieure des régimes à parti unique et des monarchies aux sanctions. Un dernier test portant sur le niveau de prospérité de la cible révèle une nuance : l'aisance économique renforce la résistance aux sanctions de politique étrangère, mais pas aux suspensions d'aide. Cela confirme que, alors que des routes commerciales alternatives peuvent contourner une sanction économique, ce n'est pas le cas des suspensions d'aide, les donateurs de substitution étant rares.

Mots-clés : aide extérieure, sanctions économiques, types de régime, contournement des sanctions

Les Documents de travail reflètent les idées personnelles de leurs auteurs et n'expriment pas nécessairement la position de la Banque de France. Ils sont disponibles sur publications.banque-france.fr

1. Introduction

Since the end of the Cold War, most international sanctions purport to advance a democratisation agenda, often addressing situations of democratic backsliding (Oechslin, 2014). In view of the growing importance of democratisation in the development and international agenda, the impact of sanctions on autocratic regimes has received increasing attention (Peksen, 2017; Sejersen, 2018). The effect of sanctions on the balance of power within an autocratic state can help explain why sanctions are successful in some cases but not in others. Having established that sanctions are more likely to destabilize democratic than non-democratic rulers (Onder, 2020), a strand of the literature relates sanctions effectiveness to regime type, arguing that certain types of autocracies are more vulnerable to sanctions pressure than others (Bader & Faust, 2014). Although most targets of foreign policy sanctions are non-democracies (Major, 2012), less attention is devoted to the fact that most of them are simultaneously aid recipients.

The efficacy of international sanctions in bringing about compliance with the goals of the sender is an interest shared by both International Relations (IR) and development scholars. Yet, each of these research communities focus on different measures. Aid suspensions or cut-offs, known as ‘aid sanctions’, do not feature prominently in sanctions research. They are often studied alongside foreign policy sanctions without receiving a comparable level of attention. Many sanctions scholars limit their inquiry to measures entailing the interruption of trade and finance. Frequently, analyses of the conditions under which targets of foreign policy sanctions comply with sender demands remain separate from those exploring whether suspended beneficiaries comply with donor objectives (Fürrutter, 2020; Koch, 2015). By contrast, the bulk of research on aid sanctions originates from development scholars (Crawford, 2001; Nielsen, 2013; Swedlund, 2017; Zimelis, 2011). Authors who consider aid sanctions alongside economic sanctions in their studies remain the exception rather than the norm (Del Biondo, 2015; Early & Jadoon, 2019; Jeong, 2019).

The question of whether aid cut-offs are comparable to economic sanctions, i.e. whether they display similar effects or otherwise, remains scarcely explored despite its considerable significance. The scarce attention devoted to aid sanctions in the study of foreign policy sanctions, or their outright exclusion in some cases, may be biasing our understanding of sanctions efficacy. Powerful reasons justify an inquiry into whether they perform similarly to economic sanctions. Firstly, the vast majority of countries at the receiving end of economic sanctions are located in the Global South, and are simultaneously recipients of official development aid (ODA). Conversely, aid donors and sanctions senders often overlap, as the Global North dominates both groups. Secondly, the goals of sanctions largely coincide with those of aid cut-offs, namely promoting democratic reform, improving human rights protection or stopping armed violence. Indeed, aid suspensions are often part of economic sanctions packages.

The present paper examines and contrasts the efficacy of aid suspension and foreign policy sanctions on non-democratic regimes. This question lends itself to study as it concerns a predominant goal of both aid suspensions and unilateral economic sanctions in our days: democracy promotion. In order to ascertain the applicability of existing claims about the vulnerability of different types to aid suspensions, we examine the following questions. First, how does target regime type affect the effectiveness of aid sanctions, and how relevant is regime type to the efficacy of aid sanctions compared to sanctions in general? After that, we apply some standard controls, encompassing both economic and political variables, to verify the explanatory strength of autocratic regime types. This article attempts to bridge the division between sanctions and development scholarship, relying on original data that feature aid suspensions as independent sanctions episodes. This article proceeds as follows: A first section reviews how the literature approaches the relationship between sanctions and regime type, identifying the lack of attention to aid sanctions as a weakness. A second section introduces our hypotheses and data, followed by an econometric analysis. After presenting the findings, the article concludes with a discussion of their implications. By delving into a scholarly debate that is yet unsettled, we contribute some insights on the explanatory power of autocratic types to the effectiveness of both foreign policy sanctions and aid cuts.

2. The debate around sanctions and autocracy

Scholarship acknowledges that the nature of the target’s political regime influences the success of sanctions (Bader & Faust, 2014; Onder, 2020; Zaprli, 2022). With scholarship paying increasing attention to whether targets feature a democratic or autocratic political system (Bergeijk, 1999), Hufbauer and his team (2007) corroborate that democracies are more vulnerable to pressure: ‘Democracies are by definition more open to voices advocating a policy shift than autocratic countries. If important internal groups see merit in a policy change, that view is more likely to find advocates within the top circles of a democratic government’ (Hufbauer et al., 2007).¹ Marinov found that sanctions pressure causes more government instability in democratic than in autocratic regimes (2005), although by a small differential (Jones, 2015).²

Research on autocratic survival helped sanctions research to delve deeper into the underlying mechanisms with the help of the notion of ‘selectorate’, defined as the set of individuals endowed with political rights within a state. Sanctions pose a larger threat to democratic leaders, because democratic rulers have to satisfy compassing majorities in order to survive. Accountability and fear of removal are lower in autocratic governments, which depend on a small selectorate while constraining the political freedom of a majority (Allen, 2005; Bueno de Mesquita et al., 2003). In addition, because autocrats have direct control over state resources, they can protect their supporters from the economic burden of sanctions (Escribà-Folch, 2012). Thus, regime influence over the distribution of increasingly scarce goods strengthens its bargaining power domestically, making sanctions acceptable if not advantageous (Allen, 2005; Oechslin, 2014). Brooks (2002) claims that, because of the different ways in which sanctions interact

¹ Hufbauer and his team rely on the Polity III database (2007, p. 61).

² Some contend this finding (Licht, 2017), *inter alia*, arguing that sanctions contribute to consolidating authoritarian rule because the targeted leadership instrumentalises the economic hardship to restrict political liberties and increase repression (Drury & Peksen, 2010).

with regime type, targeted sanctions are more likely to succeed when employed against autocracies than against democracies, while the opposite applies to comprehensive sanctions.

The work by Geddes (1999) on autocratic survival introduced a significant theoretical refinement. Positing that different kinds of authoritarianism differ vastly from each other, Geddes subdivides autocratic regimes in three broad types to account for their resilience. Military regimes are defined as regimes where a group of officers decides who will rule. In single-party regimes, one party dominates access to political office and control over policy. Personalist regimes differ from them in that access to office depends on the discretion of an individual leader. Geddes' study finds that military regimes are more vulnerable to pressure than personalist regimes, which are in turn less resilient than single-party regimes. Because army elites are both susceptible to splits and willing to relinquish power to preserve internal cohesion, military regimes are most fragile. Personalist regimes are less prone to internal splits, but in turn highly vulnerable to violent overthrow. Single-party regimes are the most resilient because rival factions have stronger incentives to co-operate with one another. The fact that an organisation exercises some power over the leader, controls the career path of officials and distributes benefits among supporters accounts for stability (Geddes, 1999). This dovetails with the categorisation by Davenport, who groups military and personalist regimes as the least institutionalised regimes, and describes monarchies and single-party regimes as the most institutionalised. While strongly institutionalised regimes tend to rely on co-optation of elites and broader segments of society, less institutionalised regimes are more reliant on narrow support groups and repression to maintain power (2007).

The Geddesian types have been aptly applied to sanctions research in works at the intersection between autocratic survival and sanctions scholarship. Because autocratic types are connected to specific mechanisms of regime survival, they generate plausible expectations of resilience to sanctions pressure. Escribà-Folch and Wright (2010) suggest that personalist regimes and monarchies are more likely to be destabilised by sanctions because they are more sensitive to the loss of external revenue to fund patronage. Single-party and military regimes are, by contrast, more resilient to sanctions pressure because they can raise tax revenues and reallocate expenditure to increase co-optation and repression, while the economic disruption caused by sanctions is most likely to entail political costs for personalist dictatorships. These findings are nevertheless qualified by the availability of oil revenue, which renders dictatorships resilient irrespective of their kind (Escribà-Folch & Wright, 2015). Testing data by Morgan and his team (2014), Peksen (2017) similarly concludes that personalist regimes are as amenable to sanctions pressure as democratic regimes, while military and single-party regimes show more resilience.

In sum, certain types of autocracies are assumed more vulnerable to sanctions pressure than others. Despite the similarity of the results by Escribà-Folch and Wright (2010) and Peksen (2017), these do not match the ranking of vulnerability put forward in the seminal studies on autocratic survival by Geddes (1999) and Davenport (2007). While they all locate single-party regimes at the most resilient end of the spectrum and personalist regimes among the most vulnerable, they disagree on the place of military regimes and monarchies. One could speculate that this divergence emanates from the fact that Geddes and Davenport look at overall regime stability, while Peksen (2017) and (Escribà-Folch & Wright 2010) focus on resilience to sanctions. Alternatively, the discrepancy may originate from the data. Most extant analyses rely on data compiled by the teams of Hufbauer (e.g. Allen, 2005; Escribà-Folch & Wright, 2010; Marinov, 2005) or Morgan (e.g. Peksen, 2017; Early & Jadoon, 2019), covering respectively up to the years 2000 and 2005. Moreover, none of these studies discriminates between sanctions and aid sanctions. Because our inquiry employs recent data that include a vast population of aid suspensions, our analysis can shed light on this controversy.

3. Bringing aid suspensions into the debate

Having established competing claims on the vulnerability to sanctions of different autocratic types, the next step is to interrogate whether attention to aid sanctions can bring new insights to this controversy. This debate is relevant to both development studies and sanctions scholarship as targets are mostly non-democracies, offering a suitable testing ground for regime type vulnerability to sanctions. Before turning to this issue, we first review the nature of aid sanctions as a category as well as its place in extant literature.

3.1. Aid sanctions as a sanctions subtype

Aid sanctions are understood as the interruption or limitation of ODA to a recipient in support of non-economic objectives such as human rights, democracy or the rule of law (Swedlund, 2017). Different from classical economic sanctions – the most popular type of foreign policy sanctions –, aid sanctions do not restrict trade or finance, but the flow of foreign aid. On conceptual terms, aid cut-offs meet the definitional criteria to be considered a subtype of sanctions. While the term 'sanction' lacks any universally agreed definition, sanctions are normally described as the deliberate interruption, reduction or withdrawal of normal relations or of a benefit, typically in response to illegal or politically undesirable acts (Pellet & Miron, 2013) in pursuit of a coercive intent (Hufbauer et al., 2007; Bapat et al., 2013). Morgan, Bapat and Krustev define sanctions as 'actions that one or more countries take to limit or end their economic relations with a targeted country in an effort to persuade that country to change its policies' (2007, p. 94). Aid sanctions fulfil these criteria: They are decided and implemented by donor governments, individually or via multinational arrangements, constitute measures restricting the economic relationship between donor and recipient, and pursue political objectives. The practice of aid cuts flourished in the aftermath of the Cold War with the introduction of conditionality in foreign assistance, by which a recipient government 'takes, or promises to take, certain policy actions, in support of which an international financial institution or any other agency will provide specified amounts of financial assistance' (Killick, 1998). As almost all Western donor agencies formally conditioned aid on governance requirements (Swedlund, 2017; Szent-Ivany, 2015), this period saw the proliferation of aid cut-offs when such requirements were not honoured, generating a wealth of sanctions (Bartels, 2005; Fisher, 2015). As one of the main global donors, the EU suspended aid twenty-four times on political grounds from 1990 to 2009 (Zimelis, 2011), paralleling a global increase in the use of foreign policy sanctions (Cortright & Lopez, 2000; Borzyskowski & Portela, 2018).

3.2. A low profile

Notwithstanding aid suspensions' fit with the notion of sanctions, they are often disregarded in mainstream scholarship. Numerous authors acknowledge aid cut-offs as a sanctions subtype (Brooks, 2002). However, this recognition is not universal. Many economists exclusively study trade sanctions, e.g. leading authors Kaempfer and Lowenberg (2007) consider measures restricting trade and capital flows, alongside those banning the travel of elite members or freezing their assets, but disregard aid sanctions. The scarce presence of aid sanctions in sanctions databases mirrors this situation: Neither of the two databases that record aid sanctions contains information on their contents (Jeong, 2019).³ Because of the preponderant role of databases as tools of study in sanctions scholarship (Peksen, 2019), the low visibility of aid cuts in these compilations - or their outright absence - implies that they are scarcely explored (Portela & Charron, 2023). The low profile of aid sanctions in sanctions scholarship is compounded by a discrepancy in disciplinary research foci, which prevents their integration. Most IR authors studying sanctions are preoccupied with effectiveness. By contrast, development scholars looking at aid conditionality and sanctions focus on consistency and selectivity (Crawford & Kacarska, 2019; Del Biondo, 2011; Laakso et al., 2007; Saltnes, 2018) or sanctions onset (Molenaers et al. 2015), which in turn receives scarce attention from IR researchers (Charron & Portela, 2015). While IR authors do not always consider aid sanctions in their research, development scholars focus solely on this type (Crawford & Kacarska, 2019; Nielsen, 2013). These routinely source their own data, build tailored datasets, and typically analyse the behaviour of individual donors (Crawford, 1997; Del Biondo, 2011; 2015; Fisher, 2015; Swedlund, 2017; Zimelis, 2011).

Nevertheless, a growing body of research acknowledges the interconnections between aid cut-offs and foreign policy sanctions, giving way to works located at the intersection between both literatures (Molenaers et al. 2015; Swedlund, 2017). Illustratively, pioneering work by Stokke (1995) explored determinants of sanctions success that largely mirror those identified by Hufbauer and his co-authors (1990). Similarly, Crawford (1997) replicated the approach proposed by Hufbauer's team, appraising progress towards political reform in each recipient before ascertaining the contribution made by aid sanctions. This growing literature has analysed both types of sanctions jointly (Del Biondo, 2015; Hazelzet, 2001; Portela, 2010; 2016) and acknowledge their specificities (Early, 2015; Early & Jadoon, 2019). However, scholars have only made some initial steps in investigating whether aid sanctions *perform* similarly to other sanctions in achieving policy goals. Those who have, reached dissimilar results: While Crawford (1997) adventured that aid sanctions are less effective than other categories, others suggest otherwise (Early & Jadoon, 2019; Jeong, 2019; Portela, 2010). Since these studies rely on diverse sets of data and focus on different senders, the controversy persists.

Development scholarship has scarcely explored the relationship between sanctions and autocratic type. In contrast to the focus on effectiveness characterising sanctions research, development studies mostly interrogate determinants for aid allocation (Alesina & Dollar, 2000; Szent-Ivany, 2015) and withdrawal (Crawford & Kacarska, 2019; Del Biondo, 2011; Molenaers et al., 2015; Saltnes, 2018; Zimelis, 2012). While the impact of foreign aid on the survival of non-democratic leaders has been investigated (Licht, 2010), the question as to how aid suspensions affect different autocratic types remains unexplored. Testing Stokke's (1995) propositions, Crawford concluded that 'military-backed governments, often characterised by a ruthless suppression of internal dissent, are generally more able to resist external pressure', confirming that 'external intervention is more successful when it combines with internal pressure from an active political opposition' (1997, p. 83). Yet, other autocracies are absent from his study.

3.3. Do aid sanctions operate and perform differently from other sanctions?

In order to explore whether aid sanctions can be expected to affect autocratic types differently from foreign policy sanctions, it is necessary to consider whether the specificities of this subtype are likely to affect its performance. In keeping with the literature, two aspects are relevant. One of them concerns the modalities of aid sanctions: they can restrict programme aid or entail the total or partial suspension of budget support offered to a recipient.

Budget aid, which goes directly to the recipient government's coffers, is more fungible for political benefit than project aid, which is linked to specific assistance programmes. Since cuts typically concern budget support rather than project aid, assistance to social services like health and education remain unaffected (Nielsen, 2013). Still, since the recipient government retains the ability to commit domestic funds liberated by foreign aid to other objectives, the provision of aid may end up 'substituting for government spending that would have occurred anyway, thereby freeing up government monies to be spent as the government wants' (Kosack & Tobin, 2006, p. 210). Thus, the importance of aid modality is only relative in terms of its fungibility.⁴

A more central divergence between aid cut-offs other sanctions concerns the ease of evasion. The provision of development aid entails high costs for the sender, which contrast with the revenue-generating character of trade (Early & Jadoon, 2019). Discontinuing aid disadvantages the target, while restricting mutually profitable trade entails costs for both sides. This has implications for the likelihood of sanctions busting: Third states are more likely to engage in sanctions-busting trade out of commercial interest, in the absence of any political intention to favour the target. By contrast, third states are unlikely to replace withdrawing donors due to the high costs of direct aid provision, unless driven by a strong political motivation (Early, 2015). Therefore, the population of thirds states willing to replace trading partners lost to sanctions is bound to be considerably larger than that willing to replace a withdrawing donor.

In light of these considerations, we set out to explore how paying more attention to aid suspensions affects the exploration of the relationship between sanctions efficacy and autocratic types. Due to persisting scholarly boundaries, development and sanctions scholars tends to analyse different data and produce separate bodies of research. This division between the study of aid suspensions

³ Only data by Morgan et al. (2007) treat the 'termination of foreign aid' as a fully-fledged sanctions category. Aid sanctions feature in the popular sanctions database produced Gary Hufbauer and his collaborators (2007); however, aid cuts are integrated in the broader category of financial sanctions. The recent compilation (Felbermayr et al., 2020) does not feature aid sanctions.

⁴ This is the case even if certain aid is acknowledged to be non-fungible (Bermeo, 2016).

and other sanctions is problematic as it may be hampering our ability to generate knowledge about sanctions efficacy. By leaving out a considerable portion of coercive exercises, we might be misestimating impacts and, consequently, distorting findings. A new exploration contributes to eroding scholarly barriers in the hope of improving our understanding of how aid sanctions relates to autocratic heterogeneity.

4. Dataset, hypotheses and methodology

Autocratic survival relies on both repression and the distribution of rents among loyal elites, both of which are costly. Sanctions can reduce the availability of funds to the government, and thus diminish the ability of autocracies to fund both repression and rents (Bueno de Mesquita et al., 2003; Lowenberg et al., 2004). Escribà-Folch and Wright suggest that personalist regimes and monarchies are more likely to be destabilised because they are more sensitive to the loss of external sources of revenue to fund patronage. Single-party and military regimes are, by contrast, more resilient because they can increase tax revenue to step up co-optation and repression while the economic disruption caused by sanctions is most likely to carry political costs for personalist regimes (2010). By contrast, classical scholarship ascribes the stability of autocratic regimes to their level of institutionalisation, positing that less institutionalised regimes are more reliant on narrow groups and repression to maintain power (Davenport, 2007; Geddes, 1999). According to this logic, monarchies and single-party-regimes are more resilient than personalist and military regimes. This leads us to formulate the following competing hypotheses:

Hypothesis 1a.

Personalist regimes and monarchies are the most vulnerable to sanctions because of their sensitivity to the loss of revenue to fund patronage and repression, while single-party regimes and military regimes are the most resilient to sanctions.

Hypothesis 1b.

Personalist regimes and military regimes are the most vulnerable to sanctions because of their weak institutionalisation, while single-party regimes and monarchies are the most resilient to sanctions.

The next step is to interrogate if aid suspensions affect autocratic types differently from other sanctions. The question is whether any of the divergences that set them apart affect the mechanisms that underlie autocratic survival differently. Since autocracies ensure their survival by using their wealth to nurture patronage networks and fund repression, whether funds derive from international trade or foreign aid appears irrelevant. Aid withdrawals will affect government revenue in similar ways as the interruptions of trade links, shrinking the budget available for funding patronage and repression. While budget support should be, in principle, more fungible due to its government-to-government nature, in reality target governments retain the option of redirecting other revenue from public services, rendering the difference between both modalities superfluous. Whichever of the above logics is true for autocratic resilience to sanctions - a function of institutional set-up versus a function of ability to fund redistribution and repression -, we expect aid sanctions to behave similarly to other sanctions. This gives rise to the following hypothesis:

Hypothesis 2.

Autocratic types are as vulnerable to aid suspensions only as to all sanctions.

To explore this question, we examine which regime type is most vulnerable to aid sanctions and ascertain whether the result is altered when all sanctions (i.e., both foreign policy sanctions and aid sanctions) are considered.

Next, we consider selection effects relevant to sanctions evasion. Once sanctions cuts external sources of revenue, target governments seek to capture resources for politically motivated redistribution elsewhere (Escribà-Folch & Wright, 2010). Alternative trading partners will step in to conduct the trade lost to sanctions out of sheer commercial interest. By contrast, aid sanctions are less likely to attract busting by third states (Early, 2015). Substitute donors are harder to find than trading partners. Because of the high costs of aid provision, replacing a donor will only appeal to strongly politically-motivated powers (Early, 2015). Albeit the rise of non-Western donors enlarges the population of potential replacements for withdrawing donors (Barton & de Bellefroid, 2015), many 'new' donors do not follow developmental priorities in aid allocation, making them unlikely substitutes with recipients of little commercial or geostrategic consequence. In the absence of special significance, which rarely occurs, extremely underdeveloped or resource-poor targets may be unable to lure alternative donors (Jeong, 2019). In light of the greater likelihood of finding third countries available to replace trading partners lost to trade sanctions than of attracting donors to substitute funds lost to aid suspensions, we expect wealth to shield targets of foreign policy sanctions, but not of aid cuts. The reason is that targets will be able to maintain wealth obtained from trade despite sanctions thanks to the ease of evasion via alternative partners, while wealth obtained from foreign aid will not survive donor withdrawal.

Hypothesis 3.

Wealth protects autocracies less from aid suspensions than from other sanctions.

Thus, we look at the level of wealth in the target country in order to test whether the result is altered when all sanctions are considered. Lastly, we apply several controls to test the robustness of our results. Following convention in the field (Hufbauer et al., 2007), we combine standard economic variables with political variables, such as the level of democracy in the target and the identity of the sender (Bapat et al., 2013).

4.1. Dataset

We test our hypotheses against an original dataset tailored to the purpose of our inquiry. Our dataset encompasses sanctions imposed by the principal senders and donors, including the US, the UN, Canada, the EU and other international organisations (I.O.s). We considered entries only when they could be verified against a minimum of two different sources. Albeit this choice restricts our aid sanctions universe, it ensures that all our episodes are correctly identified, i.e. that we exclude aid interruptions motivated by other reasons such as technical unviability or change in donor priorities.⁵ The timeframe spans from 1990 to 2018, comprising 309 episodes in total.⁶ Data on aid sanctions are sourced from Hazelzet (2001), Crawford (2001), Del Biondo (2015) and Molenaers et al. (2016). These data are updated until 2018 with official documents and media sources. Data on standard economic sanctions from Hufbauer et al. (2007) are complemented with data from UN Targeted Sanctions Consortium (Graduate Institute, 2018) for UN sanctions, and Borzyskowski and Portela (2018) for sanctions by regional entities. Key innovations of our database are therefore the integration of aid sanctions and a comprehensive coverage of EU measures.

4.2. Dataset design and unit of analysis

Various reasons advised against the use of conventional databases in our inquiry. Data by Molenaers et al. (2016) focus on aid sanctions but lacks information on effectiveness. The HSE (Hufbauer et al., 2007) and TIES databases (Morgan et al., 2014) stop in 2000 and 2005, respectively. The most comprehensive database, the Global Sanctions Database (Felbermayr et al., 2020) excludes aid sanctions, as does the UN Targeted Sanctions Consortium database (Graduate Institute, 2018). By contrast, our original data improves conventional compilations in several respects. Firstly, aid sanctions feature as a stand-alone sanction category, contrary to standard datasets that either subsume them into larger categories or mention them only when wielded in conjunction with other economic measures, as in Hufbauer et al. (2007), making it difficult to observe independent effects. In a departure from the conventional focus on great powers, the dataset is unique in that it features regional organisations as senders, reflecting their increasingly prominent role in regional security (Hellquist, 2022). Voluntary sanctions enacted by multinational entities, a category of sanctions routinely ignored (Doxey, 2009), are included too. The dataset encompasses the rich practice of EU aid suspensions, which has a modest presence in standard databases, often studied separately because they are adopted outside the EU foreign policy framework (Koch, 2015; Portela, 2010). In contrast to Morgan et al. (2014), our data exclude threats⁷ as well as measures of commercial defence.

The unit of analysis is the episode, in tune with recent scholarship (Biersteker et al., 2016). Every sanctions event features information on the nature of the restrictions wielded, recording whether measures have a bearing on elites or on the economy as a whole. Each episode features the set of measures imposed by a single sender against a target for the same violation. A new episode is created if the goals of the sanctions regime change (Biersteker et al., 2016). Two sanctions regimes imposed against the same target for different reasons are recorded as two different episodes. An episode terminates when sanctions are lifted, or when the goal pursued by the sender changes substantially. Where two senders impose sanctions simultaneously against the same target⁸, our dataset features two episodes rather than one, which allows us to separate measures by various senders that are dissimilar in nature and scope. The definition of the episode as a unit of analysis allows us to disaggregate different measures by multiple senders that are conflated elsewhere.⁹ This makes it possible to consider separately the outcome of individual sanctions regimes imposed on a target by different senders in pursuance of separate objectives, even if they occur simultaneously. This is particularly relevant to targets suffering multiple crises in close succession. Lastly, because our dataset encompasses foreign policy sanctions in addition to aid sanctions, it allows for the comparative analysis of aid sanctions with the entire sanctions universe to fit the purpose of this paper. Under ‘foreign policy sanctions’, we subsume all sanctions categories other than the interruption of development aid, i.e. trade and financial restrictions alongside a small number of diplomatic sanctions and travel bans.

Table 1 summarises the number of episodes by sender/ donor entity or country. Most sanctions were issued by the US, followed closely by the EU. Table 2 summarises the episodes by target. Some countries experienced multiple episodes.

Table 1: Number of episodes by sender (1990-2018)

Sender	Number of sanctions episodes issued
US	91
EU	89
UN	35
AU	17
ECOWAS	10
Others (less than 10 episodes each)	68

Source: self-elaboration.

⁵ Sadly, this excludes entries by Molenaers et al. (2016) that could not be confirmed independently.

⁶ Episodes initiated before 1990 that remained active after that year are included.

⁷ Including threats would disproportionately increase the number of economic sanctions as opposed to aid sanctions, which are less well documented. We forgo their inclusion to avoid exacerbating the imbalance.

⁸ The dataset only features targets endowed with state or quasi-state authority, excluding terrorists groups.

⁹ The definition of episode is less fine-grained than that applied by Biersteker et al. (2016) to avoid generating externalities (Early, 2016).

Table 2: Number of episodes by target country

Target country (or institution)	Frequency (number of episodes)	Percent	Target country (or institution) (Cont.)	Frequency (number of episodes)	Percent
Fiji	12	3.88	Uzbekistan	3	0.97
Libya	10	3.24	Venezuela	3	0.97
FRY	9	2.91	Yemen	3	0.97
Haiti	9	2.91	Argentina	2	0.65
Liberia	9	2.91	Bosnia and Herzegovina	2	0.65
Côte d'Ivoire	9	2.91	China	2	0.65
Guinea	8	2.59	Croatia	2	0.65
Guinea-Bissau	8	2.59	Cuba	2	0.65
Syria	8	2.59	Grenada	2	0.65
CAR	7	2.27	Guatemala	2	0.65
Myanmar	7	2.27	Kenya	2	0.65
Niger	7	2.27	Malawi	2	0.65
Russia	7	2.27	Qatar	2	0.65
Togo	7	2.27	Somalia	2	0.65
Burundi	6	1.94	South Africa	2	0.65
Iran	6	1.94	South Sudan	2	0.65
Madagascar	6	1.94	Sri Lanka	2	0.65
Mauritania	6	1.94	Zambia	2	0.65
Mali	5	1.62	Albania	1	0.32
Nicaragua	5	1.62	Algeria	1	0.32
Sudan	5	1.62	Angola	1	0.32
Belarus	4	1.29	Burkina Fasso	1	0.32
DRC	4	1.29	Cameroon	1	0.32
Eritrea	4	1.29	Colombia	1	0.32
Gambia	4	1.29	Ecuador	1	0.32
Iraq	4	1.29	El Salvador	1	0.32
North Korea	4	1.29	Equatorial Guinea	1	0.32
Paraguay	4	1.29	Estonia	1	0.32
Rwanda	4	1.29	France	1	0.32
Thailand	4	1.29	India	1	0.32
Zimbabwe	4	1.29	Jordan	1	0.32
Afghanistan	3	0.97	Latvia	1	0.32
Armenia	3	0.97	Lebanon	1	0.32
Azerbaijan	3	0.97	Lithuania	1	0.32
Cambodia	3	0.97	Maldives	1	0.32
Comoros	3	0.97	Nepal	1	0.32
Egypt	3	0.97	Panama	1	0.32
Ethiopia	3	0.97	Poland	1	0.32
Honduras	3	0.97	Saudi Arabia	1	0.32
Indonesia	3	0.97	Slovenia	1	0.32
Nigeria	3	0.97	Suriname	1	0.32
North Macedonia	3	0.97	Turkmenistan	1	0.32
Pakistan	3	0.97	UAE	1	0.32
Peru	3	0.97	Vietnam	1	0.32
Sierra Leone	3	0.97			
Turkey	3	0.97			
USSR	3	0.97			
			Total	309	100

Source: self-elaboration.

4.3. Standard of success

We include a variable measuring sanctions success, labelled 'progress'. In keeping with mainstream sanctions research, the standard of success used for the present analysis is deliberately low: it is coded as 1 when the target conceded to at least part of the sender demands, even if compliance fell short from optimal. The value 0 stands for lack of progress; thus, 'progress' is a dummy.¹⁰ Outcomes adopted from Hufbauer et al. (2007) are coded as positive when they receive the cut-off value of nine as their success score, indicating that sanctions made a substantial contribution to sender goals. When cases are not recorded by Hufbauer et al. (2007), values allocated to the variable 'progress' originate from alternative sources or from our own assessment. When required to perform our own assessment to credit sanctions for progress, we apply the criteria spelt out by Pape (1998): the target concedes to

¹⁰ The value 0 is allocated also to cases in which progress was negative, i.e. where measures contributed to an aggravation of the wrongdoing at hand (Peksen, 2019).

a large portion of demands; sanctions are threatened or applied before the target changes stance; and no explanation for the target's change of heart is more credible.¹¹ In spite of these precautions, the variable 'progress' indicates that a positive development followed the imposition of the measures, without attributing to sanctions sole responsibility for such outcome. A positive outcome indicates that sanctions at least reinforced concurrent policy measures.¹² In the remainder of this article, 'progress' is referred to indistinctively as sanctions 'effectiveness' or 'success'.

4.4. Regime typification

To code regime type, data originate from the 'Autocratic Regimes Dataset' by Geddes et al. (2014). The use of data compiled under the direction of the author of the tripartition at the heart of our investigation (Geddes, 1999) ensures consistency between her characterisation of autocracies and our coding. Following her categories, we code autocratic regimes as single-party, personalistic, military or monarchies. Reflecting the rarity of pure autocratic types (Schmidt, 2003), a regime may fall into two categories simultaneously; e.g., military and personalistic traits can combine. Such amalgams receive more than one code in our dataset. Where data were missing from Geddes et al. (2014) – notably for minuscule countries –, we resort to data from Cheibub et al. (2010). These data are an imperfect substitute given that they do not distinguish between personalist and single-party types, subsuming both within the category 'civilian government'. However, these data still feature categories for military regimes, monarchies and democracies, which display a reasonable degree of overlap with Geddesian types.¹³ Post-2010 cases retain their 2010 code unless a change of regime occurred, in which case they are left un-coded. Polity IV provides a composite Indicator of Democracy and Autocracy (Polity IV, 2018). To identify significant transitions advising against the use of the 2010 code, we look out for increases in the country's Polity score of at least six points, which implies a change in the character of the regime (Szent-Ivany, 2015) and render the 2010 coding obsolete. While this method does not allow us to detect transitions in which an autocratic regime replaces another, this phenomenon applies to very few events. The same Polity IV indicator captures cases of anarchy – often civil war –, which are coded as such in a separate variable.¹⁴ Table 3 identifies the episodes of our database with the type of regime according to the classification by Geddes et al. (2014). Most episodes feature some form of personalist government (110 cases), in exclusivity or in conjunction with another type. Geddes et al. (2014) lack data for 39 of our episodes.

Table 3: Target regime type as classified by Geddes et al. (2014)

Regime type following the classification of Geddes <i>et al.</i> (2014)	Frequency (number of episodes)	
	Number of episodes	Percent
Personalistic regime	110	35.60
Democracy	55	17.80
Party regime	27	8.74
Military	22	7.12
PP (party + personalistic)	19	6.15
Military + Personal	11	3.56
PPM (party + personalistic + military)	10	3.24
Monarchy	6	1.94
Party + Military	4	1.29
Party + Personal	4	1.29
Oligarchy	2	0.65
Not classified	39	12.62
Total	309	100

Source: self-elaboration and Geddes et al. (2014).

Note: Episodes missing from data by Geddes et al. (2014) appear as 'not classified'.

Table 4 classifies episodes according to regime type categories by Cheibub et al. (2010). Most targets are civilian regimes, closely followed by military regimes. Data from Cheibub et al. (2010) do not cover 48 of our episodes.

¹¹ This must be confirmed by the timing of concessions and target leaders' statements.

¹² This approach obviates the difficulties associated with the multiplication formula applied by Hufbauer et al. (2007), whereby a major contribution to a mediocre policy outcome would receive the same score as a sanction making little contribution to a successful policy outcome (Biersteker et al., 2018).

¹³ Data by Wahman et al. (2013) do not represent a superior alternative due to discrepancies in regime typification as these authors contest the characterization of personalist regimes as a distinct type (Hadenius & Teorell, 2007). No alternative categorization was attempted since these merely conceptual classifications which make no claims that compete with the Geddesian account.

¹⁴ In addition, the combination of categorical with continuous typologies helps correcting their respective deficits: The former obscure dynamics of political liberalisation; the latter, changes occurring from one authoritarian regime to the next (Franz, 2018).

Table 4: Target regime type as classified by Cheibub et al. (2010)

Regime type following the classification of Cheibub <i>et al.</i> (2010)	Frequency (number of episodes)	
	Frequency	Percent
Civilian	115	37.22
Military	106	34.31
Democracy	34	11
Monarchy	6	1.94
Not classified	48	15.53
Total	309	100

Source: self-elaboration and Cheibub et al. (2010).

Note: Episodes missing from data by Cheibub et al. (2010) appear as ‘not classified’.

Finally, Table 5 classifies our episodes according to Polity IV indicators of Democracy and Autocracy (2018). Autocracies dominate our dataset (68.94 per cent). 41 target countries present an ‘interregnum’ or anarchy situation, due to civil war or state failure, and do not take either positive or negative values.¹⁵

Table 5: Indicators of democracy and autocracy in target countries according to Polity IV

Indicator of Democracy and Autocracy following Polity IV Project (2018)	Frequency (number of episodes)		
	Frequency	Percent	Cum.
-10	5	1.89	1.89
-9	15	5.68	7.58
-8	8	3.03	10.61
-7	47	17.80	28.41
-6	23	8.71	37.12
-5	20	7.58	44.70
-4	19	7.20	51.89
-3	24	9.09	60.98
-2	5	1.89	62.88
-1	16	6.06	68.94
1	22	8.33	77.27
2	1	0.38	77.65
3	6	2.27	79.92
4	8	3.03	82.95
5	8	3.03	85.98
6	12	4.55	90.53
7	9	3.41	93.94
8	6	2.27	96.21
9	8	3.03	99.24
10	2	0.76	100
Total	264	100	

Source: self-elaboration and Polity IV (2018).

Note: Values are from POLITY2 Revised Combined Polity Score. Indicators reflect the level of democracy (+) or autocracy (-) of the target countries, ranging from a value of (+10) to (-10). 41 country cases experiencing interregnum do not receive any value. Polity IV is also the source employed for classifying regimes as democratic, hybrid or autocracies. According to Polity IV’s own definition, regimes taking the value +5 and above are democracies, those between -5 and +5 are considered hybrid regimes, and those taking the value -5 or inferior are considered full autocracies. Frequencies are displayed on table 6.

¹⁵ ‘Interregnum’, defined as the ‘complete collapse of central political authority’ in the Polity Manual, is not discussed as it does not qualify as a regime type.

Table 6: Frequency of regime types by degree of democracy (1990-2018)

Regime type	Number of episodes	percent
Autocracies	98	37,12
Hybrid	129	48,86
Democracies	37	14,02
Total	264	100

Source: self-elaboration and Polity IV.

To analyse the interrelation between sanctions effectiveness and the macroeconomic stance of the target, we include economic information on the target country, as shown on Table 7.¹⁶

Table 7: Overview of economic indicators

Variable	Definition	Units	Observations	Source	Comments
Aid (constant prices)	Official Development Assistance Disbursements: flows to developing countries and multilateral institutions provided by official agencies, including state and local governments, or by their executive agencies, each transaction of which meets the following tests: i) it is administered with the promotion of the economic development and welfare of developing countries as its main objective; and ii) it is concessional in character and conveys a grant element of at least 25 per cent.	US Dollar, Millions, 2020, constant prices	284	Organisation for Economic Co-operation and Development's (OECD), Development Assistance Committee (DAC)	The variable has been corrected (divided by 1000 in the estimations)
Sender organisation	Type of sender (see comments)	Dummy variable	309	Self-elaboration	1: Sender is an international organisation or group of countries at the same time (EU, UN, MERCOSUR, etc.); 0: sender is a single country (US, Turkey, Canada, etc.)
GDP (PPP) (Constant prices)	Gross domestic product converted to international dollars using purchasing power parity rates.	Constant 2017 international dollars	271	World Bank, World Development Indicators	The variable has been correct (divided by 10000000000 in the estimations)
GDP pc (PPP) (Constant prices)	GDP per capita based on purchasing power parity (PPP)	Constant 2017 international dollars	269	World Bank, World Development Indicators	The variable has been correct (divided by 1000 in the estimations)
Exports (constant prices)	Exports of goods and services represent the value of all goods and other market services provided to the rest of the world. They include the value of merchandise, freight, insurance, transport, travel, royalties, license fees, and other services, such as communication, construction, financial, information, business, personal, and government services. They exclude compensation of employees and investment income (formerly called factor services) and transfer payments.	Constant 2015 US dollars	262	World Bank, World Development Indicators	The variable has been corrected (divided by 100000 in the estimations)
Current account balance	Sum of net exports of goods and services, net primary income, and net secondary income.	Balance of payments, Current U.S. dollars.	286	World Bank, World Development Indicators	The balance of payments (BoP) is a double-entry accounting system that shows all flows of goods and services into and out of an economy. The variable has been corrected in the estimations (divided by 1000000000)

Source: self-elaboration

5. Results

We conduct a series of tests with both all sanctions and aid suspensions only, applying the abovementioned controls. Table 8 explores the relationship between sanctions efficacy and regime type according to the classification of Geddes et al. (2014), following linear OLS regressions. The variable 'progress' is a dummy, with a value of either 0 or 1. We also include a control for the target country's overall wealth: we control for the Gross Domestic Product (GDP) per *capita* in ppp, checking whether they exert any

¹⁶ Sadly, data on oil production and oil exports is unavailable for many observations.

influence on the effectiveness of the sanctions categories we explore. Rather than simply approximating the size of the target economy, GDP *per capita* approximates efficiency.¹⁷ GDP per capita is recorded in constant prices.¹⁸

Table 8: Sanctions effectiveness (“progress”) by regime type according to Geddes et al. (2014), controlled by GDPppp

	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)
	ALL sanctions	ALL sanctions	AID sanctions	AID sanctions
	Progress	Progress	Progress	Progress
GDPppp Per capita (constant prices)	-0.0110*** (0.00238)	-0.0154*** (0.00352)	0.0149 (0.0123)	0.0153 (0.0121)
Party regime		-0.288*** (0.0914)		-0.342** (0.152)
Personalistic regime		-0.0359 (0.0678)		-0.0339 (0.123)
Military regime		-0.226*** (0.0851)		-0.306** (0.123)
Monarchy		0.267 (0.276)		-0.837*** (0.0842)
Democracy	0.105 (0.0743)		0.0908 (0.138)	
Constant	0.553*** (0.0416)	0.699*** (0.0629)	0.550*** (0.0716)	0.712*** (0.128)
Observations	233	233	83	83
R-squared	0.067	0.127	0.027	0.171

Note: Robust standard errors are in parentheses (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Our first question concerns which regimes types are most vulnerable to sanctions pressure. We find that the only regimes displaying statistically significant resilience to sanctions are single-party regimes and military regimes. This dovetails with Davenport’s classification, which categorised these types as the most institutionalised autocracies, while insufficient evidence prevents the ranking of personalist or monarchic regimes. The same applies to democracies. This seems to indicate that, because of their superior level of institutionalisation, entailing better administrative capacities and the solidity of their decision-making structures, these autocracies are better equipped to weather hardship and are thus more apt to survive the sanctions exercise.

Our second question concerns whether aid cut-offs perform similarly to sanctions in general. In order to facilitate comparison, tables 8, 9 and 10 include the results for both the entire universe of sanctions (ALL sanctions) and for aid suspensions (AID sanctions) only. The results for aid sanctions are congruent with those obtained for all sanctions: single-party and military regimes are resistant. However, the significance is weaker, and monarchies appear resilient to aid sanctions. The most intriguing result of the test displayed in table 8 emanates from our control for wealth per capita. Prosperity makes target countries more resilient when all sanctions are considered; however, the same effect is not observed when aid sanctions are isolated from the rest.

We now conduct a similar test that employs data from Cheibub et al. (2010), again controlled by GDP per capita, displayed in table 9. The categories diverge from the Geddesian tripartition, and so do the results: military regimes no longer emerge as particularly resilient, neither when all sanctions are considered nor when aid sanctions are isolated;¹⁹ by contrast, monarchies appear resistant to aid sanctions. Remarkably, the test with Cheibub’s data corroborates that prosperity renders targets resilient to sanctions in general; however, the opposite is true for aid sanctions: prosperity is negatively correlated with the effectiveness of sanctions in general, but positively correlated with the effectiveness of aid sanctions.

¹⁷ For the methodology of ‘PPP’ measures, see IMF (2003).

¹⁸ For tables 8, 11 and 12, we provide alternative estimates using probit models in the appendix.

¹⁹ Single-party regimes do not feature among Cheibub’s categories.

Table 9: Sanctions effectiveness ('progress') by regime type according to Cheibub et al. (2010), controlled by GDPppp

	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)
	ALL sanctions	ALL sanctions	AID sanctions	AID sanctions
	Progress	Progress	Progress	Progress
GDPppp per capita (constant prices)	-0.00977*** (0.00197)	-0.0113*** (0.00322)	0.0285*** (0.00959)	0.0315*** (0.00935)
Civilian		0.0618 (0.0999)		-0.0533 (0.177)
Military		0.0748 (0.0998)		0.0150 (0.166)
Monarchy		0.225 (0.245)		-0.771*** (0.152)
Democracy	-0.0755 (0.0916)		0.0293 (0.158)	
Constant	0.588*** (0.0406)	0.526*** (0.0912)	0.503*** (0.0802)	0.514*** (0.161)
Observations	225	225	79	79
R-squared	0.053	0.055	0.058	0.093

Note: Robust standard errors are in parentheses (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

A further test with Polity IV values along the democracy/ autocracy continuum, displayed in table 10, confirms that resistance of targets to sanctions in general increases with wealth. However, this does not apply to aid sanctions. Table 10 also indicates that vulnerability to sanctions pressure increases with the level of democracy, although the evidence does not achieve the same degree of robustness.

Table 10: Sanctions effectiveness ('progress') democracy/ autocracy according to Polity IV

	Linear regression (OLS)	Linear regression (OLS)
	ALL sanctions	AID sanctions
	Progress	Progress
GDPppp Per Capita (constant prices)	-0.00872*** (0.00214)	0.0216* (0.0109)
Democracy/Autocracy (Polity IV Project)	0.0147** (0.00605)	0.0183 (0.0114)
Constant	0.602*** (0.0379)	0.577*** (0.0839)
Observations	227	85
R-squared	0.067	0.093

Note: Robust standard errors in parentheses (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

We now conduct a test that includes multiple economic controls. We take into account exports, aid and current account balance (following the definitions and methodology summarized in table 7, as well as income per capita. It confirms some of the insights gained from previous tests: Single-party and military regimes appear more resilient than other types, while there are also some indications that democracies are more vulnerable to sanctions in general. Wealth shields the target from sanctions pressure. In addition, there is some evidence that being an exporter reduces vulnerability to sanctions. However, the most relevant insight is that being a recipient of aid renders targets more resilient to sanctions pressure.

Table 11: Sanctions effectiveness, regime type following Geddes et al. (2014) and macro environment

	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)
	ALL sanction	LL sanction	LL sanction	LL sanction	AID sanctions	AID sanctions	AID sanctions	AID sanctions
	Progress	Progress	Progress	Progress	Progress	Progress	Progress	Progress
GDPppp Per Capita (constant prices)	-0.0196*** (0.00507)	-0.0227*** (0.00529)	-0.0159*** (0.00428)	-0.0191*** (0.00476)	0.0167 (0.0235)	0.0188 (0.0258)	0.0338 (0.0271)	0.0380 (0.0300)
Exports (constant prices)			-1.29e-08*** (4.01e-09)	-1.00e-08* (5.19e-09)			-2.88e-07 (4.87e-07)	-2.96e-07 (5.31e-07)
Aid (constant prices)	-0.136*** (0.0436)	-0.104*** (0.0377)	-0.122*** (0.0430)	-0.107*** (0.0396)	-0.382*** (0.120)	-0.237 (0.156)	-0.356** (0.146)	-0.234 (0.173)
current account balance	0.00973* (0.00533)	0.0118* (0.00634)			0.00727 (0.0157)	0.0119 (0.0154)		
Party regime		-0.296*** (0.0950)		-0.215** (0.100)		-0.237 (0.173)		-0.213 (0.173)
Personalistic regime		-0.0542 (0.0699)		-0.0548 (0.0733)		-0.0431 (0.127)		-0.0214 (0.131)
Military regime		-0.267*** (0.0883)		-0.254*** (0.0886)		-0.320** (0.129)		-0.283** (0.126)
Monarchy		-0.0552 (0.284)		0.118 (0.263)		-0.783*** (0.131)		-0.862*** (0.158)
Democracy	0.131* (0.0785)		0.118 (0.0823)		0.116 (0.141)		0.121 (0.142)	
Constant	0.638*** (0.0496)	0.790*** (0.0655)	0.636*** (0.0520)	0.781*** (0.0706)	0.682*** (0.0925)	0.782*** (0.144)	0.626*** (0.106)	0.717*** (0.153)
Observations	217	217	200	200	80	80	74	74
R-squared	0.093	0.156	0.087	0.135	0.098	0.202	0.115	0.213

Note: Robust standard errors in parentheses (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Having examined our economic controls, we now turn to our political control, namely, whether sanctions imposed by I.O.s are associated with a higher degree of effectiveness. This dovetails with the literature that relates effectiveness to the identity of the sender (Bapat et al., 2013), and more specifically to I.O.s as they are better equipped to encourage compliance from a sanctions coalition than individual leading countries (Drezner, 2000).²⁰

²⁰ We thank an anonymous reviewer for this suggestion.

Table 12: Effects of I.O.s as senders

	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)	Linear regression (OLS)
	ALL sanctions	ALL sanctions	AID sanctions	AID sanctions
	Progress	Progress	Progress	Progress
GDPppp (constant prices)	-0.0126***	-0.0122***	-0.00282	-0.00151
	(0.00388)	(0.00395)	(0.00957)	(0.00856)
Party regime		-0.225**		-0.386**
		(0.0880)		(0.153)
Personalistic regime		-0.0189		-0.0716
		(0.0689)		(0.109)
Military regime		-0.202**		-0.328***
		(0.0836)		(0.119)
Monarchy		-0.334**		-0.711***
		(0.165)		(0.114)
sender organization	0.139**	0.0967	0.192*	0.167
	(0.0659)	(0.0679)	(0.105)	(0.102)
Democracy	0.104		0.173	
	(0.0767)		(0.134)	
Constant	0.423***	0.558***	0.489***	0.712***
	(0.0562)	(0.0743)	(0.0839)	(0.115)
Observations	234	234	84	84
R-squared	0.054	0.097	0.058	0.194

Note: Robust standard errors in parentheses (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

Consistent with our expectation, the test confirms that I.O.s senders are associated with higher rates of effectiveness. However, this effect is weaker with sanctions in general, and subsidies when we take into account further economic controls.

6. Democratising malawi

The democratisation of Malawi in the aftermath of the Cold War constitutes an illustrative case of the vulnerability of a personalist regime to aid suspension. Since independence in 1964, the country had been ruled by President Hasting Kamaza Banda, leader of the Malawi Congress Party (MCP). Upon taking office following the country's independence, he quickly turned the state into a highly repressive autocracy of personalist traits (Geddes et al. 2018). To shore up its base of support, the MCP elite extended patronage to cabinet ministers and members of parliament by subsidising their entry into the industrial monopolies for tobacco and sugar, Malawi's most profitable crops (Kaspin, 1995). Patronage was also extended into the peasantry of the country's central region by making territorial chiefs frequent recipients of state aid, securing a loyal support base through which the state exerted control over society. The pro-democracy movement was triggered in March 1992 by local Catholic bishops, whose call for greater freedoms unleashed anti-government protests across the country, reaching groups beyond this religious community. In response to the government's crackdown on the opposition and protesters, bilateral donors collectively agreed to suspend aid in April 1992, conditioning resumption on democratic reform. The UK and the US suspended all non-humanitarian aid in 1992, while the EU froze new project aid in May 1992 (Crawford, 2001). The withholding of foreign aid led to a foreign exchange crisis, a devaluation of the currency by 22%, and a contraction of the economy by an annual rate of 7.33%, the worst downturn since independence, drying up the leadership's ability to buy support. In a bid to avoid economic collapse, the regime quickly began looking for alternative sources for aid, turning to China and North Korea, ultimately unsuccessfully (Emmanuel, 2013). In October 1992, merely months after the announcement of aid sanctions, Banda announced a referendum to determine if Malawi should turn to a multiparty system. Following the positive outcome of the referendum by a majority of 63%, presidential elections were held in May 1994, which were won by Bakili Muluzi, leader of the opposition party United Democratic Front (UDF). While the peaceful handover of power to the election winners caused surprise (Emmanuel, 2013), the Malawian case typically illustrates the quick crumbling of a power base that relies merely on personalist patronage networks when external funding is removed.

7. Discussion: aid sanctions and autocratic heterogeneity

Our findings help us refine our theoretical understanding of the mechanisms that govern aid suspensions and sanctions in general. Our first hypotheses concerned the resilience of different autocratic type to sanctions pressure. The competing hypotheses only

diverged in the classification of two types, military regimes and monarchies, given that scholarship converges around the characterisation of single-party regimes as the most resilient. Our results corroborate the resistance of single-party regimes; yet, they make it difficult to adjudicate with confidence between the competing hypotheses. Results using the Geddesian tripartition point to military regimes as resilient, which dovetails with Davenport's distinction between strongly versus weakly institutionalised regimes (hypothesis 1a). This appears to confirm institutional solidity as the determinant of regime stability under challenging economic conditions. By contrast, the analysis with data by Cheibub et al. (2010) points to military regimes as vulnerable to sanctions in general and identifies monarchies as most resilient to aid sanctions, a slight difference of emphasis more affine with previous results by sanctions scholars (hypothesis 1b). The resilience of monarchies, superior to that of other autocratic types, underlines the insularity of a regime type whose population shrank dramatically in recent decades. Defined as governments whose effective head is of hereditary royalty (Cheibub, 2010), today this category merely covers a handful of states, heavily concentrated in the Persian Gulf. Our tests reveal that not only are democracies more vulnerable to sanctions pressure than non-democracies, but chances of sanctions success increase with the level of freedom in the target. Thus, the closer a 'hybrid' regime moves up the democracy scale, the more vulnerable it is to sanctions pressure, irrespective of its type.

Our second hypothesis finds almost full validation: Results for aid cut-offs do not diverge from those applicable to sanctions in general, with the only exception of the, almost residual monarchic category. This corroborates our intuition that aid suspensions display similar effects on autocratic types as foreign policy sanctions, which confirms our claim that the marginal role ascribed to them in mainstream sanctions scholarship is unwarranted. Furthermore, the fact that our third hypothesis is confirmed constitutes a key insight that compels us to put the character of aid suspensions into perspective. Wealth's shielding effect against foreign policy sanctions is pronounced, but disappears when only aid sanctions are considered. The finding that affluence strengthens the resistance of targets under foreign policy sanctions but not aid suspension dovetails with our evasion-based explanation. Following Early (2015), a country's resistance to sanctions can be explained by its continued ability to generate revenue via trade. When trade with a set of senders is disallowed, resort to alternative trading partners and illicit routes remains an option. By contrast, a target's prosperity is not a predictor of resilience for those affected by aid suspensions because substitutes for withdrawing donors are in shorter supply. The Malawian leadership struggling – and ultimately failing - to lure new donors illustrates this dynamic. Importantly for our purposes, our controls reveal that target resilience increases with those that are exporters. Combined, these circumstances highlight a key difference in the operation of sanctions: the prosperity of a target cannot shield it from sanctions effects by any other means than the continuation of commercial exchange. While the receipt of economic assistance helps shielding targets under foreign policy sanctions against their impact, aid withdrawal has comparatively more severe effects.

Lastly, we control for I.O. as senders, a determinant of sanctions effectiveness highlighted by Bapat et al. (2013), and one that our database is particularly apt to test due to the abundance of this sender type. As expected, I.O. senders are associated with a higher rate of effectiveness than individual countries. However, this effect subsides when we consider economic controls. Again, this can be indicative of a difference in the operation of aid sanctions and other sanctions. The fact that I.O. senders display stronger effects when suspending aid than when applying other sanctions underscores the argument about the difficulty of finding substitutes for withdrawing donors. An aid suspension by an I.O. equates to the withdrawal of multiple donors, magnifying donor co-ordination habits. When I.O.s issue suspensions, alternative donors may be even more difficult to find than when a single state ceases aid. This introduces a nuance to our second hypothesis: while aid suspensions behave largely as other sanctions, their specific characteristics affect their operation. Rather than warranting their seclusion, this insight calls for increased attention in sanctions studies.

Our findings have significant policy and research implications. The fact that most autocratic types are as vulnerable to aid sanctions as to foreign policy sanctions, and less likely to find substitutes for withdrawing donors, implies that the suspension of aid ought to be contemplated more often, and possibly before the imposition of foreign policy sanctions, in the interest of efficacy. The resilience of monarchies to aid sanctions is hardly of concern in view of the small size of this population. By contrast, the resistance to sanctions pressure shown by single-party regime is more preoccupying, as their worldwide abundance (over 20% of the Geddesian sample) does not augur well for future sanctions efforts. Furthermore, by uncovering that target resistance to sanctions increases with wealth, and that being an aid recipient strengthens target resilience, our analysis opens up a new avenue for research. This includes investigating the interactive effects of combining aid suspensions and trade restrictions on sanctions effectiveness, and exploring the differential effects of using aid cut-offs in conjunction with foreign policy sanctions as opposed to stand-alone measures. Lastly, our finding about the effectiveness of aid sanctions issued by I.O.s appears promising. The question as to when, how and for which purpose I.O.s resort to aid suspensions requires some updating as their sanctions activity increases in frequency and intensity. Recent research has highlighted how sanctions by I.O., in particular regional arrangements, prove effective in resolving governance crises, pointing to an adroit use of these tools (Hellquist, 2022; Borzyskowski & Portela, 2023). Yet, I.O.s' use of aid cuts remains scarcely researched.

8. Conclusion

Our analysis explored whether aid suspensions display comparable effects on different autocratic types as foreign policy sanctions, testing them on an original dataset featuring aid sanctions obscured elsewhere. Our findings bring fresh insights to the sanctions and aid conditionality debate. Aid suspensions behave largely like any other sanctions in terms of their effectiveness on different autocratic types. This calls for this subtype's full integration of this subtype in mainstream sanctions research, corroborating suggestions that 'scholars of International Relations should take interest in aid sanctions because they offer new evidence to adjudicate between competing explanations of state behaviour' (Nielsen, 2013, p. 57). At the same time, we find that aid sanctions' specific characteristics result in differences in their impact and effectiveness vis-à-vis foreign policy sanctions, implying that more research is required to delve into how different subtypes of sanctions may behave differently. However, the implementation of this promising research agenda is contingent upon improved compilations of data on which new research questions can be tested. Extant databases lack important information on the contents of aid sanctions (Jeong, 2019), and recent efforts tend to disregard aid

sanctions. Our endeavour is but a first step towards remedying the unsatisfactory documentation of a widespread international coercive practice.

References

- Alesina, A., & Dollar, D. (2000). Who gives foreign aid to whom and why? *Journal of Economic Growth*, 5(1), 33-63.
- Allen, S.H. (2005). The determinants of economic sanctions success and failure. *International Interactions*, 31(2), 117-38.
- Bader, J., & Faust, J. (2014). Foreign aid, democratization and autocratic survival. *International Studies Review*, 16(4), 575-95.
- Barton, B., & de Bellefroid, A. (2015). The EU, China and sub-Saharan Africa. In J. Wouters, J., Defraigne, J.C. & Burnay, M. (Eds.), *China, the European Union and the Developing World* (pp. 371-401). Edward Elgar.
- Bergeijk, P. van (1999). Economic Sanctions: Why do they succeed; why do they fail? In W. J. M. van Genugten, & G. A. de Groot (Eds.), *United Nations Sanctions* (pp. 97-111). Interentia.
- Bermeo, S.B. (2016) Aid is not oil: Donor utility, heterogeneous aid, and the aid-democratization relationship, *International Organization*, 70(1): 1-32.
- Biersteker, T., Eckert, S., & Tourinho, M. (2016). *Targeted sanctions. The effectiveness of UN action*. Cambridge: CUP.
- Biersteker, T., Eckert, S., Tourinho, M., & Hudakova, Z. (2018). UN sanctions datasets (1991-2013). *Journal of Peace Research*, 55(3), 404-12.
- Bapat, N., Heinrich, T., Kobayashi, Y., & Morgan, T.C. (2013). Determinants of sanctions effectiveness: Sensitivity analysis using new data, *International Interactions*, 39(1), 79-98.
- Borzyskowski, I., & Portela, C. (2018). Sanctions cooperation and regional organisations. In S. Aris, A. Snetkov, & A. Wenger (Eds.), *Inter-organisational relations in international security: Cooperation and competition* (pp. 240-61). Routledge.
- Borzyskowski, I., & Portela, C. (2023). Global governance from below. Regional sanctions as drivers of UN sanctions, *Journal of Conflict Resolution*.
- Brooks, R. (2002). Sanctions and regime type: What works, and when. *Security Studies*, 11(4), 1-50.
- Bueno de Mesquita, B., Smith, A., Siverson, R., & Morrow, J. (2003). *The logic of political survival*. MIT Press.
- Cortright, D., & Lopez, G.A. (2000). *The sanctions decade: Assessing UN strategies in the 1990s*. Lynne Rienner.
- [dataset] Cheibub, J.A., Gandhi, J., & Vreeland, R. (2010). Democracy and dictatorship revisited. *Public Choice*, 143(2-1), 67-101. <https://sites.google.com/site/joseantoniocheibub/datasets/dd>
- Charron, A., & Portela, C. (2015). The UN, regional Sanctions and Africa. *International Affairs*, 91(6), 1369-1385.
- Crawford, G. (1997). Foreign aid and political conditionality: Issues of effectiveness and consistency. *Democratization*, 4(3), 69-108.
- Crawford, G. (2001). *Foreign aid and political reform. A comparative analysis of democracy assistance and political conditionality*. Palgrave.
- Crawford, G., & Kacarska, S. (2019). Aid sanctions and political conditionality: continuity and change. *Journal of International Relations and Development*, 22(1), 184-214.
- Davenport, C. (2007). State repression and political order. *Annual Review of Political Science*, 10(1), 1-23.
- Del Biondo, K. (2011). EU aid conditionality in ACP countries: Explaining inconsistency in EU sanctions practice. *Journal of Contemporary European Research*, 7(3), 380-95.
- Del Biondo, K. (2015). Donor interests or developmental performance? Explaining sanctions in EU democracy promotion in sub-Saharan Africa. *World Development*, 75(1), 74-84.
- Demena, B., Alemanyehu, R. Benalcazar Jativa, G., P. Kimararungu, P. & van Bergeijk, P. (2021). Publication bias in sanctions research. In P. van Bergeijk (Ed.) *Research Handbook on Economic Sanctions* (pp. 125-150). Edward Elgar.
- Doxey, M. (2009). Reflections on the sanctions decade and beyond. *International Journal*, 64(2), 539-49.
- Drezner, D. (2000). Bargaining, enforcement, and multilateral sanctions: When is cooperation counterproductive? *International Organization*, 54(1), 73-101.
- Drury, A.C., & Peksen, D. (2010). Coercive or corrosive: The negative impact of economic sanctions on democracy. *International Interactions*, 36(3), 240-64.
- Early, B. (2015). *Busted Sanctions: Explaining Why Economic Sanctions Fail*. Stanford University Press.

- Early, B., & Jadoon, A. (2019). Using the carrot as the stick: US foreign aid and the effectiveness of sanctions threats. *Foreign Policy Analysis*, 15(3), 350-369.
- Early, B. (2016). Review of Thomas J. Biersteker, Sue E. Eckert, Marcos Tourinho, eds. Targeted Sanctions: The impacts and effectiveness of United Nations action, *H-Net Reviews in the Social Sciences*, at: <https://www.h-net.org/reviews/showpdf.php?id=47356>
- Emmanuel, N. (2013). Democratization in Malawi: Responding to International and Domestic Pressures. *African and Asian Studies*, 12(4), 415-434.
- Escribà-Folch, A. (2012). Authoritarian responses to foreign pressure: Spending, repression and sanctions. *Comparative Political Studies*, 20(10), 1-31.
- Escribà-Folch, A., & Wright, J. (2010). Dealing with tyranny. International sanctions and the survival of authoritarian rulers. *International Studies Quarterly*, 54(2), 335-59.
- Escribà-Folch, A., & Wright, J. (2015). *Foreign pressure and the politics of authoritarian survival*. Oxford: OUP.
- Felbermayr, G., Kirilakha, A., Syropoulos, C., Yalcin, E., & Yotov, Y. (2020) The Global Sanctions Data Base. *European Economic Review*, 129, 1-23.
- Fisher, J. (2015). 'Does it work?' Britain and political conditionality since the Cold War. *World Development* 75(1), 13-25.
- Franzt, E. (2018). Authoritarian politics: Trends and debates. *Politics and Governance*, 6(2), 87-89.
- Fürutter, M. (2020). The transnationalized reality of EU sanctioning: a new research agenda beyond the study of effective economic sanctions. *Journal of European Public Policy*, 27(10), 1585-1597.
- Geddes, B. (1999). What do we know about democratisation after twenty years? *Annual Review of Political Science*, 2(1), 115-44.
- Geddes, B., Franz, E., & Wright, J. (2014). *Global Political Regimes Code Book*.
- [dataset] Geddes, B., Franz, E., & Wright, J. (2014). Autocratic breakdown and regime transitions: A new data set. *Perspectives on Politics*, 12(2), 313-31. <http://dictators.la.psu.edu/>
- Geddes, B., Franz, E., & Wright, J. (2018). *How dictatorships work*. CUP.
- [dataset] Graduate Institute (2018). *UN Targeted Sanctions Consortium Database*. http://graduateinstitute.ch/home/research/centresandprogrammes/global-governance/research-projects/UN_Targeted_Sanctions/targeted-sanctions-consortium-da.html
- Hadenius, A., & Teorell, J. (2007). Pathways from authoritarianism. *Journal of Democracy*, 18(1), 143-56.
- Hart, R. (2000) Democracy and the successful use of economic sanctions. *Political Research Quarterly*, 53(2), 267-284.
- Hazelzet, H. (2001). *Carrots or sticks? EU and US reactions to human rights violations (1989-2000)*, Doctoral dissertation. European University Institute.
- Hellquist, E. (2022). The African Union in a world of sanctions. In A. Charron & C. Portela (Eds.), *Multilateral Sanctions Revisited* (pp.99-114). McGill-Queen's University Press.
- Hufbauer, G.C., Schott, J., Elliott, K.A. & Oegg, B. (2007). *Economic sanctions reconsidered. History and current policy* (3rd ed.). Institute for International Economics.
- International Monetary Fund (2003). Economic prospects and policy issues. In *World Economic Outlook. Public debt in emerging markets. World economic and financial Surveys* (pp. 1-63). IMF.
- Jeong, J.M. (2019). Do sanction types affect the duration of economic sanctions? The case of foreign aid, *International Political Science Review*, 40 (2), pp. 231-245.
- Jones, L. (2015). *Societies under siege. Exploring how international economic sanctions (do not) work*. OUP.
- Kaempfer, W., & Lowenberg, A. (1999). Unilateral versus multilateral international sanctions: A public choice perspective. *International Studies Quarterly*, 43(1), 37-58.
- Kaempfer, W., & Lowenberg, A. (2007). The political economy of economic sanctions. In T. Sandler, & K. Hartley (Eds.), *Handbook of Defence Economics, Volume 2*. (pp. 867-912). North-Holland.

- Kaempfer, W., Lowenberg, A., & Mertens, W. (2004). International economic sanctions against a dictator. *Economics and Politics*, 16(1), 29-51.
- Kaspin, D. (1995). The Politics of Ethnicity in Malawi's Democratic Transition, *Journal of Modern African Studies*, 33(4), 595-620.
- Killick, T. (1998). *Aid and the political economy of policy change*. Overseas Development Institute.
- Koch, S. (2015). A typology of political conditionality beyond aid: Conceptual horizons based on lessons from the European Union. *World Development*, 75(1), 79-108.
- Kosack, S., & Tobin, J. (2006). Funding self-sustaining development: the role of aid, FDI and government in economic success. *International Organization*, 60, 205-243.
- Laakso, L., Kivimäki, T., & Seppänen, M. (2007). *Evaluation of coordination and coherence in the application of Article 96 of the Cotonou Partnership Agreement*. Aksant Academic Publishers.
- Licht, A. (2010). Coming into money: The impact of foreign aid on leader survival. *Journal of Conflict Resolution*, 54(1), 58-87.
- Licht, A. (2017). Hazards or hassles? The effects of sanctions on leader survival. *Political Science Research and Methods*, 5(1), 143-61.
- Major, S. (2012). Timing is everything: Economic sanctions, regime type and domestic instability. *International Interactions*, 38(1), 564-76.
- Mann, H.B., & Whitney, D.R. (1947). On a test of whether one of two random variables is stochastically larger than the other. *Annals of Mathematical Statistics* 18, 50–60.
- Marinov, N. (2005). Do economic sanctions destabilise country leaders? *American Journal of Political Science*, 49(3), 564-75.
- Molenaers, N., Gagiano, A., Smets, L., & Dellepiane, S. (2015). What determines the suspension of budget support? *World Development*, 75(1), 62-73.
- [dataset] Molenaers, N., Gagiano, A., & Smets L. (2016). *Dataset Budget Support Suspensions (DBSS) 1999-2014*. University of Antwerp Institute of Development Policy and Management. <https://www.uantwerpen.be/nl/personeel/nadia-molenaers/budget-support-suspensions/>
- Morgan, C., Bapat, N., & Krustev, V. (2009). The threat and imposition of economic sanctions, 1971-2000. *Conflict Management and Peace Science*, 26(1), 96-110.
- Morgan, C., Bapat, N., & Kobayashi, Y. (2014). Threat and imposition of economic sanctions 1945-2005: Updating the TIES dataset. *Conflict Management and Peace Science*, 31(5), 541-58.
- [dataset] Morgan, C. Bapat, N., & Kobayashi, Y. (2013). *Threat and Imposition of Sanctions (TIES) Data 4.0 User's Manual, Case Level Data*. http://www.nber.org/ens/feldstein/ENSA_Sources/TIES/tiesusersmanualv4.pdf
- Nielsen, R. (2013). Selective aid sanctions against repressive states. *International Studies Quarterly*, 57(4), 791–803.
- Oechslein, M. (2014). Targeting autocrats: Economic sanctions and regime change. *European Journal of Political Economy*, 36(1), 24-40.
- Onder, M. (2020). Regime type, issue type and economic sanctions: The role of domestic players. *Economics*, 8(2), 1-18.
- Pape, R. (1998). Why economic sanctions still do not work. *International Security*, 23(1), 66-77.
- Peksen, D. (2019). When do imposed economic sanctions work? A critical review of the sanctions effectiveness literature. *Defence and Peace Economics*, 30(6), 635-647.
- Peksen, D. (2017). Autocracies and economic sanctions: The divergent impact of authoritarian regime type on sanctions success. *Defence and Peace Economics*, 30(3), 253-68.
- [dataset] Polity IV Project, 2018. *Political Regime Characteristics and Transitions, 1800-2017*. <http://www.systemicpeace.org/inscrdata.html>
- Pellet, A., & Miron, A. (2013). Sanctions, In R. Wolfrum (Ed.), *Max Planck Encyclopedia of Public International Law* (pp. 1-15), vol. IX. OUP.
- Portela, C. (2016). Are EU sanctions 'targeted'? *Cambridge Review of International Affairs*, 29(3), 912-929.
- Portela, C. (2010). *European Union sanctions and foreign policy*. Routledge.
- Portela C., & Charron, A. (2023). The evolution of databases in the age of targeted sanctions, *International Studies Review*, 25(1).

- Saltnes, J.D. (2018). The European Union's human rights policy: Is the EU's use of the human rights clause inconsistent? *Global Affairs*, 4(2-3), 277-289.
- Saltnes, J.D. (2017). Norm collision in the EU's external policies. The case of EU sanctions towards Rwanda. *Cooperation and Conflict*, 52(4), 553-70.
- Schmidt, S. (2003). Theoretische Überlegungen zum Konzept 'Politischer Stabilität'. In S. Faath (Ed.), *Stabilitätsprobleme zentraler Staaten* (pp. 9-39). Deutsches Orient-Institut.
- Sejersen, M. (2018). Democratic sanctions meet black knight support: revisiting the Belarusian case. *Democratization*, 26(2), 1-19.
- Stokke, O. (1995). *Aid and Political Conditionality*. Frank Cass.
- Swedlund, H. (2017). Can foreign aid donors credibly threaten to suspend aid? Evidence from a cross-national survey of donor officials. *Review of International Political Economy*, 24(3), 454-496.
- Szent-Ivany, B. (2015). Are democratising countries rewarded with higher levels of foreign aid? *Acta Oeconomica*, 65(4), 593-615.
- Wahman, M., Teorell, J., & Hadenius, A. (2013). Authoritarian regime types revisited: updated data in comparative perspective. *Comparative Politics*, 19(1), 19-34.
- Wilcoxon, F. (1945). Individual comparisons by ranking methods. *Biometrics* 1, 80-83.
- Zarpli, O. (2022). When do imposed sanctions work? The role of target regime type, *Journal of Conflict Resolution*, 1-28.
- Zimelis, A. (2011). Conditionality and the EU-ACP Partnership: A misguided approach to development? *Australian Journal of Political Science*, 46(3), 389-406.

Appendix: Results using probit models

To conserve space, we keep the number of tables at a minimum. Further results are available on request.

Table 8 (b): Sanctions effectiveness (‘progress’) by regime type according to Geddes et al. (2014), controlled by GDPppp

	Probit	Probit	Probit	Probit
	ALL sanctions	ALL sanctions	AID sanctions	AID sanctions
	Progress	Progress	Progress	Progress
GDPppp Per capita (constant prices)	-0.0683*** (0.0146)	-0.0748*** (0.0151)	0.0504 (0.0440)	0.0606 (0.0573)
Party regime		-0.905*** (0.270)		-0.976** (0.453)
Personalistic regime		-0.171 (0.192)		-0.118 (0.369)
Military regime		-0.651*** (0.246)		-0.876** (0.348)
Monarchy		-0.403 (0.802)		
Democracy	0.408** (0.204)		0.259 (0.380)	
Constant	0.286** (0.120)	0.763*** (0.193)	0.0898 (0.200)	0.544 (0.404)
Observations	233	233	83	82

Note: Robust standard errors in parentheses (***) p<0.01, ** p<0.05, * p<0.1).

Table 11 (b): Sanctions effectiveness, regime type following Geddes et al. (2014) and macro environment

	Probit	Probit	Probit	Probit	Probit	Probit	Probit	Probit
	ALL sanctions	LL sanctions	LL sanctions	LL sanctions	AID sanctions	AID sanctions	AID sanctions	AID sanctions
	Progress	Progress	Progress	Progress	Progress	Progress	Progress	Progress
GDPppp Per Capita (constant prices)	-0.0807*** (0.0189)	-0.0902*** (0.0197)	-0.0706*** (0.0177)	-0.0755*** (0.0182)	0.0501 (0.0674)	0.0557 (0.0810)	0.0990 (0.0803)	0.107 (0.0940)
Exports (constant prices)			-7.24e-08** (3.50e-08)	-5.67e-08** (2.84e-08)			-9.60e-07 (1.55e-06)	-9.32e-07 (1.62e-06)
Aid (constant prices)	-0.504** (0.220)	-0.363** (0.180)	-0.419* (0.228)	-0.344* (0.188)	-1.145** (0.450)	-0.930* (0.558)	-1.110** (0.512)	-0.928 (0.601)
current account balance	0.0106 (0.0211)	0.0194 (0.0215)			0.0277 (0.0517)	0.0595 (0.0596)		
Party regime		-0.969*** (0.290)		-0.678** (0.286)		-0.828* (0.499)		-0.729 (0.492)
Personalistic regime		-0.260 (0.207)		-0.219 (0.208)		-0.329 (0.443)		-0.210 (0.421)
Military regime		-0.758*** (0.260)		-0.713*** (0.255)		-1.067** (0.428)		-0.903** (0.387)
Monarchy		-0.449 (0.732)		-0.397 (0.789)				
Democracy	0.492** (0.222)		0.414* (0.225)		0.359 (0.405)		0.371 (0.414)	
Constant	0.509*** (0.152)	1.031*** (0.224)	0.485*** (0.159)	0.938*** (0.230)	0.485* (0.267)	1.010* (0.536)	0.355 (0.288)	0.806 (0.509)
Observations	217	217	200	200	80	79	74	73

Note: Robust standard errors in parentheses (***) p<0.01, ** p<0.05, * p<0.1).

Table 12 (b): Effects of I.Os. as senders

	Probit	Probit	Probit	Probit
	ALL sanctions	ALL sanctions	AID sanctions	AID sanctions
	Progress	Progress	Progress	Progress
GDPppp (constant prices)	-0.0379** (0.0160)	-0.0354** (0.0144)	-0.00708 (0.0277)	-0.00635 (0.0277)
Party regime		-0.624** (0.251)		-1.150** (0.482)
Personalistic regime		-0.0695 (0.184)		-0.250 (0.358)
Military regime		-0.547** (0.233)		-0.959*** (0.354)
Monarchy		-1.006 (0.630)		
sender organization	0.350** (0.172)	0.250 (0.180)	0.515* (0.285)	0.500* (0.304)
Democracy	0.281 (0.199)		0.480 (0.401)	
Constant	-0.193 (0.147)	0.170 (0.196)	-0.0350 (0.212)	0.619* (0.356)
Observations	234	234	84	83

Note: Robust standard errors in parentheses (***) $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.