

ANALYTICAL ESSAY

Consequences of Economic Sanctions: The State of the Art and Paths Forward

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What determines the consequences of economic sanctions? Is there a common explanation for these consequences? This article provides a comprehensive review of the fragmented literature focusing on the consequences of sanctions. We critically discuss the complex relationships between types of sanctions and sanction senders and their targets, as well as the structural factors that account for the specific consequences of different sanction cases. A discussion on the thematic, methodological, and theoretical shortcomings of the existing literature on sanction consequences follows. We argue that a “common approach” to sanction consequences research should be framed within the framework of international interdependence. We also present several nascent trends and propose new directions for sanction researchers and other disciplines.

¿Qué determina las consecuencias de las sanciones económicas? ¿Existe una explicación común para estas consecuencias? Este artículo proporciona un análisis completo de la literatura fragmentada centrándose en las consecuencias de las sanciones. Tratamos de manera crítica las relaciones complejas entre los tipos de sanciones y los responsables de imponerlas y los receptores, así como los factores estructurales que explican las consecuencias específicas de los diferentes casos de sanciones. A continuación, se incluye un debate sobre los defectos temáticos, metodológicos y teóricos de la literatura existente sobre las consecuencias de las sanciones. Sostenemos que debería plantearse un “enfoque común” para la investigación sobre las consecuencias de las sanciones dentro del marco de la interdependencia internacional. También presentamos varias tendencias nacientes y proponemos nuevas orientaciones para los investigadores de sanciones y otras disciplinas.

Par quoi les conséquences des sanctions économiques sont-elles déterminées? Existe-t-il une explication commune de ces conséquences? Cet article propose un examen complet de la littérature fragmentée se concentrant sur les conséquences des sanctions. Nous abordons d’un œil critique les relations complexes entre les types de sanctions et les émetteurs de sanctions et leurs cibles, ainsi que les facteurs structurels qui expliquent les conséquences spécifiques des différents cas de sanctions. Nous poursuivons par une discussion sur les lacunes thématiques, méthodologiques et théoriques de la littérature existante sur les conséquences des sanctions. Nous soutenons qu’une « approche commune » des recherches sur les conséquences des sanctions devrait s’inscrire dans le cadre de l’interdépendance internationale. Nous présentons également plusieurs

tendances naissantes et nous proposons de nouvelles orientations pour les chercheurs spécialisés en sanctions et les autres disciplines.

Keywords: economic sanctions, sanction consequences, interdependence

Palabras clave: sanciones económicas, consecuencias de sanciones, interdependencia

Mots clés: sanctions économiques, conséquences des sanctions, interdépendance

Introduction

Economic sanctions are increasingly used in international relations. Research on sanction consequences is growing and already covers many issues and areas. However, our understanding of the various impacts of sanctions on different actors (including targets, sanction senders, other states, individuals, groups, and systems) remains limited due to the fragmentation of the existing research along the different approaches or subtopics.

To understand the state of the art of sanction consequences research, we provide a rare comprehensive review of sanction consequences literature. While a recent essay by [Allen et al. \(2020\)](#) evaluates some advances and policy implications of the latest research in this area, we present a broader critical review of sanction effects for all actors and on a systemic level discuss the conflicting findings, limitations, and paths forwards. We bring together works on different influenced entities, different types of sanctions and their consequences, and different methodologies and data. As no review can cover all the research on sanction consequences, we attempt to present selected works covering the broadest possible range of sanction impacts in different areas. The breadth of the literature review aims to demonstrate the fragmentation of the literature and to integrate otherwise rarely communicating works from different approaches. Moreover, it shows that different subareas of sanction consequences research may benefit from common insights. After critically reviewing the existing research on economic, political, humanitarian, and social and systemic consequences, we discuss the main weaknesses and limitations of the current research.

We identify several problematic thematic, methodological, and theoretical issues in the sanction consequences literature. We argue that while a parsimonious theory of sanctions is difficult to achieve, accounting for the interdependence between sanction senders, targets, and other states can explain the lack of consistency between different findings, as well as facilitate dialogue among methodologically different works. Most importantly, focusing on interdependence may allow one to connect the most distinct branches of sanction consequences research and improve one's understanding of each.

Therefore, we propose a common approach (as opposed to a comprehensive theory) to study sanction consequences by accounting for different degrees of interconnectedness and interdependence between the sender/target and other states. Building upon the logic of the asymmetrical network-based interdependence approach ([Farrell and Newman 2019](#)), we argue that what combines sanction consequences research is that sanctions are conducted within the context of interdependent actors located within multiple hierarchical networks and possessing different capacities for restricting economic transactions or adjusting to them. Moreover, we show how newly developing issues (such as the use of cryptocurrencies or migration flows) not yet fully tackled by sanction consequences research can fit within the scope of an understanding of interdependence and its influence on sanctions, their

impacts, and their outcomes. A focus on network-based interdependence could shed light on the target's capacity to strengthen its own relations with other states by creating new economic networks. Locating sanctions within such a framework of interdependence will allow for a better understanding of the effects of secondary sanctions and sanction boosters. It may also help evaluate the adaptation capacity of third states connected to the economic network, as well as the systemic consequences related to the global changes within the economic and financial networks.

In the following sections, we review the existing literature on sanction consequences, focusing on the political, economic, humanitarian, and other (such as social) consequences for different actors and the international level. We acknowledge that as many sanction impacts are interlinked, focusing on these types represents a rather approximate categorization. We discuss the relevant findings within each broader type of sanction consequence to make it easier to identify the connection between sanction impacts for different actors. Then we discuss the main shortcomings of the literature and point to directions for the further advancement of sanction consequences research. In the third section, we present the framework of networked interdependence as a common approach to analyzing sanction consequences and show the intertwined relations between all the actors involved. Finally, we synthesize our main observations about sanction consequences research and discuss the paths forward.

Literature Review on Sanction Consequences

Economic sanctions can be defined as restrictions over economic activity imposed by one international actor on another with a specific purpose. Purposes of sanctions may include “signaling” one’s message to targeted or third states, enforcing a behavioral change (“coercion”), “constraining” one’s behavior (Giumelli 2011, 32–35), meeting other goals,¹ or achieving combinations of different purposes. The actors involved may include not only the sanctioning and targeted states, but also the international organizations among senders, nonstate actors (specific groups within the state, terrorist organizations, or even specific people among targets), and third-party states. We consider third-party states, or states not participating in sanctions or involuntarily taking part in their enforcement (for example, in the mandatory United Nations sanctions) because the increasing use of secondary or extraterritorial sanctions limiting the economic activities of third-state actors with “primary targets” (Meyer 2009, 906) blurs the line between involuntary participants and non-participants. Economic restrictions can result in multiple consequences with varying intensities depending on factors such as the type of sanction sender and the target, the scope and type of sanctions, and the relations between sanction senders, targets, and third-party states. Such variations show the need to review different types of sanction consequences and to understand the conditions under which they occur.

Economic Consequences of Sanctions

Research demonstrates that the intensity and probability of facing the economic impacts of sanctions vary across different actors. Targets may face consequences ranging from economic downfall to limited or no costs, while some sanctions may “strengthen” targets (Park 2014, 202–3). In contrast, sanction senders and third-party states tend not to experience economic effects above minor or medium levels, while only minor impacts were witnessed on the system level.

Evaluations of the overall economic effects of sanctions on targets focus on detecting changes (after sanction imposition) in the gross domestic product (GDP),

¹ Alternative goals of sanctions include “(a) deterrence, (b) compliance, (c) punishment, (d) destabilization, (e) limitation of conflict, (f) solidarity, (g) symbolism, (h) signaling” (Doxey 1996b, 54–55) and, depending on one’s judgment, may fall within or outside of Giumelli’s (2011) categorization.

the gross national product (GNP) (Drezner 2000, 90–91), or GDP growth rates (Neuenkirch and Neumeier 2015). However, such cumulative results of shrinking trade and other economic disturbances caused by sanctions vary across cases. While the United States' selective sanctions against China had no "significant adverse effect" on its economy (Yang et al. 2004), the 2011–2014 sanctions against Iran decreased Iran's GDP by 17 percent (Gharehgozli 2017); comprehensive UN sanctions devastated Iraq's economy. Investigating such differences, studies show that comprehensive UN sanctions have a higher negative effect on targets' GDP than UN sanctions in general (Neuenkirch and Neumeier 2015). Similarly, multilateral UN sanctions tend to have stronger effects on the target's GDP growth than unilateral US sanctions (Neuenkirch and Neumeier 2015), while higher cooperation between the senders of multilateral sanctions is likely to increase targets' costs (Drezner 2000). However, as EU sanctions are found to be less effective than those imposed by the UN (Besedeš, Goldbach, and Nitsch 2017), there is a need to differentiate between different multilateral sanctions. Moreover, considering the degree of economic power (dis)parity and dependence between targets and senders may help explain the differences in targets' costs. However, analyzing such costs is tricky due to the limitations of available datasets, which is discussed in the following section.

There are contradictory findings on the impact of sanctions on foreign direct investment (FDI), which may shrink due to the expectations of higher risks and lower profits for investors caused by trade or investment restrictions. While case studies show a decrease of foreign investment inflows in the case of sanctions against China (Yang et al. 2004) and Russia (Gurvich and Prilepskiy 2015), a recent large-*N* study suggests that economic sanctions are unlikely to harm targets' international trade or foreign direct or portfolio investment, irrespective of the types of sanctions (Shin, Choi, and Luo 2015). Earlier studies also show that FDI from the United States decreases during sanction threats but returns to initial levels after sanction imposition (Biglaiser and Lektzian 2011). FDI from other states may substitute for lost investments from the sender (Lektzian and Biglaiser 2013). However, the reported lack of any sanction impact (Shin, Choi, and Luo 2015), contradicting the observations in case studies, is surprising. This contradiction could result from the operationalizations used by Shin, Choi, and Luo (2015). They analyzed net trade (percentage of exports to imports) and net FDI inflows (difference between inflows and outflows), which could hide the balancing effects of decreasing FDI outflows and lower imports due to countersanctions and decreasing purchasing power. Thus, such contradictions may indicate the need to reevaluate the categorizations and operationalizations used in quantitative studies and to look at case studies to understand the dynamics behind different indicators.

There is more agreement on the question of the financial impacts of sanctions on targeted states. Sanctions decrease financial flows between sanctions senders and targets (Besedeš, Goldbach, and Nitsch 2017). They may also lead to lower availability of international financing, as was experienced by Russia witnessing "institutional illiquidity," "limited capital market access," increased "state funding" (Pak and Kretzschmar 2016, 577), and "decoupling" of the local stock market from the global one (Castagneto-Gissey and Nivorozhkin 2016, 82). Decreasing access to financing, and possible overall economic shocks, increases the likelihood of banking crises (especially under financial and costlier sanctions) (Hatipoglu and Peksen 2018). Costlier and multilateral sanctions have bigger effects on financial instability and currency crises due to the possibility of "speculative attacks" based on sanction-related political risks, while the type of sanctioned sector can determine the gravity of such outcomes (Peksen and Son 2015, 456). Sanction-related country risks and targeted restrictions could lead to higher volatility in stock indices in Russia (Ankudinov, Ibragimov, and Lebedev 2017), while unanticipated sanctions contributed to higher currency volatility (Dreger et al. 2016). While such research

suggests that impacts on the targets' financial sector depend on multiple characteristics of the sanctions, there is yet little knowledge on which states are more likely to experience such costs and how sanction threats influence financial stability.

Economic sanctions can also impact nonsanctioned sectors due to the reduced demand for intermediary goods, as well as to lower incomes and employment (Khan 1988, 135–39). Impacts on the target's welfare and employment, however, depend on the targets' economic characteristics (such as the price elasticity of labor and goods markets) (Black and Cooper 1987). Targeted states may experience negative impacts in “tourism, communications, aid, transfer of technology” (Doxey 1980, 487). Even in the case of a successful adjustment to sanctions, targets are likely to have additional logistical costs, higher “risk premiums,” and a slowdown in “long-run development” (van Bergeijk 1995, 450); they may end up buying commodities via third parties or of lower quality (Amuzegar 1997, 32) and selling products at lower prices (Haidar 2017). Moreover, economic sanctions may continue to affect a target's exports even after sanctions are lifted, which may be related to the “sunk costs” of the affected trade relationships (Evenett 2002, 558, 572). However, as often such findings are based on case studies of major sanction episodes, further quantitative or comparative studies could help understand the likelihood and duration of such impacts. Indeed, a study on the long-term effects of sanctions shows that sanctions lead to protectionism because target's elites competing with imports may be strengthened by sanction and demand market protection after the sanctions end (Pond 2015, 16–17).

Nevertheless, some sanctions may unintentionally benefit targets by causing “siege morality” and mobilizing people, thereby contributing to the growth of domestic productive sectors (as reportedly happened in Iran) (Amuzegar 1997, 35) or possibly stimulating industrialization (Zimbabwe) (Watanabe 1987, 537). Alternatively, the pre-2014 sanctions on North Korea “deepen[ed]” business relations between Korean and Chinese companies and made their interactions more efficient (Park 2014, 210). Given that such evidence comes from case studies, there is a need for large-*N* studies to understand whether such consequences are systematic or specific to certain targets or senders.

Sanction senders themselves incur economic costs as they restrict their own economic transactions by imposing sanctions; such costs may be even necessary as they signal the sender's commitment to the demands (Lektzian and Sprecher 2007, 416). However, early studies assumed that due to senders' capacity to adjust these costs, they are likely to be short term (Bayard, Pelzman, and Perezlopez 1983, 76) and rather small, especially in cases of unilateral sanctions for economies as large as the United States (Farmer 2000). Even with adjustments and depending on the type and scope of sanctions, the type of target, and the presence of international support, senders may face some costs (such as trading with less preferable markets, sectoral disruptions, competition with other markets, “adjusting to new trade partners,” and possible countersanctions) (Farmer 2000).

Later studies show that dependent on the type of sanctions, even the United States experiences sanction impacts (such as a decreasing volume of trade (Hufbauer et al. 1997) and decreasing financial flows [in the case of financial sanctions] (Besedeš, Goldbach, and Nitsch 2017) between senders and targets). Such impacts are related to the interdependent nature of trade relations: to restrict trade of a target, a sender needs to restrict its own interactions with the target. Moreover, when the target is a large economy, senders may face higher costs: this happened when the United States' sanctions against China caused additional costs for United States' consumers and increased the United States' trade deficit while benefiting its rivals in some areas (Yang et al. 2004, 1078). Moreover, lost exports and a reduction in export-related highly paid jobs may reduce average wages (Hufbauer et al. 1997). Some targets may impact senders by countermeasures (Doxey 1980, 487; Farmer 2000), as exemplified by Russia's countersanctions

against the EU, which decreased the Baltic states' GDP by 0.4–0.8 percent (Veebel and Markus 2018, 15–16). However, how the characteristics of senders and their relations with other states influence senders' costs needs investigation.

Sanction costs vary between sanction senders, even within the same sanctioning state; it is often private actors who incur the sanction costs (Botterill and McNaughton 2008). For example, EU sanctions against Russia and Russia's countersanctions have been found to cause a decline in agricultural sectors (varying across the EU), while the chemical sectors of Malta and Lithuania increased their exports to Russia (Giumelli 2017, 1077). Similarly, while some of a sender state's businesses can temporarily disinvest from the targeted economies (Biglaiser and Lektzian 2011) or lose access to the targets' market, others may circumvent sanctions, investing in sanction-busting or not participating in sanctions states in order to continue trading with the target (Barry and Kleinberg 2015). Financial institutions in sanctioning states also experience the rising costs of compliance with new procedures necessary to adjust to restrictions, particularly in selective financial sanctions (Arnold 2016, 89). Such institutions bear the costs related to "de-risking" (quitting some activities due to high risks) while limiting regulated banking activity, which can increase unregulated financial activity (Arnold 2016, 91). Such "evasive economic activity" was reported on the Chinese borders as a result of the sanctions imposed on North Korea (Lee and Gray 2017, 424–26). The remaining questions are which sanctioning states and sectors are more likely to experience the costs of sanctions and when private actors tend to adjust to or circumvent sanctions. Considering the use of circumvention or secondary sanctions may help better understand different sanction costs for senders.

Third-party states also incur the economic costs of sanctions. They can influence sanction costs for senders and targets, and they depend on these states' actions. Involuntary participants of UN sanctions, which require the compliance of all member states, may face significant costs if they depend on their economic relations with the target. Although such states may ask for compensation or exemption from imposing sanctions (Doxey 1996a), the effectiveness of such cost-mitigating measures may be limited. Sanction impacts may vary depending on third-party states' dependence on the targeted economy, their ability to adjust, the flexibility of the related markets, as well as sanction costs for targets. Targets' land neighbors may face higher costs of UN sanctions because of decreased imports and exports, adjustment costs to new markets, and "increased transportation costs and trade disruptions" (Slavov 2007, 1722). Likewise, the industries of states with close relations to both senders and targets may be harmed (e.g., having production facilities in a targeted state while selling their products to the sender) (Yang et al. 2004). Partners of the targeted states may lose their own trade revenues when sanctions reduce the economic activity of the target (Yang et al. 2009, 1225), as was predicted for Greece or Turkey in 2000 and 2005 with a model simulating the effects of multilateral oil sanctions against Iraq (Canes 2000, 142–43). In contrast, targets' rivals may even benefit, as happened when oil exporters enjoyed additional demand during sanctions against Iraq (Canes 2000, 143).

Nonmandatory sanctions may also benefit third-party states when a target shifts its trade to their markets (Haidar 2017). This was the case as Iran refocused trade from Europe to Asia (Esfahani and Rasoulinezhad 2017). Similarly, among sanction senders, the first states that lift sanctions may benefit from being the initial party to enter the targeted state's market (Freeman 1993). Additionally, states that are likely to continue trade with a target under sanctions may benefit from higher investment inflows from the sender's firms (who are trying to overcome the sanctions) (Barry and Kleinberg 2015). Moreover, the target's allies, dependent on their trade with targets, are likely to increase trade under sanctions (Early 2012, 568), and even a sender's allies may increase trade with the target due to their domestic firms' preferences (Early 2009). Considering that in some cases the senders' allies

(at least in short term) support sanction senders (Yang et al. 2009) and that secondary sanctions were found to cause lasting EU support of United States' sanctions on Iran (Lohmann 2016), future studies should analyze secondary sanctions as well as allies' dependencies on senders to understand when such support may occur.

The literature proposes that economic sanctions may also have some system-level effects. Early studies argued that sanctions, especially those imposed on important economies, could lead to "disruption of trade and investment, blocking of channels of exchange; emphasis on self-sufficiency; loss of certainty; loss of confidence" (Doxey 1980, 488); they could cause spillover effects and uncertainty about a partner's ability to trade, and lower the efficacy of international markets (van Bergeijk 1995, 451–52). Though no major sanction-induced disruption has yet occurred, Jones and Whitworth (2014) argue that sanctions may cause divisions in the global financial infrastructure and less effective financial markets, exemplified by Russia and China's attempts to create alternatives to the society for worldwide interbank financial telecommunication (SWIFT) system (from which Iran was banned by sanctions) (Arnold 2016, 92). Sanctions affecting exporters or importers representing a large share of the market may affect flows and prices of global goods, as when sanctions on Iraq increased oil prices by about 2 to 3 percent (Canes 2000, 143).

To sum, research suggests that while multilateral and comprehensive sanctions are likely to be costlier for targets, these costlier sanctions are also likely to be more damaging for economically close third-party states. However, while there exists some agreement on the economic effects of sanctions on targets, evidence of such costs for senders and third-party states is mostly limited to those case studies that focus on major sanction episodes (which may lead to biased conclusions). Similarly, use of different datasets, different controlling variables, and measurements makes it difficult to compare studies with diverging findings. An in-depth investigation of the mechanisms behind the sanction impacts may help better understand how sanctions work and contribute to more sophisticated analyses especially on the areas where present scholarship presents conflicting findings. Future research on sanction costs may also account for the interconnectedness between economic costs for different actors and their interactions.

Political Consequences of Sanctions

The political consequences of sanctions for senders or third-party states are either minor or absent. In contrast, targeted regimes and their populations may experience multiple political consequences, such as weakening some regimes and strengthening others. This section discusses studies on the likelihood of different actors to face political impacts of sanctions.

Some economic sanctions are explicitly aimed to inflict political costs on targets (to challenge targeted regimes), while other sanctions may have inadvertent political effects. Quantitative studies show that sanctions destabilize targeted regimes, increasing the probability of a leadership change (Marinov 2005), and escalate political "antigovernmental activity" due to the sanction-related "economic hardship" suffered by the population (Allen 2008, 916) (though both political effects are more likely in democracies than in more autocratic states). A recent study shows that sanction threats, types of sanctions, and their senders are important for the domestic politics of targets, and threats of especially multilateral sanctions increase political activity in targeted states due to their signaling effect of outside support to opposition (Grauvogel, Licht, and von Soest 2017, 93).² As Marinov (2005) also proposed that threats could be even more destabilizing than imposed sanctions, future studies focusing on sanction threats in relation to governmental change are needed.

²Threats might also motivate protests by signaling avoidable economic hardships.

Targets' regime types may influence the consequences of different sanctions. Brooks (2002) proposed that comprehensive sanctions influencing voters are more likely to create political costs for democratic regimes, whereas sanctions targeting specific elites are costlier for authoritarian regimes depending on narrower support bases. Even among authoritarian regimes, there are differences in the political effects of sanctions. Sanctioned theocratic regimes are shown to strengthen themselves using religious rhetoric (Naghavi and Pignataro 2015). Personalist regimes are argued to be less likely to comply with liberalization demands than "more factionalist" military states, as divided elites are more likely to "capitulate" to external demands while united regimes tend to "fight to the end" (Walldorf 2014, 645). Perhaps in connection with this observation, personalist regimes are less likely to survive sanctions than military or single-party regimes, though economic power and oil resources may reduce such destabilization risks (Escribà-Folch and Wright 2010). While the research could be enriched by comparing different types of sanctions, these studies demonstrate the importance of analyzing the internal dynamics within targeted states. Developing "social conflict analysis of sanctions," Jones (2015, 38) argues that their political impacts indeed depend on the political struggles within the targeted states that may lead to different outcomes.

The reactions of targeted governments in response to sanctions also diverge. North Korean leaders, during sixty years of sanctions, adopted reform-oriented rhetoric in response to negative sanctions (to appease the population) and more conflictual stances in response to positive sanctions (Kim 2014). Targeted leaders trying to minimize the political costs of sanctions may attempt to create a "rallying-around-the-flag" effect by emphasizing identities and "embattled sovereignty" (Jaeger 2016, 966); they may also appeal to popular emotions in an attempt to increase leadership's resilience to sanctions (Galtung 1967, 404, 411). A large-*N* study evaluating the rallying-around-the-flag effect argues that sanctions may strengthen authoritarian regimes resisting democratization if the society sees them as legitimate and is weakly connected to the sanction senders (Grauvogel and von Soest 2014, 645–46).

Sanctions may strengthen targeted regimes due to an incumbent's response to limit "public goods" and weaken possible "challengers" (Oechslin 2014, 25), while a deteriorating targeted economy weakens civil society and the "middle and lower classes" (Fathollah-Nejad 2014, 62). While especially comprehensive sanctions are known to negatively influence democratic freedoms (Peksen and Drury 2010), purposefully "democratic sanctions" correlate with "increasing levels of democracy" in targeted states (von Soest and Wahman 2015, 972). Von Soest and Wahman's (2015) findings suggest the need to differentiate between the purposes of sanctions because they may influence sanction designs. The purposes and designs of sanctions may in turn cause different reactions from targeted leaders and influence their survival chances differently. Moreover, because the studies use different datasets covering different periods (1972–2000 and 1990–2010, respectively), some differences in their observations could relate to the evolving sanction designs and changing political contexts after the end of the Cold War.

While sanctions often aim to improve human rights records, they may fail to do so, particularly if they are less costly for targeted regimes than abandoning oppression (Morgan and Schwebach 1995) or the costs of compliance. A study by Drury and Li (2006) suggests that the United States' threats of sanctions could lead to less protection of human rights in China due to the possible audience costs of China's compliance with the external demands. A large-*N* study by Wood (2008, 509) concluded that sanctions (especially multilateral) tend to increase repression used by targeted regimes to mute any domestic dissent. For similar reasons, human rights for physical integrity can deteriorate under extensive, multilateral, and prolonged sanctions (Peksen 2009). "Extensive and high-cost sanctions" are also especially likely to weaken property rights in targeted countries where governments may resort

to “predatory” tactics to decrease their economic woes (Peksen 2017, 225). Finally, even targeted UN sanctions may worsen human rights or make a human rights situation less likely to improve (Carneiro and Apolinário 2016). Such research demonstrates that especially comprehensive and multilateral sanctions consistently intensify political oppression and damage human rights in targeted states.

Looking at alternative intervening factors, Escriba-Folch (2012) proposes that repression is most likely to increase under personalist regimes with severe budget constraints; among the less budgetary constrained regimes, single-party rulers tend to subsidize their own supporters, while militarist regimes increase military spending (Escriba-Folch 2012, 705). Increased military spending is proposed by McDonald III and Vincent (2016) as a means used by militarist regimes to offset a weakened economy. Thus, these studies demonstrate the importance of narrowing the typologies of targeted states and accounting for their domestic constraints.

Economic sanctions are found to worsen women’s rights, especially in countries with a lower GDP per capita and under longer and costlier sanctions; such impacts are less serious under “humanitarian sanctions” (Drury and Peksen 2012, 475–83). Analyzing sanctions against Iraq, Buck, Gallant, and Nossal (1998, 81–82) demonstrate that sanctions have gendered impacts; they add an additional burden for women, who provide housekeeping and childcare under crisis conditions (with fewer income opportunities), experience a “decline in dowry wealth,” and have less independence within their families. Sanctions (especially multilateral and/or extensive) also undermine media openness as targeted governments may try to censor criticizing the media, while the media may have less funding resources within a weakening economy (Peksen 2010, 459). Thus, as less resources are available to nongovernmental actors, and governments try to further suppress domestic dissent, sanctions often result in the deterioration of civil freedoms.

Sanctions may violate human rights when humanitarian programs fail to prevent sanction-inflicted human suffering (Herring 2002, 56). Sanctions may also violate a person’s human rights by targeting individuals without a “fair hearing” or the possibility of an appeal against UN sanctions listings (Elliott 2009, 95). Erroneous listings may harm the targeted individual’s economic situation and reputation (Biersteker 2010, 103; Eriksson 2016). There has been little discussion of these issues and research into the “social and collective impacts of individual sanctions” is yet to develop (Tourinho 2015, 1412).

Economic sanctions may also influence conflicts and security in targeted states. While some argue sanctions may end conflicts, others conclude that this is due to the combination of sanctions and military interventions (Pape 1997; Eriksson and Wallenstein 2015, 1395). While sanctions are associated with shorter civil conflicts (Escriba-Folch 2010), they are found to increase the ethnic discrimination (Peksen 2016) that results from unequal suffering from sanction costs, to increase ethnic violence (Lv and Xu 2017) and civil conflict intensity (unless they limit the military capacity of the targeted governments) (Hultman and Peksen 2017). Although shortening civil conflicts and increasing conflict intensity seems contradictory, Escriba-Folch (2010) shows that sanctions imposed outside of international organizations are likely to contribute to military victories; quicker military victories may correspond to increased conflict intensities. If international organization (IO)-imposed sanctions may help resolve conflicts either by presenting a possible enforcer of negotiated peace or by ensuring senders’ commitment (Escriba-Folch 2010), one could analyze whether such sanctions also reduce conflict intensity.

Targeted states may also witness an increase in international terrorism events (Choi and Luo 2013) because terrorist groups may become stronger when the states fighting them are sanctioned; in contrast, such groups may weaken when the states providing them “sanctuaries” are targeted by sanctions (McLean et al. 2016, 378). Thus, the latter study shows the importance of exploring the nature of relations between states and nonstate actors to understand sanction effects.

The international political effects of sanctions also diverge. Some sanctions may bring the targeted state new allies instead of isolating it (Amuzegar 1997, 35). Within existing international disputes, stronger sanctions might escalate war by fostering weapon trade between targets and sanction busters (Garoupa and Gata 2002). However, large-*N* studies show that especially unilateral sanctions signal to third-party states international disapproval and weakening of the target and, therefore, increase the probability of military action against targeted states by others by about 50 percent (Peterson and Drury 2011, 595–96). Moreover, to minimize sanction costs, senders are more likely to use violence against targets (Lektzian and Sprecher 2007). The conditions under which sanctions bring targets new allies or increase the likelihood of military actions against targets are yet to be understood in relation to the type of sanctions and sanction senders. As some sanctions aim to prevent conflicts or support peacebuilding, more research (especially with a focus on smart sanctions) is needed in these areas (Eriksson and Wallensteen 2015).

Similar to targeted states, some groups within sanction senders may benefit from sanctions (Kaempfer and Lowenberg 1988); the broader political consequences for sanction-imposing governments are less clear. While Whang (2011) shows that the use of sanctions by the United States' presidents is associated with higher domestic support, Webb (2018, 505–6), analyzes a broader set of sanctions (including trade-related sanctions) to find that sanctions correspond to a “small decrease in presidential approval” related to dissatisfaction with economic costs for senders. While controlling for political scandals, crises, or wars, the latter study does not explore the differences between public response to unilateral and multilateral sanctions. Webb (2018, 506) acknowledges the possibility of positive effects, but their enabling conditions are unclear, and analyzing the differences between these conflicting studies could help understand such conditions.

Experimental studies show that public support for sanctions may depend on perceptions of sanction effectiveness and harm for targeted populations (McLean and Roblyer 2017) or expectations about the long-term effects of sanctions (Heinrich, Kobayashi, and Peterson 2017); however, the effects of such factors on attitudes toward sanctioning governments is not known. Such insights can be used to investigate actual public support for sanctions.

Besides the effects on domestic politics, sanctions may worsen relations between senders and targets (Fathollah-Nejad 2014), even if sanctions were intended to increase cooperation. The international image of a sanction-threatening state may be weakened if the state fails to impose sanctions after making threats (Peterson 2013), while successful and failed sanctions may sometimes alienate even the sender's allies (Hufbauer et al. 2009, 112). Academic research on the symbolic impacts of sanctions is still too limited and there is no systematic explanation of which sanctions influence international attitudes toward sanction senders and how.

The existing research on the alignment of third parties with senders or targets, however, shows that if a targeted state has high political importance (as in case of EU sanctions on Russia), alignment with the sender by third states is less probable and lack of such alignment may question the “normative” authority of the EU (Hellquist 2016, 1015). Target and third states' relations can also deteriorate when third states, dependent on trade with targets, suffer losses (Hellquist 2016). This shows that the political effects are not limited to targets or senders or their relations, but include third states, and that their relationships are highly interdependent.

The few additional studies on third-party states show that neighbors of targets of human rights-related sanctions (Carneiro 2014, 210) and third-party states, perceiving themselves as “similar” to the target, are likely to improve their own human rights records being deterred by such sanctions (Peterson 2014, 161). In contrast, if sanctions are threatened but not imposed, third-party states may become more likely to resist senders' future demands, especially in similar contexts (Peterson 2013, 679). While such research shows that sanctions improve human

rights in third-party states, one could also examine whether the deterrent effects of sanctions are dependent on their cost. Given that third-party states may be harmed by secondary sanctions or spillovers from targets, researchers could analyze the political consequences of such secondary risks.

On a systemic level, such deterrence of third-party states from violating norms or from cooperating with violators may be seen to strengthen human rights norms (Carneiro 2014; Peterson 2014) or “international trade regimes” in goods like diamonds (Eriksson 2016, 201). Anti-proliferation sanctions are also argued to prevent third-party states’ proliferation, irrespective of targets’ persistence (Miller 2014), even if such sanctions may reinforce a target’s perception of security threats and “push” the target toward proliferation (Paul 1996, 465; Miyagiwa and Ohno 2015). However, it is unclear which of the consequences has a stronger effect on the nonproliferation regime. Finally, the UN’s legitimacy and “normative order” is arguably damaged by problems with sanctioning individuals as discussed above (Eriksson 2016, 201), though the impacts are difficult to evaluate.

While research shows that targets are by far the most likely actor to experience the political costs of sanctions, the intensity of such impacts varies even for targets, often depending on the internal dynamics of the targeted states and their relations with other countries. The findings of the political effects on senders and third-party states similarly suggest their contingency on sanctions effects for targets. Still, further theorizing of the processes behind political effects of economic sanctions for different actors is necessary. Similarly, additional analysis of secondary sanctions is needed to understand effects of such measures on third-party states. Finally, as studies on sanction senders often focus on the United States, these processes in different contexts remain understudied.

Humanitarian and Other Consequences

While the effects of sanctions on sanction senders and third-party states are mostly limited to economic and political impacts, the states targeted by the costliest sanctions may also face humanitarian consequences. For example, due to worsened economic conditions and failing services, Iraq experienced a lack of drinking water, proper sewage systems, fuel, and wood as well as an increase in the spread of disease (Buck, Gallant, and Nossal 1998) and mortality (Mack and Khan 2000, 284). Iran and Syria suffered a decline in the availability of food and medicines (Moret 2015, 130). Even medicines excluded from sanctions may become less available due to higher prices, problems with transportation and funding, or companies’ unwillingness to engage in the complicated process of selling even permitted goods to targets (Setayesh and Mackey 2016, 5–6), as witnessed in Iran (Shahabi et al. 2015; Karimi and Haghpanah 2015). Because such impacts are (mostly) demonstrated in case studies, quantitative research could help identify the conditions determining such effects.

One of the quantitative analyses of sanctions’ effects on public health shows that sanctions may “reduce immunization rates and government spending on health care,” especially during military conflicts (Allen and Lektzian 2013, 133). Among the later quantitative studies in this area, McLean and Whang (2019) show that as sanctions tend to decrease a target’s revenues, social spending or expenditures in natural disaster prevention also decreases that may increase a country’s costs in the case of a disaster. Gutmann, Neuenkirch, and Neumeier (2020) demonstrate that sanctions tend to decrease life expectancy in targeted states and especially influence women’s life expectancy in the first years after sanction imposition. Such an effect is particularly evident in countries with a below average domestic political environment and may be caused by increased child mortality, the unmitigated spread of diseases, and a decrease in health-related expenditure (Gutmann, Neuenkirch, and Neumeier 2020). Child mortality tends to increase under costlier sanctions, as

well as under those imposed by the United States, due to a population's worsening welfare and lack of "basic needs" and healthcare (Peksen 2011). Such an effect may also occur due to decreased incomes, limited maternal access to health services, and an escalation in the conflict (as happened in case of the Democratic Republic of Congo) (Parker, Foltz, and Elsea 2016).

Sanction threats may increase corruption by creating expectations of increased rivalry for resources, especially in states where corruption is already frequent (Balanov 2017). Similarly, reported to increase corruption, UN-targeted sanctions are also associated with higher criminality rates in more than half of the cases (Eriksson 2016, 202). Although earlier criminalizing effects were reported for the 1992–1995 sanctions against Yugoslavia (Andreas 2010), it is unclear when and why such effects occur. Sanctions can also increase inequality (Cooper 1989), especially if they are prolonged and if targeted states have low education levels and a lack of capital investment (exacerbating the exploitation of low-paid labor) (Afesorgbor and Mahadevan 2016, 5). Likewise, poverty gaps are found to increase under sanctions, particularly with more severe and multilateral sanctions, which may be caused by a weakening economy, an undersupply of goods and services, or uneven resource reallocation under sanctions (Neuenkirch and Neumeier 2016, 111, 117). Regional inequalities may also widen, as happened in North Korea where regional capacities to overcome sanctions depended on the proximity to borders (Lee and Gray 2017). Finally, trade sanctions are reported to increase child labor due to falling household incomes, although this may be mitigated by greater access to credit (Jafarey and Lahiri 2002); sanctions specifically directed against goods produced by child labor do not produce the desired outcome (Basu, Chau, and Grote 2006).

Although the humanitarian costs of comprehensive sanctions have led to the design of targeted sanctions, targeted UN sanctions are found to have humanitarian consequences in 44 percent of cases (Eriksson 2016). Such consequences are more probable when sanctions have economic and political, or only economic, impacts (Elliott 2016, 183–84), as larger economic costs act as an intermediate mechanism leading to the humanitarian costs of sanctions. An analysis of United States' sanctions imposed since 2000 shows that they reduced the human development index of targeted countries and increased corruption (Rosenberg et al. 2016, 19). Thus, there is still a need to identify whether factors like the specific design of sanctions, number of senders, or target types influence such outcomes.

While the humanitarian consequences for third-party states (or on the system-level) have not been studied, media reports on increasing refugee flows to targets' neighbors³ suggest the need to analyze such impacts for third-party states. The unexplored effects of sanctions on migration (Weiss 1999, 505), mental health, environment (Bessler, Garfield, and Hugh 2004, 82–85), and many other variables require further research. Moreover, as studies on humanitarian costs of sanctions often focus on specific cases, quantitative studies and analyses of the mechanisms behind such effects could help understand their determinants. Acknowledging that many consequences have yet to be uncovered, we hope that this review summarize the general dimensions of the research.

Limitations of Existing Research

The following section summarizes some limitations common to sanction literature. We acknowledge that the issues highlighted in this section are inevitably selective and they neither include all shortcomings of the scholarship nor diminish its incredible value.

³ Recent reports argue that the United States' sanctions on Iran could "fuel a new refugee crisis—in Turkey" (Cunningham 2020).

One of the main weaknesses of the research on sanction consequences is that it is divided into almost *incommunicado* compartments along several lines. Such fragmentation limits scientific discussion within each “compartment” of the literature and prevents a broader discussion of this topic. The most persistent divide within the literature focuses on the actors or entities influenced by economic sanctions. The lack of communication between works focusing on different actors inhibits a full understanding of the impacts on each actor. This fragmentation may be one of the factors behind the inconsistent or even contradictory results on economic consequences for senders and targets, as the review in this paper has shown.

Estimating sanction costs for targets without considering the types of senders, their motivations, the international and domestic constraints of such decisions, or senders’ abilities to adjust their own economic interactions may lead to misleading findings. For example, relatively similar sanctions imposed on a single target may have different consequences due to different motivations and constraints of sanction senders. Connolly (2018, 58) argues that while Japan imposed multiple restrictions on individuals and firms in Russia, sanctions were aimed to “signal” its commitment to Western allies rather than to convey a message to Russian decision-makers. Different from the United States and the EU, Japan spared the Russian energy sector; this could have provided a better bargaining position for Japan as an importer of energy resources and a possible exporter of energy-related technologies (Connolly 2018, 67). Studying the economic consequences of the same sanction types, without accounting for sender-related characteristics and motivations, may lead to different conclusions.

Another problem, especially within the “compartment” of consequences for sanction targets, is that such research typically focuses on states. As Peksen (2019, 642) highlights, sanction effectiveness literature emphasizes the “state-centric approach” but neglects the increasing use of sanctions on “nonstate actors” (such as terrorist or illicit groups or particular individuals). Similar concerns are valid for the sanction consequences literature. Some studies about the impact on targeted individuals exist, yet, the broader impact of such targeting is understudied (Tourinho 2015, 1412). While the latest Targeted Sanctions Consortium’s dataset includes variables identifying the specific entities targeted by sanctions, further research on the wider consequences of such sanctions is needed. Besides the lack of dialogue between studies on different influenced actors, the lack of attention to the different types of targets, their costs, and the related externalities is also critical.

Focusing on the impacts of sanctions on third states is also problematic. While third states are mostly seen as states not participating in sanctions, their roles may coincide with those of either sender or targets. In the case of UN sanctions, even a state opposing a sanction must comply with the UN Security Council resolution, thus becoming a sender. In the case of non-UN sanctions, a third-party state may face threats of secondary sanctions, being forced to either cut some economic ties with the targeted states (and thus implicitly join the sanction regime) or face repercussions of the sanction sender (taking the role of a secondary target). In such cases, considering the findings of research on sanction senders and targets could help analyze sanction consequences for third states. Following Peksen’s (2019, 8) argument that secondary sanctions can impact effectiveness and “sanction-busting” and, thus, should be more thoroughly studied in the sanction effectiveness literature, we suggest that such sanctions create even more questions in the sanction consequences literature. New research could focus on the difference in economic impacts of secondary sanctions on FDI flows across countries as contrasted with sanction episodes without secondary measures. One could also study the possibly increasing costs for private entities within sender states due to the decreasing chances of adjustments in the presence of secondary sanctions. Analyzing the possible

political costs for third-party states in cases of compliance or noncompliance with secondary sanctions could also influence our understanding of the political effects of sanctions for third states. Thus, without accounting for secondary sanctions, deriving meaningful comparison between the consequences for different actors of different sanction regimes is also problematic.

Division of the literature along the lines of comprehensive, targeted, and smart sanctions presents another reason of fragmentation. While the difficulties to define and differentiate between such types also pose methodological difficulties as discussed in the next section, dividing literature into such types creates a problem on its own. While further learning on the consequences of smart sanctions is necessary, restricting large- N analyses to specific sanction types may prevent comparison between the impacts of different subtypes of sanctions and limit the degree of freedom in the research. An understanding of the differences in consequences of sanctions with different scopes is crucial to understand which designs are likely to minimize, if not to prevent, such humanitarian consequences of sanctions as increasing hunger or mortality.

While such categorizations may have theoretical and practical benefits for understanding different aspects of economic sanctions, the current state of research presents parts of research that rarely communicate. Using insights from different subareas (such as considering consequences for senders and their characteristics when analyzing sanction costs for targeted states) could greatly benefit the related research.

The literature's predominant focus on sanctions imposed by the United States is a significant thematic bias. The United States is the sanction initiator in "more than half" of sanction cases included in the widely used Threats and Imposition of Sanctions (TIES) dataset (Webb 2018, 495). Considering the scale of its economy, one may expect that most sanctions imposed by the United States are likely to harm the target much more than the United States itself, and often more than sanctions imposed by smaller economies. The impacts of multilateral sanctions may also potentially depend on whether the United States is among the senders. Certainly, there are studies which account for the regional sanction regimes such as those imposed by the European Union, Arab League, or African Union (Borzyskowski and Portela 2016; Seeberg 2016). Moreover, a recent special issue, presenting seven studies on sanctions imposed by different regional organizations on their members, evaluates their influence on the "competing norms of democracy protection" (Hellquist and Palestini 2020, 2). Still, while it is not possible to account for every existing work on regional or non-US sanctions, the predominantly high frequency of US-oriented studies is likely to provide a skewed estimation of sanction consequences. Further focus on non-US unilateral or regional sanctions and types of sanction-sending states is necessary to produce more generalizable conclusions about sanction consequences.

Methodological Issues

Different methodological approaches used in sanction consequences research, albeit providing diversity, also contribute to fragmentation of the literature. Another important fragmentation in sanction consequences research is related to the methods used in different studies. While in-depth case studies identify multiple novel mechanisms behind sanction impacts and identify novel consequences faced by different actors, many of these insights are absent from the quantitative research, which uses large- N studies based on existing datasets. Lack of better communication between case studies and quantitative studies often hinders the possibility of improvement of the research. Moreover, methodologic divides create conflicting findings as exemplified by how foreign investment under sanctions is reported to decrease by a case study (Gurvich and Prilepskiy 2015) but to remain unaffected by

a quantitative analysis (Shin, Choi, and Luo 2015). A lack of dialogue between the two approaches prevents an understanding of whether the contradictory results found in the different works are caused by the exceptional nature of a sanction case or different operationalization or measurements used in large-*N* studies.

Even between different quantitative studies there are conflicting findings, which may be due to different datasets or different controlling variables. Most quantitative studies use one of three available datasets: Hufbauer et al. (2009) a dataset by Hufbauer, Schott, Elliott, and Oegg (2009) (HSE/HSEO), threat and imposition of economic sanctions dataset (TIES) (Morgan, Bapat, and Kobayashi 2014), and the latest, Targeted Sanction Consortium (TSC) (Biersteker et al. 2018). The TSC dataset deals with the most recent cases and accounts for the changes in sanctioning regimes (dividing them into episodes), novel variables (such as goals) in terms of “signaling/stigmatizing,” and whether the sanction means to “coerce” substate actors as particular groups or terrorists. Although the dataset addresses Peksen’s (2019, 7–8) critique on the prevailing focus on state actors in the literature on sanctions and the lack of “time-varying sanction data” (Peksen 2019, 641), its restricted focus only on targeted UN sanctions leaves the limitations of larger datasets unresolved. While the most recent dataset developed by Felbermayr et al. (2020) also argues to provide a solution for the dynamic nature of sanctions, future studies are needed to estimate the effects of the newly available data.

Different coding in these datasets also makes the reproduction of earlier results more difficult (Van Bergeijk and Siddiquee 2017; van Bergeijk 2019, 6–7). For example, costs are estimated in US dollars in TIES (Morgan, Bapat, and Kobayashi 2014), as an index in HSE dataset (Hufbauer et al. 2009), and as various types of possible costs (including reputational costs) in TSC (Targeted Sanctions Consortium 2014). Due to such differences in indicators, combining datasets to analyze longer periods or larger numbers of cases remains difficult.

Different operationalizations, definitions, or names of the same variables used in these studies make comparing different studies difficult. While comprehensive sanctions targeting the whole target’s economy and “smart sanctions” restricting smaller parts of the economy are seemingly distinct, the scope of each sanction type varies, making such divides less clear. Comprehensive (or “extensive” (Peksen and Drury 2010, 249)) sanctions range from overall embargos to sanctions only on imports or exports. “Smart sanctions” are sometimes called “targeted” (Gordon 2011, 315) or “selective” sanctions and can have different designs and scopes, as exemplified by the targeted sanctions imposed against Russia by Japan in comparison with costlier and broader targeted sanctions imposed by the United States (Connolly 2018). Some scholars alternatively divide “smart sanctions” into “targeted sanctions” aiming to influence individuals or entities and “selective sanctions” targeting “products or financial flows” (Hufbauer et al. 2009, 125). To add to this complexity, alternative sanction typologies related to the tools they employ can differ between those targeting aid, assets, finance, money, trade (Kirshner 1997, 41), or other factors. This differentiation is important as, for example, financial sanctions tend to impose higher costs on targets than other targeted sanctions (Drezner 2015, 757). As a better understanding of the differences in consequences of different sanctions is crucial, the use of more uniform and less ambiguous sanction typologies could increase the comparability of different studies.

The issue of including sanction threats into the analysis of sanctions poses a question of understanding the impacts of sanction threats and also may suggest a possible selection bias when one does not account for such threats. In fact, the imposition of sanctions after a lack of a target’s response toward threats (at least when the sanction aims to inflict behavioral change) may show a higher resolve of the target to endure sanctions costs. A target’s readiness to endure costs despite threats can, in turn, bias the results toward finding higher costs of sanctions. Thus,

because sanction threats can influence which countries are sanctioned and how they respond, accounting for threats could reduce possible selection bias.

Theoretical Issues

Besides thematic and methodological divides, sanction consequences research lack a common theoretical framework behind such studies. Some scholars attempt to build game-theoretic models of sanctions (Lacy and Niou 2004). Others apply different theories and approaches, such as the public choice approach (Kaempfer and Lowenberg 1988) or the theory of conflict management (Garoupa and Gata 2002). In addition, some studies analyze sanctions' consequences within the scope of other theories, accounting for a context where sanctions and their consequences can take place (e.g., related to political protest and democratization). Many studies only implicitly rely on some broader theories while focusing on the relationship between the event of the sanctions and a specific impact of the sanctions but omitting alternative factors (e.g., other impacts of sanctions or relations with other actors), which can influence our understanding of the sanction outcome. Such additional theoretical fragmentation provides further difficulties for the dialogue between different studies, as they often employ approaches that are too different from one another.

While combining sanction scholarship with other disciplines provided a rich venue for research and understanding sanction consequences, the lack of a shared approach to understanding such consequences in different economic, political, and humanitarian (among others) spheres may lead to the relatively spontaneous use of some controlling variables and conflicting findings based on similar data. In the following section, we attempt to tackle this issue and present a shared approach for sanction consequences research.

New Perspectives and New Directions for the Research

A Common Approach to Sanction Consequences Research: Interdependence

While a single theory accounting for all of the sanction consequences literature would be impossible, a shared approach to frame sanction consequences, irrespective of the type of consequences or type of influenced actors, would help one avoid missing important variables. In this section, we discuss the possibility of a common approach to study sanction consequences within the larger topic of interdependence. We argue that such an approach could help bring together different fragments of the sanction consequences research.

Research on interdependence has its roots in the liberal and institutionalist theories suggesting that economic interdependence between states (increased economic relations between states) leads to more peaceful international relations, as states would not want to lose the benefits from trade by engaging in conflict. Interdependence "implies that the actions of states, and significant nonstate actors, will impose costs on other members of the system" and reflects a traditional understanding of the international system (Keohane and Nye 1987, 730). In contrast, an alternative ideal type of interdependence is "complex interdependence," under which states have "multiple channels of contact," do not use military force against each other, and "there is no hierarchy of issues" (Keohane and Nye 1987, 30–31, with reference to Keohane and Nye (1977)). However, while this theorizing on interdependence acknowledges multiple states, it is mostly limited to bilateral relations (Wagner 1988). A rare study that tried to apply the classic liberal definition of interdependence to sanctions could not find a direct link between sanction initiation and level of interdependence (Silva and Selden 2019).

The practice of economic sanctions is only possible in the presence of economic interactions between states and some sort of economic interdependence. Different kinds of interdependence may influence who can impose sanctions and how such

sanctions will work. When considering the link between the fragmented literature on sanction consequences, we argue that the research on the impacts of sanctions on different actors is connected by the interdependent nature of the world political and economic structure. None of the actors influenced by sanctions is fully independent from the others and sanctions' impacts on targets often influence other actors. Similarly, the nature of the targeted state (the connectedness or dependency of its economy to others and the volume of its markets) may influence how sanctions would affect different actors.

We propose that accounting for such interdependent context of sanctions is necessary to better understand sanction consequences. We argue this task can be achieved by studying the framework of economic networks in which different states function. Some earlier works also applied the social network approach to understand economic sanctions. [Cranmer, Heinrich, and Desmarais \(2014\)](#) and [Dorff and Minhas \(2017\)](#) see the sanctioning process as a network and analyze the sanction network dynamics between different senders and targets. However, these studies do not account for the contextual networks of economic relations within which sanctions are imposed. [Peterson \(2018\)](#) takes a broader approach, analyzing the trade network between different states. He evaluates the effect of states' positions within the network (accounting for trade relations of targets and their counterparts) on sanction initiation and the effectiveness of sanction threats. Because not all sanctions target overall trade, focusing on such broader trade network may be less applicable to financial or other targeted sanctions.

Also focusing on the power derived from states' positions within different exchange networks (such as financial, informational, or trade systems), [Farell and Newman \(2019\)](#) analyze states' capacity to coerce others. They propose that states with central positions (hubs) in a network with hierarchical structures can control the network by monitoring it and expelling others from this network and, thus, may weaponize asymmetric interdependence. However, the authors focus only on coercive capacity of the central states in the systems and limit application of such approach to some hierarchical networks.

This paper suggests integrating the network approaches and applying them to sanction consequences research. We propose considering the narrower economic networks, within which sanctions are applied (which are more applicable for targeted sanctions), and the impacts of different state positions within the networks on sanction effects for different actors. Applying the idea of network-based interdependence to the context of sanction consequences can directly point to the often-overlooked factors that influence such consequences. We propose that it can provide one insightful way of approaching and understanding otherwise fragmented and often contradictory insights from the sanction consequences scholarship. We argue that the idea of a networked interdependence can bring the existing sanction scholarship together and provide answers to many of the limitations of the literature on sanction consequences. Some of such answers are summarized in the [table 1](#).

Because interdependence presupposes mutually influencing relations, any evaluation of sanction consequences might consider the place of the target within the related economic network (e.g., in the case of an oil export restricting sanction within the network of oil trade). Sanction consequences are likely to be determined by the position of the sanction sender within the same network and the nature of their relations with the target (symmetry or asymmetry—dependence). The position of other states within the network (all connected to a sender, a target, or a third state) can also influence sanction impacts, not only on senders and targets but also on third-party states. Moreover, it can shed light on the possibility of sanction-busting behavior or noncompliance with secondary sanctions if countries are connected not only to the sanction sender, but also to other hubs (or even being a central point itself).

Studying the structure of the targeted network of economic relations may also help predict targets' capacity to adjust to sanctions. The presence of alternative

Table 1. Some promises of the networked interdependence approach

Problematic issue	Network approach-based answer
<i>Thematic issues:</i> research fragmentation according to the affected actors.	Consideration of the position within the network of all the actors (e.g.: center, periphery, bridge, not connected, other categories; highly connected versus weakly connected)
<i>Thematic issues:</i> US-oriented research. United States as a unique, most frequent sanction sender.	The United States may not be a unique case but an instance of a central and well-connected country to many networks. Such categorization would make it comparable to other central countries in smaller networks.
<i>Methodological issues:</i> different approaches used by quantitative and qualitative research.	Network approach can be used for both qualitative case studies and quantitative research when such data may become available.
<i>Theoretical issues:</i> different theories are used to explain research in different areas. No approach is used across the whole literature.	The networked interdependence approach can be applied to studies of sanction impacts for different actors.

trade partners not bound to the sanction sender is likely to enable an easier adjustment for the target, as it will be able to shift its own trade relations toward other partners. Russia's attempt to shift some of its economic relations from Western markets to Asia exemplifies the tactic of moving across a less hierarchical network. Similarly, while the network of oil and gas trade is supposed to be nonhierarchical (Farrell and Newman 2019), the difficulty of adjusting some transportation types (such as pipelines) can, in the short run, prevent any possibility of adjustment. Russia's current construction of alternative gas pipelines can illustrate a state strengthening its own position within a network by creating new connections and becoming a network hub itself.

Considering the existing research on sanction consequences and the limitations outlined above, an interdependence approach can help move forward by considering the following issues when conducting future research: Accounting for senders' positions within economic networks and their relations to targets can bring together studies on sanction consequences for senders and targets and reconcile inconsistent observations as different costs faced by different senders. Similarly, considering the nature of the targeted network (a single-centered network of a monopoly importer–exporter or a multicentered network with relatively equal relations) can help predict the target's ability to adjust and minimize its own costs. The target's position within the economic network (its connectedness to other actors, its ability to create its own hub, and the presence of other nonconnected actors) may also shed light on the possibility of a target's adjustment and its potential to harm the sender via counter sanctions or due to prolonged sanctions.

The issue of secondary sanctions in the context of a hierarchical network can be addressed by looking at whether the network within which such secondary sanctions are imposed has more than one central state and whether that central (hub) state is the one imposing the sanction. The aim of such research would be to look into the consequences of secondary sanctions within different networks (centralized or dispersed) or whether a noncentral state in a network can credibly impose secondary sanctions.

Finally, the problem of US-centered research could be addressed by considering the position of the United States and other states within the related networks. In the cases of dispersed networks, where the United States' position is like that of

other states, one can expect comparability in sanction consequences. In contrast, the scope of sanction impacts is likely to be different between sanctions imposed by the United States (being in the center of the related economic network) and sanctions imposed by another state or international organization located on the periphery of such a network. However, in both cases, the question of consequences for senders and targets would also depend on the position of the target within the same network.

Besides the focus on the central nodes of economic networks, there is also great potential in looking into other aspects of network qualities as defined by social network theories. Considering that social networks by their nature are likely to be clustered (Newman and Park 2003) and that such clusters are connected by a small number of nodes called “bridging nodes” or “bridges,” one can theorize that states acting as bridges in different economic networks can have influence within such networks, increasing their capabilities.

The importance of bridging countries in an economic network can be exemplified by the pipeline-based natural gas networks that are rigid due to the costliness and difficulties of constructing a pipeline. A central state may control its oil or gas exports via pipelines and have multiple buyers on the ends of those pipelines, but some transit countries may also hold an influential position between the exporters and importers or be a “bridge” between the buyers and senders. Hence, such bridging states can increase their own bargaining power in their interactions with other states in the network. Ukraine, which provides transit for the natural gas pipeline from Russia to the European Union, is an example of such a relationship. In the gas dispute of 2009 between Russia and Ukraine, Russia blamed Ukraine for cutting its gas exports to the EU to compensate for Russia cutting gas aimed for Ukraine (though Ukraine denied these allegations) (Kramer 2009). As a result, the EU is now actively involved in all gas-related disputes between the two states to ensure its own energy security, while Russia found itself dependent on the Ukrainian transit powers. This event illustrates that Ukraine’s role as a bridging node in relation to the pipeline may give it additional power, power which cannot be accounted for by traditional bilateral models of economic interactions. Thus, while bridging roles may be absent or difficult to identify in some economic areas, they can be highly important in understanding the differences of sanction consequences for bridging countries.

The Network-Based Interdependence Approach: New Research Areas and Its Limitations

The theoretical approach we proposed could help to illuminate the following currently understudied issues. Considering their recent rise and developments, cryptocurrency markets (based on blockchain networks) can be one of the most important areas for understanding new challenges for sanctions. While Farrell and Newman (2019, 78) mention that a “blockchain-based payment system” can reduce state dependence on the SWIFT system, research on cryptocurrency markets is important in understanding other recent challenges facing sanctions. The presence of alternative financial networks can diminish the impacts (and effectiveness) of financial sanctions imposed not only on states, but on such nonstate actors as terrorists, criminal groups, and others. Such effects of cryptocurrency markets require studies of the new potential of state and nonstate actors to adjust and boost sanctions, or newer methods of control over financial flows via novel attempts of national legislation, to control markets.

Sanction scholars may also refer to the understanding of networked interdependence to study the relationships between sanctions and migration flows within the context of global security networks. Some sanctions cause an increase in emigration from targeted states, thus creating potential consequences for third-country states and sanction senders. However, understanding such consequences is likely to

require the consideration of the structure and constraints of the economic and logistic networks used by the affected people.

Future research may also focus on the effects of sanctions on some indirectly related networks. For example, academic networks of knowledge exchange present the potential to experience the impacts of sanctions in terms of diminishing academic exchange and overseas funding (due to financial restrictions imposed on IO in relation to scholars of some countries [e.g., EU funding for Russia-based scholars] or decreasing national funds in targeted countries). Thus, considering the network-based nature of many interactions targeted by sanctions, influencing sanction consequences or being indirectly influenced by sanction imposition, presents an opportunity to investigate otherwise understudied areas of sanction consequences, as well as sanction research in general.

While demonstrating the benefits of the networked interdependence approach for sanction consequence research, we acknowledge that it has limitations. This approach can be difficult to implement within large- N studies when networks influenced by sanctions involve a very high number of different actors, especially if we include nonstate actors. Likewise, some interactions between actors may be difficult to capture due to a lack of related data. While in time more detailed data on interstate interactions may be available, current studies may be limited by such issues. Moreover, even if some political and humanitarian costs depend on economic impacts or may be directly related to the networked nature of these interactions, we acknowledge that currently such an approach is mostly limited to the economic effects of sanctions. Finally, it may help identify only some of the factors influencing sanction consequences. Thus, one needs to complement this approach with political, economic, or other theories related to the specific issues affected by sanctions and the domestic restrictions that states face. However, such limitations do not diminish the importance of considering the network-based nature of social relations as a framework in which all other mechanisms take place. Therefore, we believe that further studies using such an approach could advance sanction research.

Conclusion

In this article, we critically evaluate the current rich and fragmented scholarship on sanction consequences. We then identify the main limitations and challenges of the existing literature. We argue that the theoretical and methodological fragmentation of the literature, the weaknesses of datasets on sanctions, a US-centric focus of most sanction-related literature, and a limited understanding of the influence of secondary sanctions on sanction consequences are among the main problems of the existing literature. We propose networked interdependence approach to remedy some of these limitations as well as the current fragmentation of the scholarship.

We present a shared approach to studying sanction consequences by accounting for different degrees of interconnectedness and interdependence between the sender/target and other states. Applying the logic of asymmetrical network-based interdependence, we argue that what combines all sanction consequences research is that all sanctions are conducted within the context of interdependent states located within hierarchical networks and thus possess different capacities at restricting economic transactions or adjusting to them. We show how an interdependence-based understanding of sanction consequences can help one understand sanction consequences in the context of an increased use of cryptocurrency or the recent migration trends. Considering networked interdependence could help evaluate the adaptability of targets with a larger number of connections within the related network or the targets' capacity to create/strengthen their own hubs of economic networks with other states. Locating sanctions within such a framework of interdependence will allow one to consider secondary sanctions, sanction boosters, adaptations as adjustments of other states connected to the network, and systemic

consequences related to global changes within the networks of flows of goods, finances, and investments.

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