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## Can the sanction debate be resolved?

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# Economic Sanctions

## Peter A. G. van Bergeijk Can the Sanction Debate Be Resolved?

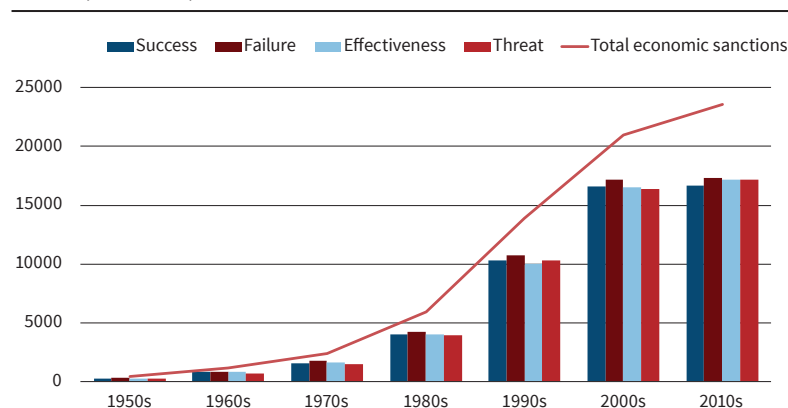
*The debate over whether economic sanctions 'work' is mired in scholarly limbo.*  
David A. Baldwin (2000, 80)

### INTRODUCTION

It is both disturbing and puzzling that despite many decades of research by the brightest minds we have still not been able to arrive at a consensus on the pertinent question “do sanctions work?” This is certainly not because the literature has not dealt with this issue. Figure 1 provides an admittedly rough and mechanic, but still useful characterization of the post-Second World War literature.<sup>1</sup> Figure 1 indicates both the amount and growth of research on economic sanctions and the role that failure and success have always played in the academic debate

<sup>1</sup> I use Google Scholar because it also covers books that have always been and continue to be important academic outlets for my topic.

Figure 1  
Number of Google Scholar Hits for ‘Economic Sanctions’ and Three Key Concepts by Decade (1950–2019)



Note: Total economic sanctions reports the number of results returned for ('economic sanctions'). For a key concept (e.g. success) the number of returned results relates to searching for ('economic sanctions' success). Source: Google scholar. © ifo Institute

on economic sanctions.<sup>2</sup> This makes the puzzle that the debate on sanctions has not been resolved even more baffling.

The remainder of this article is organized as follows. In the next section we will take a look at the debate on the effectiveness of economic sanctions and the underlying factors. The third section derives some stylized facts regarding this debate, followed by the fourth section which discusses possible explanations for this development. The final section suggests an alternative methodological approach that could help to bring the debate closer to a solution.

### PRE- VERSUS POST-1990

My own involvement with the sanction debate started in the second half of the 1980s. In those days, economic sanctions were definitely not considered effective tools to change the politics and policies of the target nation. The sanctions against the apartheid regimes of Rhodesia and South Africa had been analyzed in depth by leading scholars of the time and their verdict on the utility of economic sanctions was negative. Galtung (1967), for example, in a highly influential article had developed a theory of economic sanctions using Rhodesia as an example and with a sobering conclusion: he cautioned

that his finding that the sanctions had not been effective did not mean that sanctions could not be effective; the influential study by Wallenstein (1968, 262) however concluded that “[t]he general picture is that economic sanc-

<sup>2</sup> The analysis on which these findings are based cover more characteristics and concepts of the sanctions debate (van Bergeijk 2020). It is interesting to note that the literature considered the ex ante threat aspect of economic sanctions from the start, so well before game theoretic analyses were in vogue. The analysis also reveals dynamic developments in the literature such as the fact that the share of ‘punishment’ and ‘reward’ starts to increase from about one-fifth around 1990 to between one-half and two-thirds only in the most recent decade.



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tions have been unsuccessful as a means of influence in the international system". Indeed, in the early 1980s, the other UN sanction of that epoch (against South Africa during apartheid) was at that time also considered to be a failure; this was also true of other high-profile cases such as sanctions against Cuba and the Soviet Union or, for that matter, the OPEC oil embargo. Barber (1979, 384) summarized the state of affairs as follows: "[a]lthough there are some difficulties of evaluation, there is a strong consensus that sanctions have not been successful in achieving their primary objectives". Lindsay (1986), while recognizing the potential utility of sanctions as domestic and international symbols, concluded that sanctions generally failed with respect to compliance, subversion, or deterrence.

Why did the profession arrive at this verdict? First and foremost, it was pointed out that it would hardly be possible to bring about the political unity that is necessary for forceful embargoes and boycotts, and that – even if established – such measures would be easy to evade (Adler-Karlsson 1982). Also, the time between the announcement of the intention to impose sanctions and the actual implementation of those measures was long, offering sanction targets the option to adapt, for instance through stockpiling and restructuring the economy (Seeler 1982). Moreover, it was recognized that compliance with highly visible pressure, such as economic sanctions, would erode the target's leadership both at home and abroad (Lindsay 1986) and compliance was thus associated with high political costs in several arenas. Finally, the 1980s also brought the numbers that seemed to support this consensus when Hufbauer and Schott in 1985 published their seminal study *Economic Sanctions Reconsidered*, which for the first time coded a large number of sanction cases. Amongst their findings, the sobering fact still stands out that two out of three economic sanctions failed. The empirics thus seemed to support the consensus and some, like Pape (1997), have argued that the numerical case against sanctions is even stronger.

The research puzzle that motivates this paper is the fact the sanction debate continues today. Perhaps one might be inclined to relate this state of affairs to the fact that the conditions for sanction success have dramatically changed since the 1980s, as I argued in the mid-1990s (van Bergeijk 1994 and 1995). Indeed, the end of the superpower conflict enabled UN sanctions to be implemented quickly and

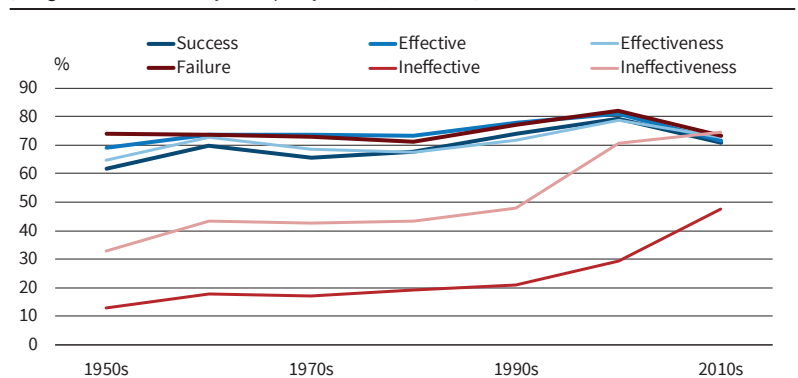
comprehensively: the severe, wide-ranging, and almost watertight sanctions against Iraq in 1990 were implemented in four days. Globalization, moreover, opened up many economies that previously could not have been hurt by economic sanctions. Apartheid ended. Since the conditions of time and place would appear to have changed to the benefit of (potential) success, one might expect the balance of evidence to have shifted from the negative consensus in the 1980s to a more positive evaluation in recent decades. However, as will become clear in the next section, the literature has actually become more inclined to discuss and find ineffectiveness.

**THE MORE WE LEARN, THE LESS WE KNOW?**

Figure 2 provides another first rough characterization of the problem at hand. The key characteristics identified in Figure 1 appear as the upper 'success' and 'failure' lines. The numbers are in percent of the total for economic sanctions (that is: the red line in Figure 1); so, the focus in Figure 2 is on the relative importance of concepts rather than on absolute numbers. Over the post-Second World War period these shares are stable. I have added four key attributes of the sanction debate, including shares for 'effective', 'effectiveness', 'ineffective', and 'ineffectiveness'. Whereas 'effective' and 'effectiveness' over the whole period appear to be common concepts in the sanction debate (with a score that is comparable to 'failure' and 'success'), we see that 'ineffective' and 'ineffectiveness' start from a significantly lower share, but since the 1990s have been catching up (an increase of 25 percentage points). This observation illustrates that the ineffectiveness of sanctions plays a larger role in the debate.

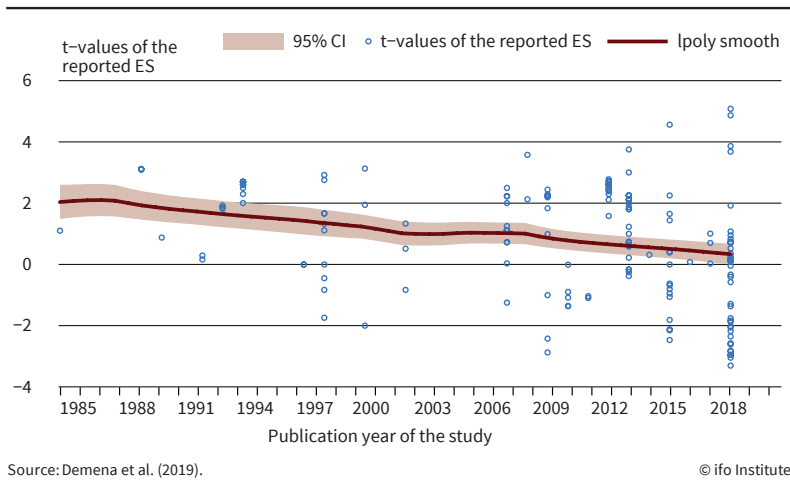
The fact that the concepts of 'ineffective' and 'ineffectiveness' have become more frequent attri-

**Figure 2**  
**'Ineffective' and 'Ineffectiveness' Have Become Much More Important Attributes in the Sanction Literature Share in Total Economic Sanctions**  
 (Google Scholar hits for key concepts by decade, 1950–2019)



Note: Total economic sanctions reports the number of results returned for ('economic sanctions'). For a key concept (e.g., success) the number of returned results relates to searching for ('economic sanctions' success).  
 Source: Google scholar. © ifo Institute

**Figure 3**  
**Reported t-Values of Trade Coefficient Reported in 36 Primary Studies**  
 Published in 1985–2018



Source: Demena et al. (2019).

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butes in the sanction debate could reflect a more balanced approach, a mere change in language, or an underlying empirical trend. It is a piece of the puzzle, but we have to dig deeper. Therefore, Figure 3 reports the t-values for the trade variable in the 36 empirical studies on success/effectiveness and failure/ineffectiveness of economic sanctions that include a trade variable amongst the explanatory or controlling variables.<sup>3</sup> The reason to take a look at the role of trade in the sanction debate is that sanctions cannot be expected to change behavior if the amount of trade between sanction sender and sanction target is negligible – for me as an economist: if anything should be associated with sanction success and failure, then it is the level of pre-sanction trade that could be hit by the sanctions. The t-values are appropriate measures because they focus on sign and significance and also because they are dimensionless (thus avoiding distortions of comparability due to slightly different operationalizations of trade).

Figure 3 shows reported t-values in empirical studies (each dot is a regression/specification) over time and makes two points. First, it shows that after initial agreement in the mid-1980s and 1990s on the positive impact of trade on success and failure of economic sanctions, after the turn of the century negative trade coefficients become more common so

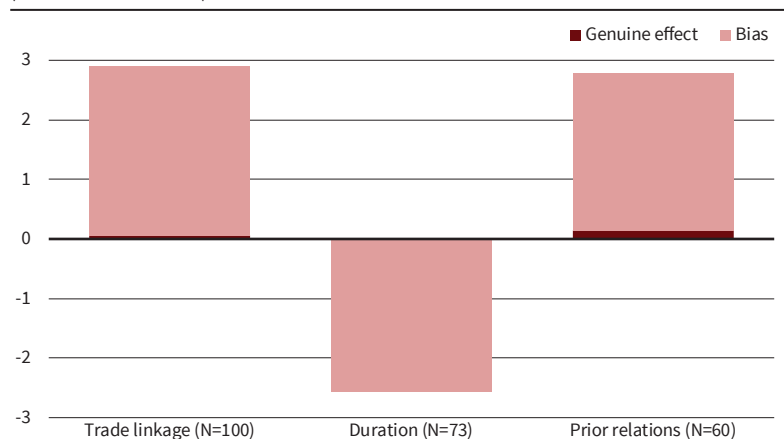
<sup>3</sup> The data collection is part of a project at my Institute for which a good three hundred estimates were collected from 36 studies that appeared in the period between 1985 to 2018 inclusive (most of these studies appeared in peer-reviewed journals), see Demena et al. (2019).

that the literature gets less and less conclusive. This is not so much due to insignificant findings as to dispersion. Indeed, highly significant negative coefficients go hand in hand with highly significant positive values. Second, Figure 3 provides a kernel plot that reveals the same issue – not from the perspective of increased dispersion, but from the point of view of the overall conclusion that can be drawn from the primary studies. The kernel function shows that year by year the primary studies show a decreasing average

and that the average in 2018 is close to becoming insignificant. So, the conclusion from Figure 3 is that no conversion emerges on the impact of a key variable and that disagreement on its sign (and size) has increased meaningfully and statistically over time.

Figure 4 provides some detailed findings of a deeper analysis of this phenomenon, as it reports on meta-regressions for trade and two other key determinants of sanction success: sanction duration and prior relations. Duration and prior relations are also key ingredients of the economic analysis (Dizaji and van Bergeijk 2013). The longer sanctions are in effect, the better the target can adjust, because adjustment of production structures and reallocation of the factors of production takes time. If prior relations are bad, then a potential target could preempt the sanction and reduce its impact either by proactive reorientation on new markets or by stockpiling. The results of the meta-regression analyses that use study characteristics as controlling vari-

**Figure 4**  
**Meta Regression Analyses for Three Determinants of Sanction Success**  
 (Genuine Effect and Bias)



Source: Benalcazar Jativa (2018), Kimrararungu (2018) and Reta (2018).

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ables and relate to different (but overlapping) sub-samples of the empirical sanctions literature are sobering. While the primary studies on average report that the signs of trade, duration, and prior relations conform to a priori theoretical expectations, the meta-regression analysis is that this is mainly due to publication bias away from zero. Indeed, the genuine effects are always very small. The implication of this finding is that the literature appears to exaggerate the importance of the three determinants for the success of economic sanctions.

All in all, we have uncovered that the literature on economic sanctions can be characterized by three stylized facts:

1. the empirical post-Second World War literature shows an increasing association between economic sanctions and their ineffectiveness since the 1990s;
2. the findings that are reported in the empirical literature show an increasing dispersion and inconclusiveness since the turn of the millennium; and
3. the post-1985 empirical literature suffers from significant bias in the reported results.

In the next section I will discuss potential explanations for this phenomenon.

### **WHY DOES THE DEBATE MOVE TOWARDS FURTHER INCONCLUSIVENESS?**

It is actually not uncommon to find that the literature on a topic develops in opposite directions, that seminal results are contested, and/or that publication bias is significant in a literature. We can thus resort to research that has found and discussed similar results. According to Robert Goldfarb (1995), the time pattern of findings in economics very often starts with a paper that reports a new and exciting statistically significant result and initiates a stream of skeptical publications that contest the original result and, in a later round new papers contest the contestations, and so on, until the literature converges to a consensus. In any emerging scientific field, many findings are ‘preliminary’ and often contradictory due to the process of finding out the true effect (van Bergeijk and Lazzaroni 2015). At first sight, Figure 3 would seem to represent such a trend, starting with a highly significant trade parameter that adjusts to more accurate smaller values over time. Indeed, the kernel function suggests that skepticism is doing its job in science, but in fact it does not. We can observe that findings pro and contra rest on increasingly statistically more significant findings. Figure 3 shows no convergence but divergence in statistically significant positive and negative results, and Goldfarb’s

theory cannot provide an explanation for the state of affairs in sanction research.

So, let us take a look at explanations for publication bias that according to Figure 4 is a severe problem. Publication bias is a bias that is introduced into the publication process by selection of particular results. This can occur in the referee procedure. Editors and referees will prefer convincing papers and all too often they look for papers with large and highly significant coefficients. It is thus more difficult to publish less significant findings, and this biases what we see in the journals. In the same vein, it is easier to publish a paper that contradicts rather than confirms existing knowledge. Confirmation tells us something that ‘we already know’.

It is, however, not only the publication process that creates bias. Researchers are typically intrinsically motivated. Economic sanctions are applied for a great many issues, including adherence to human rights, and like all economic activities they have important external effects (e.g., on health). Obviously, economic sanctions are applied in a context of international conflict with different impacts on sender and target. For some, sanctions are an alternative to outright war. Also, the tension between sanctions and free trade is a relevant issue. All in all, sanctions have a high societal and political relevance and therefore researchers might be (explicitly or implicitly) driven by their ideals or ideologies to report results that fit their worldview in relation to problem identification, solutions, as well as instruments (and, importantly, they may ignore results that contradict their view of the world). If so, political cycles and geopolitics can to a large extent explain both the publication bias as well as the lack of convergence and absence of a consensus.

The problem with the sanction literature is, moreover, that empirical research is by and large based on three data collections (Peksen 2019), namely Hufbauer et al. (1985, 1990 and 2007); Morgan et al. (2009 and 2014); and Biersteker et al. (2018). While these datasets are referred to as large-N datasets, meaning they contain a large number of sanction episodes (the unit of analysis/observation), the number of episodes is small by the usual standards. The label large-N was earned because before 1985 comparative research of economic sanctions would be based on a few handfuls of cases. So, 1985 is a watershed year because, thanks to the seminal study by Hufbauer et al., the number of cases exceeded one hundred. Later work updated, extended, and also brought new types of sanctions into the picture, but essentially all empirical research is asking questions to a quite limited set of data that is all constructed in similar ways. Despite the large-N epitaph, the sample is by most standards small – especially if subsets of specific sanction goals or

senders are considered. A related problem is that updates of the data often coincide with changes in coding, so that results for even a similar set of cases can differ from data version to data version (van Bergeijk and Siddique 2017).<sup>4</sup> My conclusion is that we need a new approach: the large-N datasets have been an important step forward, but as illustrated in Figure 3 and 4 cannot bring us closer to a consensus. So, what to do?

### A FUTURE FOR SANCTION RESEARCH?

In order to resolve the sanction debate, we will need new ways of looking at the (in)effectiveness and impact of economic sanctions, because the current approaches do not show that the field is moving towards consensus. This requires a change in the dominant methodology, which presently evaluates and codes the judgment of scientists and policymakers on the success/failure of sanctions and uses this data to establish covariates and determinants of the outcomes of economic sanction cases. The aim is to reach a general conclusion, but this comes at the cost of a deeper understanding of country-specific relationships

The alternative avoids the subjective evaluations and relies on empirically established relationships. Such an approach starts with a revival of country or case studies. Using the sanction target as the unit of observation enables researchers to bring much-needed detail on country- and/or economy-specific characteristics into the picture. Data on trade structure, production, elasticities, political systems, et cetera are available for countries, but bringing such items into the realm of the traditional large-N studies is not feasible. The large-N is not sufficiently large, and we would soon be left without degrees of freedom.

Country case studies could also include the dynamic development of political and (socio)economic variables that is missing from our current analysis of success and failure (Peksen 2019). An example of such a case study is the Vector Auto Regressive model that I developed with Sajjad Dizaji regarding sanctions against Iran (Dizaji and van Bergeijk 2013). VAR models could be a preferred tool of analysis because they allow for flexible structures, and also because the data requirements are not too demanding. As we showed in our article, we can construct a VAR model that shows how sanctions over time impact the economy and the political system; actually we find that the reduction of oil and gas rents due to the sanctions generates economic costs that act as incentives to move towards a more democratic setting. An important finding is that this effect is significant in the first two years only and

indeed turns negative after six or seven years. The driver of these dynamics is that adjustment of economic structures mitigates the economic – and thereby the political – impact of the sanctions.

In conclusion, we need more VAR studies for countries that have become the target of economic sanctions. This will help us to understand differences and communalities between the cases. Once we have sufficient country studies, we can attempt to synthesize this research by means of a meta-analysis. Of course, we cannot predict if this research strategy will provide a consensus, but it will bring new knowledge and perspectives on the sanction process that are currently not available.

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<sup>4</sup> In the context of this article, it is important to note that the findings for trade linkage, duration, and prior relations are not influenced by the data vintage.

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