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The Effects of Sanctions

Sanctions imposed on Russia after its invasion of Ukraine are argued to be the strongest and farthest-reaching imposed on a major power after WWII, more numerous and more comprehensive than all other measures currently in force against all other sanctioned countries. A question often asked, which is hard to answer, is whether sanctions are effective. In the present case, the effect most associate with success would be a swift end of the hostilities, perhaps accompanied by a regime change in Russia. But even when it seems these prizes are out of reach, sanctions certainly have effects, all too often glossed over by the debate but nonetheless of significance.

Why Are Sanctions Seen as Ineffective?

Sanctions are restrictions imposed on a country by one or more other countries with the intent to pressure in effect some desirable outcome, or conversely to condemn and punish some undesired action already taken. When evaluating sanctions, therefore, the focus is naturally on whether they succeed to discourage this particular course of action, or to remove the decision-makers responsible for it. And on this account, sanctions are overwhelmingly seen as unsuccessful. However, a few complications cloud this conclusion.

First of all, sanctions that are implemented already failed at the threat stage. If the threat of a well-specified and credible retribution did not deter the receiving part from pursuing the sanctioned course of action, it is because they reckoned that they can afford to ignore it. So, unless this punishment goes beyond what was expected, in scope or in time, its implementation will also fall flat. This implies that any effort to evaluate sanctions retrospectively suffers from the negative selection problem, when almost exclusively cases of failure, intended in this particular sense, are observed.

Second, sanctions are a rather blunt instrument, that often cannot be targeted with the precision one would desire. Even though sanctions have over time become "smarter", in the sense that stronger efforts are made to target the regime, or elites that may have the clout to actually affect the regime (think the oligarchs in Russia), they often fail to reach or affect in a meaningful way those individuals that are the real objective, for various reasons. Instead, they can cause significant "collateral damage", to groups of a population that often are quite far removed from any real decisional power, including those in the sending countries, and even third parties who are extraneous to the situation. The damage inflicted to those parties can only in very special circumstances be part of a causal link eventually impacting the intended outcome. For instance, citizens struggling in an impoverished economy could be led to a riot, or in some other way put pressure on their government – but this implies that the country is sufficiently free for riots to take place or for voters' opinions to be taken into consideration.

To this, it should be added that, once a course of action has been taken, it might be not obvious how to change or undo it, notwithstanding the signaled displeasure from the sanctioning parties. Sanctions are therefore rarely working in isolation. When positive outcomes are achieved, it is often the case that diplomatic channels were kept open and clear incentives offered for a way out. But then it might be unclear whether it was the sanctions or something else that led to the success.

Other Effects of Sanctions

The pitfalls highlighted above, which make it tricky to answer whether sanctions are effective at reaching their aim, also apply when studying other effects that sanctions might have. There is of course a range of outcomes that might be affected: in this literature we find studies looking at inequality (Afesorgbor et al., 2016), exchange rates (Dreger et al., 2016), trade (Afesorgbor, 2019; Crozet et al. 2020), the informal sector (Early et al, 2019), military spending (Farzanegan, 2019), women's rights (Drury, 2014), and many more. But as it often happens the most studied outcome is GDP, as this is a measure that efficiently summarizes the whole economy and correlates very nicely with many other outcomes we care about.

Suppose then that we would like to investigate what is the effect of sanctions on a target country's GDP. One problem is identifying an appropriate counterfactual; to observe what would have happened in the target country in the absence of sanctions. It is also an issue that the incidence of international sanctions is often a product of a series of events in the target or sender country (e.g.

the Iraqi invasion of Kuwait or the apartheid system in South Africa), which also have impacts on the economy that would need to be isolated from the impact of sanctions themselves.

A variety of econometric techniques can be of help in this situation. One first idea is to use, as a reference, cases where sanctions were *almost* implemented. Gutmann et al. (2021) compare countries under sanctions to countries under threat of sanctions, while Neuenkirch and Neumeier (2015) contrast implemented sanctions to vetoed sanctions, in the context of UN decisions. Both studies find a relatively sizeable negative impact on GDP, in a large group of countries over a long period of time. In the first study, the target country's GDP per capita decreases on average by 4 percent over the two first years after sanctions imposition and shows no signs of recovery in the three years after sanctions are removed. The second study estimates a reduction in GDP growth that starts at between 2,3 and 3,5 percent after the imposition of UN sanctions and, although it decreases over time, only becomes insignificant after ten years. It should be considered that a lower growth rate compounds over time: experiencing a slower growth even by only 1 percent over ten years implies a total loss of almost 15 percent. As a comparison, the average GDP loss due to the Covid-19 pandemic is estimated to be 3,4 percent in 2020.

These studies have limitations. Countries under threat of sanctions are probably making efforts to avoid punishment, which might imply that these countries are precisely the ones who would be most negatively affected by the sanctions. If so, the impact found by Gutmann et al. (2021) is probably underestimated. Neuenkirch and Neumeier (2015) only look at UN sanctions, which on one hand might give a larger impact because of the multilateral coordination. But on the other hand, the issue of an appropriate counterfactual emerges again: countries whose sanctions are vetoed might be larger, more influential, and better connected within the international community or to some of the major powers, which may also affect their economic success in other ways.

Kwon et al. (2020) adopt a different technique and come to a different conclusion. They use an instrumental variable (IV) approach and find that standard OLS overestimates the negative effect of sanctions, in other words, that sanctions' effects are less negative than we think. They find an instantaneous effect on per capita GDP that becomes insignificant in the long run, just as if sanctions never happened.

Our confidence in these estimates hinges upon the validity of the IV used. In this case, the actual imposition of sanctions is replaced by its estimated likelihood based on sender countries' variation in institutions and diplomatic policies (which are exogenous to the target country's economic developments) and pre-determined country-pair characteristics (trade and financial flows, travels, colonial ties). Therefore, episodes where sanctions are imposed because the sender country happens to be in a period of hawkish foreign policy and because the target does not have strong historical relations with them are contrasted to episodes in which the opposite is true, and sanctions are therefore not implemented, everything else being equal.

The results also show that there is heterogeneity across types of sanctions, with trade sanctions having both a short and long run negative impact, while smart sanctions (i.e. sanctions targeted on particular individuals or groups) have positive effects on the target country's economy in the long run. This is quite an important point in itself. Often, sweeping statements about effectiveness of "sanctions" lump all the different measures together, and fail to appreciate that there may be substantial differences. However, the effect of one or another type of sanctions will vary depending on the structure of the economy that is hit.

A third approach is the synthetic control method. Here the researcher tries to replicate as closely as possible the path of economic development in the target country up to the point of sanctions' implementation, using one or a weighted average of several other countries. In this way, evolution after sanctions' inception can be compared between the actual country and its synthetic control. Gharehgozli (2017) builds a replica of Iran based on a weighted combination of eight OPEC member countries, two non-OPEC oil-producing countries and three neighboring countries, that match a set of standard economic indicators for Iran over the period 1980-1994. The study finds that over the course of three years the imposition of US sanctions led to a 17.3 percent decline in Iran's GDP, with the strongest reduction occurring in 2012, one year after the intensification of sanctions (2011-2014) was initiated.

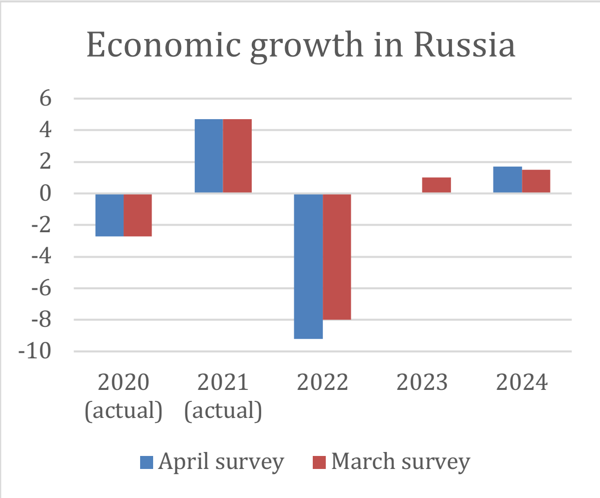
This is a stronger effect than those presented earlier. However, it only speaks to the special case of Iran, rather than estimating a broader global average effect. Another study focusing on Iran (Torbat, 2005) makes the important point that the effect of sanctions varies by type: financial sanctions are found to be more effective (in lowering Iran's GDP) than trade sanctions – which contrasts with what is found to be true on average by Kwon et al. (2020).

Finally, the relation between economic damage and the effectiveness of sanctions in terms of reaching their goals is debatable. In a theoretical model, Kaempfer et al. (1988) suggest that this relation might even be negative and that the most effective sanctions are not necessarily the most damaging in economic terms. The sanctions most likely to facilitate political change in the target country are those designed to cause income losses on groups benefiting from the target country's policies, according to the authors.

The Effect of Sanctions on Russia

Are these results from previous studies useful to form expectations about the effects of the current sanctions on Russia? The invasion of Ukraine which started at the end of February was a relatively unexpected event, at least in character and scale, in contrast to what can be said in the majority of situations involving sanctions. However, the context leading up to it was not one of normality either. Besides the global pandemic, Russia was already under sanctions following the Crimean Crisis in 2014. The impact of those economic sanctions, and of the counter-sanctions imposed by Russia as retaliation, is still unclear – and will be in all probability completely dwarfed by the current sanction wave as well as other exogenous shocks, such as significant changes in oil prices in this period. Kholodilin et al. (2016) estimated the immediate loss of GDP in Russia to be 1,97 percent quarter-on-quarter, while no impact on the aggregate Euro Area countries' GDP could be observed. A Russian study (Gurvich and Prilepsky, 2016) forecasted for the medium term a loss of 2,4 percentage points by 2017 as compared to the hypothetical scenario without sanctions. This pales in comparison to the magnitude of consequences that are being contemplated now. Even the potentially optimistic, or at least conservative, assessment of the current situation by the Russian Federation's own Accounts Chamber, in the words of its head Alexei Kudrin, suggests that: "*For almost one and a half to two years we will live in a very difficult situation*." At the end of April, they published revised forecasts on the economic situation, among which the one for GDP is shown below. Russian Central Bank chief Elvira Nabiullina also sounded bleak, speaking in the State Duma: "The period when the economy can live on reserves is finite. And already in the second - the beginning of the third quarter, we will enter a period of structural transformation and the search for new business models." The World Bank has forecasted that Russia's 2022 GDP output will fall by 11.2% due to Western sanctions. These numbers do not yet factor in the announcement of the sixth EU sanction package, which famously includes an oil embargo (see an earlier FREE Policy Brief on the dependency of Russia on oil export).

Figure 1. *Revised forecasts of growth rates for the Russian economy*



Source: Macroeconomic survey of the Bank of Russia, April 2022.

Are these estimates realistic, and what would have been the counterfactual development without sanctions? If we believe the studies reviewed in the previous section, and also taking into account the unprecedented scale and reach of the current sanctions, at least the time horizon, if not the size, of the consequences forecast by Russian authorities is, though substantial, certainly underestimated. But there is too much uncertainty at the moment, hostilities are still ongoing and sanctions are not being lifted for quite some time in any foreseeable scenario. One reason why these sanctions are not likely to be relaxed, and why their impact is expected to be more severe than in most cases, is that a very broad coalition of countries is backing them. Not only this but the sanctioning countries see Russia's conduct as a potential threat to the existing world order, so their motivation to contrast it is particularly strong relative to, say, the cases of Iran, North Korea, or Burma.

Moreover, these loss estimates do not yet factor in the announcement of the sixth EU sanction package, which famously includes an oil embargo. Oil is a fundamental driver of growth in Russia. An earlier FREE Policy Brief shows how two-thirds of Russia's growth can be explained by changes in international oil prices. This is not because oil constitutes such a large share of GDP but because of the secondary effect oil money generates in terms of domestic consumption and investment. Reducing export revenues from the sale of oil and gas will therefore have significant effects on Russia's GDP, well beyond what the first-round effect of restricting the oil sector would imply.

In short, it is too early to venture an assessment in detail, however, the scale of loss that can be expected is clear from these and many other indicators. In the longer run, it will only be augmented by the relative isolation in which Russia has ended up, implying lower investments and subpar capital inputs at inflated prices, and by the ongoing brain drain (3,8 million people have already left the country since the war began).

Conclusion

In conclusion, the debate about economic sanctions as a tool of foreign policy is often restricted to a binary question: do they work or not? There is ample support in the literature studying sanctions to say that this question is too simplistic. Even if we do not see immediate success in reaching the main aim of the sanction policy, they do cause damage, in many dimensions, and such damage is non-negligible. The political will and the regime behind it may be unaffected, but the resources they need to continue with their course of action will unavoidably shrink in the longer run.

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