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On the Economic Effects of Financial Sanctions: Evidence from Germany*

KEY MESSAGES

- **Financial sanctions are effective. They have a strong and immediate negative effect on direct financial flows with the sanctioned country**
- **Financial sanctions imposed by a subset of countries, such as the European Union alone, face a higher risk of sanctions evasion, as opposed to sanctions imposed by the United Nations**
- **Financial sanctions tend to be smart, with their effects mostly concentrated on the targeted activity. There is limited evidence that financial sanctions create collateral damage by reducing trade in goods and services**
- **Domestic firms doing business with sanctioned countries tend to be large enough to divert their activities to alternative business opportunities with non-sanctioned countries when sanctions are imposed.**

Over the past decade, there has been a growing interest in the economic effects of diplomacy. Recent research not only covers a wide range of diplomatic activities, from membership in international organizations to the operation of embassies and consulates, from foreign travels by politicians to visa policies. An increasing number of papers is also concerned with the wider picture, examining the economic implications of growing geopolitical tensions and possible shifts in the international balance of power.

A policy instrument that has recently received considerable attention in the literature on economic diplomacy is sanctions. Sanctions have become of particular interest for at least two reasons. First, from a conceptual perspective, sanctions are presumably a very powerful tool in the toolkit of diplomatic strategies. Since direct action is taken, sanctions typically go beyond other diplomatic initiatives, such as meetings or negotiations. Moreover, by banning cross-border interactions, they imply costs which affect both the country targeted by sanctions and the country that imposes the restrictions. Second, sanctions have of late been increasingly used (again) in practice. Most notably, massive sanctions have been imposed on Russia in response to its war of aggression against Ukraine.

Despite this sizable interest, however, the identification of the economic effects of sanctions is far from trivial. An obvious challenge is to isolate the effects of sanctions on the targeted country, whose economy is likely to be affected by many factors, including developments which may have led to the imposition of sanctions in the first place. Another issue is that sanctions are often composed of various, very specific measures, making it difficult to identify individual as well as aggregate effects of those restrictions. In February 2023, for instance, the European Union adopted its 10th package of sanctions against Russia.[1]

In view of these difficulties, we developed a research agenda that helps to avoid many of these issues by analyzing the impact of sanctions in a very specific (and maybe even unique) setting. In particular, our research is characterized by three key features. First, instead of covering the full range of possible restrictive measures,[2] we typically focus on a single type of restrictions, namely financial sanctions. In practice, many restrictive measures are indeed targeted at the financial sector.[3] Examples include investment bans and restrictions on access to capital markets and the provision of financial services. Moreover, other types of restrictions often contain constraints on financial transactions and are, therefore, also officially recorded as financial sanctions. Embargoes on exports of specific types of goods, for instance, typically involve restrictions on technical assistance, training and financing; travel bans on

* This article discusses, and extensively draws on, our research on financial sanctions. We are indebted to our co-authors in this line of work: Tibor Besedeš, Constantin Drott, and Matthias Efing.

[1] See https://ec.europa.eu/commission/presscorner/detail/en/ip_23_1185.

[2] Possible restrictive measures of the European Union include, for instance, diplomatic sanctions, suspension of cooperation, boycotts of events, trade sanctions (including arms embargoes), financial sanctions, flight and travel bans, and restrictions on admission; see http://eeas.europa.eu/cfsp/sanctions/docs/index_en.pdf.

[3] See, for instance, Kirilakha et al. (2021, Table A.2).

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named individuals are often accompanied by other restrictive measures, such as the freezing of funds and financial assets.

Second, we examine data on cross-border financial activities from only a single country, Germany. With this setup, analyzing bilateral financial interactions between Germany and other countries over time, we are able to identify patterns of adjustment in financial relationships after the imposition of a sanction. Implicitly, we also take advantage of the fact that Germany only imposes sanctions authorized by either the European Union or the United Nations.

Third, we analyze highly disaggregated data. Our main source of data is the Deutsche Bundesbank's balance of payments statistics, which provide detailed information on financial transactions between Germany and the rest of the world. For instance, for each single declaration, the value and the partner country of the transaction is provided, along with the name and address of the reporting unit (bank or corporation) and the type of asset that is transferred. As a result, we are able, for instance, to decompose the aggregate value of German capital flows with a partner country into various factors, including the unique number of reporting units that declare financial transactions with that country, the unique number of asset classes in which business has taken place, and the average value of capital flows by declarant-asset pair.

Equipped with this framework, we examine the economic impact of sanctions along various dimensions.

FINANCIAL SANCTIONS AND FINANCIAL FLOWS

In a first application (Besedeš et al. 2017), we focus on the activity targeted by financial sanctions, cross-border financial flows. The motivation for this exercise is twofold. First, while the ultimate goal of sanctions is to achieve a change in the target's policies, the definition of success as well as the contribution to success made by sanctions depend to a significant degree on subjective evaluation. Therefore, a more straightforward approach to assess the effectiveness of sanctions is to analyze their impact on the targeted activities.

Second, while sanctions, embargoes, asset freezes and other forms of legally imposed restrictions can be, in principle, expected to reduce financial transactions, the overall effect of sanctions on bilateral financial flows is unclear. On the one hand, the effect may be negligible, since many of these restrictive measures have become increasingly targeted at specific sectors or listed individuals, mainly to limit the humanitarian consequences of such actions. On the other hand, financial outflows could also decline in formally unrestricted business areas due to an increase in market uncertainty abroad (possibly related to fears that the target country may take retaliatory action on the sender country) or to a greater administrative effort, such that the overall effect would be large.

Applying a difference-in-differences analysis on 20 sanctions episodes over the period from 2005 through 2014, we find that financial activities between Germany and the targeted country decline significantly after the imposition of financial sanctions. Responding to the restrictive measures, German investors tend to sell their assets held in sanctioned countries. Similarly, investors from targeted countries engage less with the German financial market. Sanctions also work across the board; they do not only lower the value of financial flows, but also lessen the number of transactions and the number of asset categories. Overall, our estimates indicate that, after the imposition of financial sanctions, German financial flows with the sanctioned country decrease by about 50 percent.

We also find a number of other interesting results. For instance, in one extension, we distinguish between United Nations (UN) and European Union (EU) sanctions and find that if only a subset of countries imposes sanctions, in these cases the EU, there seems to be rampant evasion through third countries. In other words, UN sanctions seem far more effective in cutting off financial flows than EU-only sanctions, indicating that the effect of EU-only sanctions may be more in the political area than the economic area. We also find little evidence of anticipation effects, though this may be a consequence of sanctions being imposed soon after the stated reason for them (usually one to two months). Finally, the easing or strengthening of sanctions does seem to matter, too. Thus, changing the intensity of sanctions may not only serve as a political signal, but also as an economic one.

FINANCIAL SANCTIONS AND DOMESTIC FIRMS

With the decline in cross-border financial flows, sanctions imply costs for both the target and the sender country. In fact, business groups in the sanctions-imposing country typically oppose such measures. When the US government, for instance, considered a tightening of sanctions against Russia in June 2014, the US Chamber of Commerce and the National Association of Manufacturers issued a newspaper advertisement stating that "[w]e are concerned about actions that would harm American manufacturers and cost American jobs. […] The only effect of such sanctions is to bar U.S. companies from foreign markets and cede business opportunities to firms from other countries."[4]

In Besedeš et al. (2021), we assess the costs of financial sanctions on the imposing country in more detail. In particular, we examine the effects of finan-

[4] See, for instance, "Business Groups Oppose Any New Sanctions on Russia" in USA Today, June 25, 2014 (https://eu.usatoday.com/story/news/politics/2014/06/25/obama-russia-sanctions-national-association-of-manufacturers-us-chamber-of-commerce/11349731/).

cial sanctions on German non-financial entities, i.e., declarants that are classified neither as banks nor as entities in section K ("financial and insurance activities"), according to the NACE Rev. 2 classification. To the extent that financial restrictions have any measurable effect on the economic performance of individual declarants, these effects should be particularly observable for non-financial business entities. For German banks and insurance companies, in contrast, with their large-scale financial operations in major national and international markets, the reduction in business opportunities due to sanctions policies is expected to have generally limited consequences on their overall activities.

A main advantage of our analysis is that our data set allows us to identify entities that declared business with the sanctioned country shortly before sanctions were imposed and, therefore, can be assumed to be directly affected by the restrictive measures. Therefore, we begin our analysis by characterizing such German firms in more detail. As it turns out, German firms that declared financial transactions with sanctioned countries have been disproportionately large and generally very active in (many) international markets. However, this finding is perhaps not very surprising, given that in our sample of 23 sanctions over the period from 1999 through 2014, restrictive financial measures have been primarily imposed, with only a few exceptions (e.g., Russia), on countries of small, even tiny, importance for Germany as counterparts in financial transactions.

As a result, however, firms affected by sanctions are expected to have various outside options in response to newly-imposed restrictions. More importantly, there is also consistent evidence that they indeed make use of such options, significantly expanding their business operations with non-sanctioned countries. In fact, when we examine the impact of sanctions on firm-level variables such as total sales and number of employees, the business performance of firms affected by sanctions is not measurably different from that of firms doing business only with non-sanctioned countries. Based on our estimation results (derived from a sample which ends in 2014 and, therefore, does not include the latest sanctions against Russia), we conclude that financial sanctions have, at most, limited economic consequences for non-financial business entities in the sanctioning country and, therefore, can be indeed considered as being "smart."

FINANCIAL SANCTIONS AND DOMESTIC BANKS

We complement our analysis of the impact of sanctions on German non-financial firms by a study of German bank lending in countries targeted by financial sanctions. In Efing et al. (2023), we identify the effects of sanctions on different groups of German banks (bank affiliates) in a standard differences-in-differences setting. In particular, we compare the business of German banks in a country before and after the country is targeted by sanctions and then examine whether any change in business is different for German banks that are located in Germany and abroad.

Interestingly, we find that domestic banks in Germany reduce lending in sanctioned countries, whereas their foreign bank affiliates outside Germany increase lending. In some cases, this is because the bank affiliates' host countries have not imposed sanctions themselves. However, even German bank affiliates in host countries that enact sanctions like Germany increase lending if these host countries lack strong institutions and anti-crime policies. These findings suggest that even universally adopted sanctions distort bank capital flows and competition if the level of their enforcement varies across bank locations.

SPILLOVER EFECTS OF FINANCIAL SANCTIONS

Sanctions are typically composed of a collection of measures that target a range of activities. Often, restrictive measures are defined in great detail, which raises the question of secondary effects, that the effect of one type of sanctions may spill over into another sphere of cross-border interactions. In fact, a simple link could be that the presence of financial sanctions increases the risk of doing business, any business, with the sanctioned country, resulting in a broad reduction in economic interaction between the sender of sanctions and its target.

In Besedeš et al. (2022), we examine the extent to which financial sanctions imposed by Germany through its EU and UN commitments cause collateral damage on Germany's trade in goods and services. It turns out that financial sanctions reduce Germany's inflows and outflows of financial assets, as well as imports and exports of goods and services. However, the relative effects on trade in goods and services are weaker than on financial assets, about half as large in the case of goods and two-thirds as large in the case of services. More notably, this reduction is entirely due to financial sanctions that were accompanied by restrictions on German exports. Since export restrictions are designed to limit trade, one can hardly think of these effects as being evidence of collateral damage. Rather, it is consistent with the idea of sanctions being smart: reducing precisely the activity that they target.

Our results also indicate that the primary channel through which financial sanctions affect cross-border flows is the extensive margin, reducing the number of firms or products engaged in cross-border flows when sanctions are in effect.

FINANCIAL SANCTIONS AND TARGET PAYMENT FLOWS

In most of our empirical work on sanctions, we usually do not analyze sanctions individually but pool across a number of sanctions episodes. This approach, however, may not be particularly useful for an assessment of the effects of the latest massive sanctions against Russia (which are not included in our samples anyway).

In Drott et al. (2022), we examine the effect of financial sanctions against Russia at the most disaggregated level possible, individual bank accounts. Using data down to the daily frequency level from the Eurosystem's real-time gross settlement system TARGET2, we provide empirical evidence that sanctions imposed by the EU on Russian banks following the country's military interventions in Ukraine in 2014 and 2022 have sizably reduced financial transactions with sanctioned Russian bank accounts. Among the various sanction measures taken, exclusion from SWIFT (which prohibits the exchange of financial data for payments in SWIFT, a global provider of secure financial messaging services) turns out to have the largest effects.

POLICY CONCLUSIONS

The question whether sanctions actually work is, as Kaempfer and Lowenberg (2007, 871) put it, "a prickly conundrum." While sanctions are still widely used in practice, sanctions strategies are usually designed to end at the threat stage.

If implemented, financial sanctions are effective. They have a strong and immediate negative effect on direct financial flows with the sanctioned country. Financial sanctions also tend to be smart, with their effects mostly concentrated on the targeted activity. There is limited evidence that financial sanctions create collateral damage by reducing trade in goods and services.

At the same time, however, there is considerable risk of sanctions evasion. Consequently, UN sanctions seem far more effective in cutting off financial flows than EU-only sanctions. Moreover, the harmonization of rules and regulations for cross-border financial flows has to be accompanied by efforts to seriously enforce these rules in practice.

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