

War in Ukraine and rising international tension: What impact on GDP?

By [Raul Sampognaro](#)

The invasion of Ukraine launched by Russia on 24 February 2022[[1](#)] dealt a major shock to the European economy, which was already suffering from other constraints (supply problems[[2](#)], recruitment difficulties, rising energy prices, inflation). Beyond the massive impact on the economies of the countries directly affected by the war, in particular the aggressed country itself (human losses, destruction of capital, diversion of resources from production, among others), the rise in geopolitical tensions can have economic effects even in countries not (directly) involved in the fighting. In the face of this, these countries may boost their military spending, adopt wait-and-see investment behaviour, increase precautionary savings, or suffer unanticipated shocks to import prices and capital flows (in or out). In a study [available online](#) [in French], we have attempted to quantify the effects of these ongoing tensions on GDP growth in the six economies most closely followed by the OFCE: France, the United States, the United Kingdom, Germany, Italy and Spain. In addition, we have tried to measure the impact on world trade and global industrial production.

[Caldara and Iacoviello \(2022\)](#) have recently proposed a [quantitative indicator of geopolitical risk](#). The authors construct an indicator for the level of tension at the global level, which they have developed for 43 countries, including the main players on the international scene. The study also

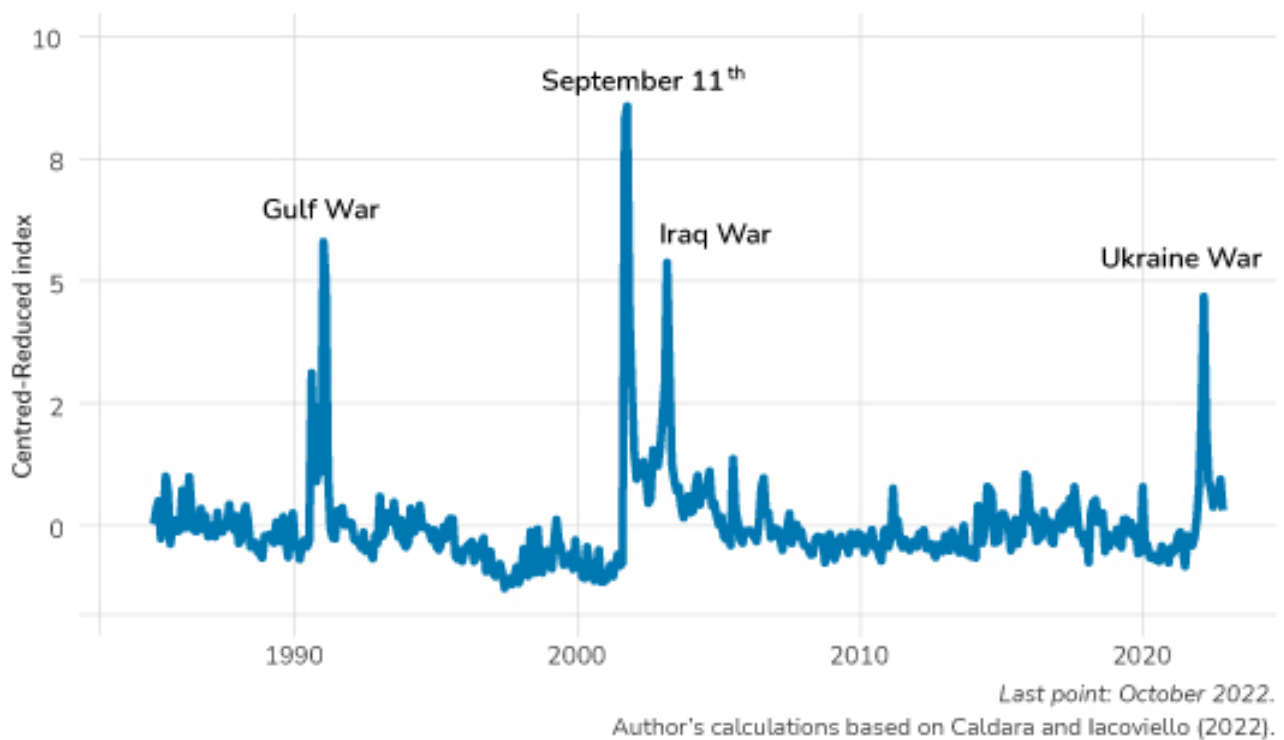
sets out the statistical method used to quantify the causal impact of the developments observed in 2022. This publication comes at just the right time for the forecaster.

2022: A historic year for international relations

For Caldara and Iacoviello (2022), *geopolitical* risk is associated with the impact of international crises, and more specifically with violence that affects the peaceful course of international relations. According to the authors, geopolitical risk refers to threats, or materializations of threats or the escalation of a pre-existing conflict. Such conflicts may be related to war, terrorism or any other type of tension between states or political actors. It should be noted that the term risk used by the authors for this type of phenomenon has a broad meaning that goes beyond the measurement of uncertainty or the probability that a random event will occur. The geopolitical risk index measures not only potential conflicts (which is consistent with a probabilistic definition of risk) but also conflicts that are actually taking place[\[3\]](#).

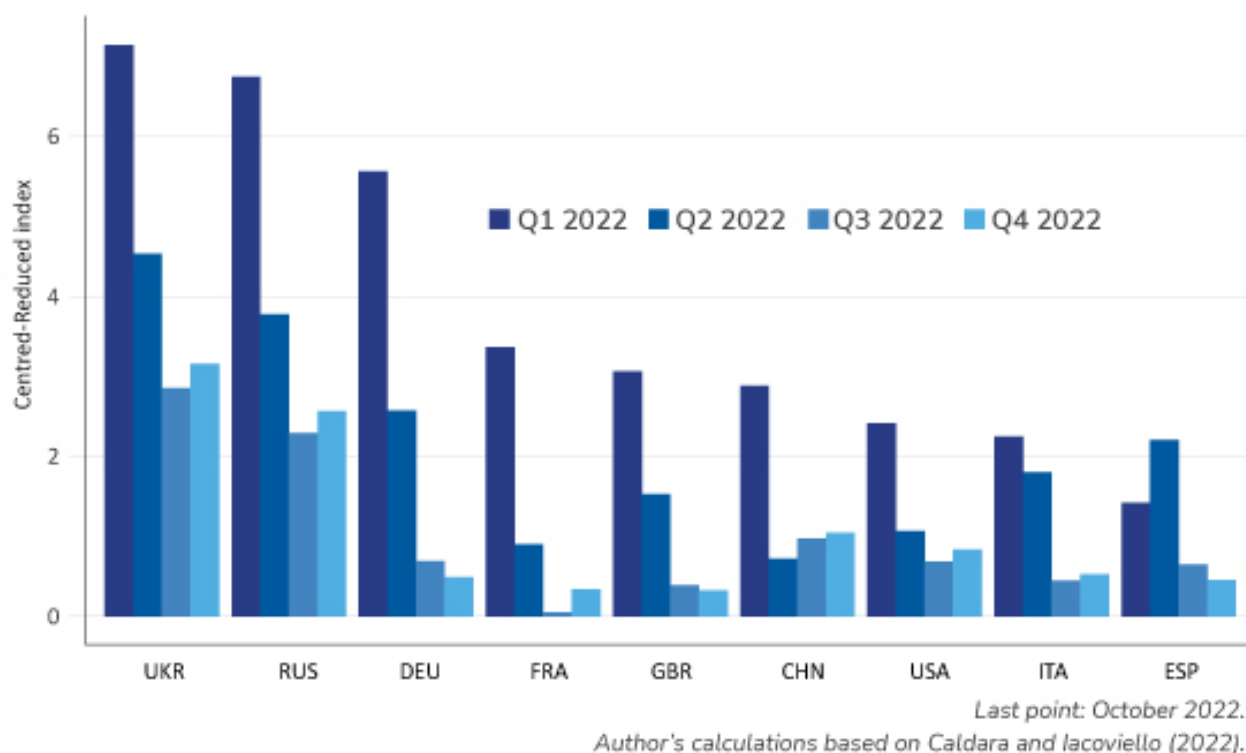
Since the 1980s, this index exhibits major changes, notably during the Gulf War, September 11th, the war in Iraq and more recently the invasion of Ukraine (see [Figure 1](#)). Moreover, between 2003 and 2022, there were occasional peaks in tension following the various terrorist attacks that took place in Europe (with France in the front line) but also in the United States, as well as other conflicts (war in Libya, for example).

Figure 1. Geopolitical Risk (GPR) Index



Of course, shocks do not affect all countries equally. [Figure 2](#) shows recent changes in the geopolitical risk index in a selection of countries since the beginning of 2022. Unsurprisingly, the risk rose the most in Ukraine and Russia. In the wake of the invasion of Ukraine, geopolitical risk has risen sharply in Germany, which is especially dependent on Russian hydrocarbons. The other European countries seem – logically – more exposed to the current tensions than China and the United States.

Figure 2. Quarterly changes in the Geopolitical Risk Index in several countries in 2022



Germany's growth strongly affected by the rise in tension

The study estimates the responses of several economic variables (GDP, investment, interest rates, market capitalization) caused by a geopolitical risk shock^[4]. In our main results, the geopolitical shock induces an endogenous fall in oil prices and interest rates. In this context, a geopolitical risk shock operates as a demand shock. When this negative effect on energy prices occurs – which is not the case for all countries – we have neutralized this endogenous effect, which does not seem to be operational in the current context, particularly in Europe, in order to make more robust quantitative assessments.

According to our estimates, if the global geopolitical risk index remains at its October 2022 level until the end of the year, the rise in geopolitical tensions observed in 2022 will have accounted for a 0.7 point drop in world merchandise trade (in volume terms) and a 0.6 point drop in world industrial production. In addition, Germany will have lost up to 1.1

percentage points of GDP in 2022 due to the year's rising geopolitical tensions. Elsewhere, the effects are smaller but significant: between 0.4 and 0.5 points of GDP in France, and 0.3 and 0.4 points in the US, Italy and the UK. Finally, Spain's GDP loss would be about 0.2 points (Table 1) [\[5\]](#).

These results provide a basis for reflection but should be taken with caution. Each international crisis is unique, and it is difficult to assess one exclusively in terms of a quantitative indicator. In particular, the current crisis has major consequences for Europe's energy supply, especially in terms of gas, which produces a different crisis from what would spontaneously emerge from a statistical model based on observations in the past [\[6\]](#).

Table. Impact of the invasion of the Ukraine on the GDP of six advanced economies in 2022

	Impact on GDP in 2022 if the GRP stays at its October 2022 level...		...and if the impact on Brent is neutralized
	...until October 2022	...until December 2022	...until December 2022
France	-0.4	-0.4	-0.5
United States	-0.3	-0.3	-0.4
Germany	-1.0	-1.1	-1.1
Italy	-0.2	-0.3	n.p.
Spain	-0.2	-0.2	n.p.
United Kingdom	-0.3	-0.3	-0.3

In the last column, it is not pertinent (n.p.) to neutralize the endogenous reaction of Brent prices to the shock of a geopolitical risk – and its impact on GDP – since this variable is not included in the models used for Italy and Spain.

Source: Author's calculations based on Caldara and Iacoviello (2022).

[\[1\]](#) Caution: When it is said that Russia's invasion of Ukraine dates from 24 February 2022, this is done for ease of language. It should not be forgotten that parts of Ukraine's territory, including the Crimea, have been under Russian control since 2014. What we are currently experiencing, far from being the beginning of a conflict, is above all the crossing of a milestone in a conflict that has persisted for many years.

[2] See [Dauvin \(2022\)](#) for an analysis of the impact of a supply shock on GDP growth in the six advanced economies.

[3] The reader interested in a more comprehensive presentation can refer to the original article for greater detail.

[4] The estimates are made using the local projection method of Jordà. See Òscar Jordà, 2005, "Estimation and Inference of Impulse Responses by Local Projections", *American Economic Review*, vol. 95, no. 1, pp. 161-82. <https://doi.org/10.1257/0002828053828518>.

[5] Obviously, while most of the increase in international tension can be attributed to the consequences of Russian decisions, it is not possible to exclude other sources of international tension, particularly in connection with the future of Taiwan and Sino-American relations.

[6] [Geerolf \(2022\)](#) discusses the implications of modelling an energy supply shock specifically in the context of a Russian cut-off of the gas supply.

How do rising interest rates impact French economic growth? An overview of macroeconometric models

By [Elliot Aurissergues](#)

The year 2022 was marked by a sharp inflationary surge in the United States and the euro zone. At the end of October, the inflation rate hit 7.7% over one year in the US, 10.6% in the

euro zone and 7.1% in France, i.e. between 5 and 8 points above the inflation targets of the US Federal Reserve (Fed) and the European Central Bank (ECB). In response, the two central banks significantly tightened monetary policy. The Fed raised its key interest rate from 0% in March 2022 to 4% in November 2022. While the ECB's key rate hike has been more measured for the moment, long-term rates on public debt in European countries have risen sharply, gaining between 250 and 300 basis points in one year in France and Germany, and even more in euro zone countries where the risk on public debt is perceived as higher. This increase is close to what is anticipated for short-term rates in 2023. The OFCE thus forecasts that the ECB's key rate will reach 3% in the third quarter of 2023[\[1\]](#).

It is not easy to estimate the impact this tightening will have on economic activity. There is a very rich literature on the transmission of a monetary shock to the rest of the economy, using methods that, while conceptually similar or even equivalent, in practice lead to a wide variety of results. We are particularly interested here in the impact of a rate shock using macroeconomic models of the French economy. For this overview, we chose three models: the *Mésange* model co-developed by the French Treasury Dept and the INSEE statistics agency (see Bardaji *et al.*, 2017), the *FR BDF* model of the Banque de France (see Lemoine *et al.*, 2019, and Aldama and Ouvrard, 2020, for the notebook on variants), along with the OFCE *e-mod* model used in Heyer and Timbeau (2006).

What is a macroeconomic model?

Macroeconomic models are the oldest class of macroeconomic models. They combine accounting relationships (or equations) with estimated behavioural equations in order to make predictions about an economy's response to shocks. The major

macroeconomic variables (wages, prices, household consumption, investment, employment) are expressed in the form of error correction equations. In the long run, these converge towards a certain target, which is determined by economic theory. Thus household consumption expenditure will converge on a certain fraction of household disposable income in the long term. In contrast, short-term behaviour is left much freer in order to achieve a good forecasting performance. The interest rate is essentially a long-term factor. The impact of a rate shock is limited initially and becomes more important as the gap between the variables and their long-term targets closes.

The *Mésange* model

We consider the variant published in Bardaji *et al.* (2017). The results are summarised in Table 1. A monetary shock of 100 basis points (or 1%) results in a fall in GDP of 0.2% after one year, 0.8% after three years and 3% in the long run. This decline is due in particular to a sharp drop in investment: -2.7% after 3 years (-3.4% for the GFCF of non-financial companies) and -5.5% in the long term, but all components of aggregate demand are hit, including exports, which fall by 3.3% in the long haul. Surprisingly, monetary tightening is reflected in higher prices in the *Mésange* model. Value-added market prices rise by 0.1% after one year, 0.8% after three years and more than 6% over a longer period! This price increase makes the economy less competitive, hence the fall in exports. Two transmission channels are at work. The first is the direct negative impact of higher interest rates on business investment. In the *Mésange* model, the demand for capital and therefore investment depends in the long run on the cost of capital. The intuition is in line with standard microeconomic theory: companies choose the combination of capital and labour that maximises their profit. A rise in the cost of capital leads firms to substitute labour for capital and pushes down investment. The user cost of capital is composed of the depreciation of capital, the long-term

interest rate on government debt and the terms of the risk premium between government bonds and corporate loans, while the long-term elasticity of investment to this user cost is estimated to be 0.44. Assuming a 10% capital depreciation rate, initial nominal rates at 0, and ignoring any risk premia, a 1% increase in the interest rate translates in the long run into a 5% decrease in investment. The second, much less intuitive channel plays a key role in this variant and explains in particular the response of prices and exports. An increase in the cost of capital means higher production costs for business. Firms pass on these higher costs in their selling prices, leading to higher inflation and lower competitiveness. Portier, Beaudry and Hou (2022) recently explored this positive impact of a rise in interest rates on prices via the cost of capital channel. Note that this effect is difficult to detect using more agnostic empirical methods (unrestricted VAR models, local projections). While these sometimes show positive effects in terms of how a rise in rates impacts prices, the effect is usually either insignificant or clearly negative over longer time horizons (see for example Miranda-Agrippino and Ricco, 2021).

The *FR-BDF* model

Compared to *Mésange*, one of the important features of the *FR BDF* model is the way it treats agents' expectations. This specificity explains why two interest rates intervene in the dynamics of the model. The short-term interest rate, determined by the European Central Bank, affects agents' expectations, while the long-term interest rate on public bonds affects the long-term demand for production factors. The long-term elasticity of investment to the cost of capital is 0.5, which is slightly higher than in *Mésange*. The *FR BDF* model does not incorporate systematic relationships between long and short rates. To generate the effect of a rate shock in the model, it is therefore necessary to add two distinct analytical variants, the first simulating the impact of a

permanent rise in the short-term rate, the second the impact of a rise in the long-term rate. These two variants are available in Aldama and Ouvrard (2020). The effects of a rate shock are much weaker than in *Mésange*. After 3 years, real GDP decreases by 0.3%, against 0.9% in *Mésange*. This is due in particular to a much smaller reduction in GFCF (-1.9% compared to -3.4% after 3 years in *Mésange*). The effects on prices are more in line with the usual Keynesian intuition, with a 0.2% fall in the GDP deflator after 3 years. The resulting improvement in competitiveness leads to an increase in exports of 0.2% after 3 years (compared to a 0.2% decrease in *Mésange*). There are two main reasons for these differences. First, the transmission channel of the cost of capital to prices is neutralised in the FR BDF model. While value-added prices are determined by the cost of production factors and a constant markup, as in *Mésange*, the cost of the capital factor that enters the price equation is not the user cost of capital but the marginal return to capital. Second, investment reacts much less strongly in the short term to the growth in value added in *FR-BDF* and is characterised by greater inertia. The negative investment shock therefore spreads more slowly.

Table. Impact of an interest rate hike of 100 basis points

% difference from central account

Impact at 3 years	<i>Mésange</i> model	FR-BdF	<i>e-mod.fr</i> model
GDP	-0.9	-0.3	-0.4
Investment of NFCs	-3.4	-1.8	-1.2
GDP deflator	0.5	-0.2	-0.1
Household consumption deflator	0.8	-0.2	-0.1
Unemployment rate	0.4	0.2	0.2

OFCE calculations.

The *e-mod* model

The impact of a rate shock in the version of the *e-mod* model developed by Heyer and Timbeau (2006) is closer to the results of *FR BDF* than to *Mésange*. However, the economic mechanism is

different. The interest rate shock is transmitted via a fall in asset prices, particularly property prices, which leads to a reduction in consumption via a wealth effect. After 3 years, real GDP falls by 0.4%, a fall that is driven by the reduction in household spending (consumption and investment) (-0.6%) and, to a lesser extent, in business investment (-1.2%) [\[21\]](#). As in *FR-BDF*, the rate shock negatively impacts prices. The GDP and household consumption deflators fall by 0.1%.

What does this overview tell us?

The main transmission channel of a rate shock in macroeconomic models involves the user cost of capital and business and household investment. The magnitude of this negative effect on investment depends on the long-run elasticity of the demand for capital to its user cost. These models estimate this elasticity econometrically. While criticisms can be made of the estimation methods, the value ultimately adopted (on the order of 0.5) seems plausible relative to other estimation methods (for example, a meta-study by Gechert *et al.*, 2022, estimates it at 0.3) and implies moderate substitutability between production factors. It is also possible that the rate shock impacts household consumption via wealth effects, even if this channel remains controversial. In addition to these primary effects on aggregate demand, there are multiplier and accelerator effects that also vary between the models, adding to the uncertainty. We find the channel of production costs, which has a certain importance in the dynamics of the *Mésange* model, implausible. This leads us to retain in this paper the results of Aldama and Ouvrard (2020) and Heyer and Timbeau (2006).

The impact of monetary tightening on economic activity will depend not only on the response of the economy to a generic shock but also on the size of the current shock. In the October 2022 OFCE forecast, the one-year interest rate hike is projected to be 300 basis points, but this hike cannot be used as is. First, this rise is not coming as a complete surprise.

Interest rates fell to very low levels during the Covid-19 crisis, and normalisation was expected to start by 2022, albeit at a very gradual pace. Second, this is a rise in the *nominal* rate. The relevant interest rate for the transmission channels of monetary policy as they appear in macroeconomic models is the *real* rate. This would not pose a problem if the rate hike were a pure monetary policy shock, i.e. if the central bankers had decided overnight to raise rates without any reason. But the rise that we are experiencing is a response to an inflationary shock, a shock that is affecting real interest rates independently of any changes in the nominal rate. The solution adopted by the OFCE in its October 2022 forecasts [\[3\]](#) was to retain the change in the real rate using certain measures of inflation expectations. This leads to a rate shock of around 2%.

On the basis of the two variants that we have chosen, a rate shock of around 2% could, all else being equal, cause French GDP to fall between 0.6% and 0.8% by 2024/2025. The impact on prices would be negative but modest, between 0.3% and 0.4%. This estimate obviously remains very uncertain. As explained in the previous paragraph, calculating the magnitude of the shock itself requires making major assumptions. The models used are estimated with limited information and therefore have potentially broad confidence intervals. More generally, the validity of this estimate of the effects of a rate shock is contingent on the validity of the models used.

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[1] See Table 2 in Appendix 1 of the OFCE forecast in the section [*Tour du monde de la situation conjoncturelle*](#), [Overview of the economic situation], OFCE Forecasting and Analysis Department, under the direction of E. Heyer and X. Timbeau.

[2] These figures are obtained by dividing the results presented in Heyer and Timbeau (2006) by two, as the authors simulated an interest rate rise of 200 bps. As the e-mod model is not completely linear, the results are an approximation.

[3] See Box 2 in [*Perspectives 2022-2023 pour l’économie mondiale et la zone euro*](#), [2022-2023 Forecast for the Global Economy and the Euro Zone], E. Heyer and X. Timbeau (dirs.).

How effective are economic sanctions?

By [Céline Antonin](#)

This topic was the subject of a conference entitled “Sanctioning a country’s economy – A solution?” on 16 November 2022 as part of Lyon’s Focus on the economy days (Journées de l’économie – Jéco):

<http://www.touteconomie.org/conferences/sanctionner-leconomie-dun-pays-une-solution>

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The idea of using economic instruments to influence political objectives dates back to antiquity, but it was not until after the First World War that sanctions were legally codified in the Charter of the League of Nations. The victors in the First World War believed that measures like this would act as a deterrent and help to secure peace by avoiding armed confrontation^[1].

Russia’s military intervention in Ukraine and the many rounds of sanctions that have been imposed by the West since then (the United States, the European Union, etc.) have revived the debate on sanctions. What is their political purpose? Can they be effective, or, in a globalized economy, can the sanctioned country find ways around them? What conditions are needed for sanctions to succeed?

History of sanctions

For several centuries, economic sanctions were intended to complement military action in wartime. In the 20th century, a paradigm shift occurred with the idea that sanctions could be an effective substitute for military action, as reflected in the Charter of the League of Nations (Article 16). Keynes himself said he was “sure that the world greatly underestimates the impact of economic sanctions”. History has, however, proved Keynes wrong: for example, sanctions by the League of Nations against Italy or Japan on the eve of the Second World War failed to prevent that global conflict.

After the Second World War, the idea of sanctions as an alternative to armed confrontation gained traction, and sanctions came into long-term use. The 1990s saw a return in force of sanctions, following the Cold War period when they were used less often, to the point where the period is referred to as the “decade of sanctions”. Voices were nevertheless raised challenging their effectiveness and highlighting the suffering of civilian populations. At the dawn of the 21st century this led to the notion of targeted sanctions, known as “SMART” sanctions (specific, measurable, achievable, realistic, time-bound).

Definition and objective(s)

What exactly is meant by the term sanctions? Askari et al. (2003)[\[2\]](#) define sanctions as “coercive measures, imposed by one country or group of countries on another country, its government or individual entities, aimed at inducing a change in behaviour or policy”. Sanctions can be general or targeted, bilateral or multilateral, trade and/or financial.

When assessing sanctions, it is common to assign them a single objective, but the reality is much more complex. There are actually a plurality of objectives, as Barber (1979)[\[3\]](#) shows: primary objectives, aimed at changing the behaviour of the *target* country; secondary objectives, aimed at satisfying *domestic* political forces; and tertiary objectives, aimed at

promoting the defence of certain values. Thus, sanctions are also a form of punishment of actors whose behaviour is deemed “deviant” from the dominant moral order, and they reflect a desire to extend national sovereignty, as exemplified by US extraterritoriality laws.

As a consequence, the effectiveness of sanctions cannot be judged solely on the basis of their primary objective. Moreover, the objectives actually sought sometimes differ from the objectives declared: in the case of sanctions against Iran, beyond the stated objective of the United States to prevent Iran from becoming a nuclear power, there is in reality also an objective of regime change, which has been pursued since 1979 (Coville, 2015[\[4\]](#)).

Debatable effectiveness

Among the attempts to assess the effectiveness of sanctions, one school of thought, considered “pessimistic”, has generally concluded that they are ineffective. This line of thought began with Galtung’s seminal study (1967)[\[5\]](#), which, using Rhodesia as a prime example, concluded that sanctions have contributed to the strengthening of political power. A second stream of research starting in the 1980s offers a more “optimistic” view of the effectiveness of sanctions; this approach was initiated with a study by Hufbauer, Schott and Elliot (HSE, 1985)[\[6\]](#): based on a sample of 103 cases of trade and financial sanctions implemented between 1914 and 1985, the authors concluded that 36 per cent of the sanctions achieved their objective. A third stream of research then developed out of criticisms of the HSE methodology. As Coulomb and Matelly (2015)[\[7\]](#) point out, recent studies suggest an average success level of 30% for targeted sanctions (Targeted Sanctions Consortium, 2012[\[8\]](#)). Some political scientists disagree, such as Robert A. Pape (1997)[\[9\]](#), who criticises the causality established between sanctions and political objectives and estimates the effectiveness of sanctions “in the strict sense” at around 4%.

Worse still, sanctions are sometimes charged with even being counterproductive. In the country sanctioned, they may provide additional legitimacy to the leadership and render the population more vulnerable to radical ideologies. They can also worsen the situation of the civilian population (access to basic needs, medical care and services, basic food, etc.) and lead to the development of a parallel economy, hurting the most vulnerable in particular. Sanctions can also have strong repercussions in the countries implementing them. They can lead to counter-sanctions, as we are currently seeing as Russia targets European countries. Furthermore, if sanctions are bilateral, they can disadvantage companies in the countries implementing them and create a windfall effect for their competitors who do not apply sanctions: both China and India are currently benefiting from a sharp discount on Russian oil, while European business is having to bear higher fuel costs.

Performance over effectiveness

As the PERSAN report (2017) cited above shows, measuring effectiveness is not in fact sufficient to determine whether sanctions are appropriate. Rather than measuring their effectiveness, the authors argue for measuring the sanction's "performance", using a triptych of relevance-effectiveness-efficiency. While the notion of effectiveness measures only the adequacy between objectives and results, the notion of relevance evaluates the adequacy between means and objectives. If a country's economy is highly integrated globally and has possibilities to circumvent bilateral sanctions, then the sanction will lose its relevance. On the other hand, effectiveness measures the relationship between means and results, in other words, it takes into account the effect of the sanctions on the country implementing them. The ideal sanction is thus one that maximises the potential cost to the sanctioned country while minimising the cost to the implementing country.

It is worth noting that the vulnerability of EU countries to sanctions is comparable to the level of the United States, if intra-regional trade is excluded. Indeed, the rate of openness to international trade, measured as the sum of a country's exports and imports of goods in relation to GDP, comes to 18% in the European Union (51% if intra-EU trade is taken into account) compared to 19% in the United States in 2019[\[10\]](#). But the level of dependence varies from one European country to another: small, very open countries such as Slovenia and Bulgaria have an openness rate of 35% (excluding intra-EU trade), whereas the openness rate in France and Portugal is only 14%. Moreover, the degree of dependence varies according to the product: for example, Guinea and Sharma (2022)[\[11\]](#) draw up a list of 233 products for which the European Union is highly dependent on the outside world, highlighting the importance of China, India and Russia.

EU sanctions against Russia: Self-defeating?

The question of how sanctions perform has importance today, especially in the case of Russia. In response to Russia's invasion of Ukraine, six successive waves of sanctions have been approved by the European Union. The first four rounds of EU sanctions targeted trade with Russia, but carefully exempted energy products and banks heavily involved in the energy sector. This changed with the fifth round of sanctions imposed by the EU Council on 8 April 2022, which banned the import of Russian coal and other solid fossil fuels to the EU from August 2022. The sixth set of sanctions decrees a total halt to imports of Russian oil within six months and to refined products by the end of 2022. Russia has responded to these measures with counter-sanctions: it has obliged foreign creditors to pay for their imports in roubles, and it has suspended gas deliveries to several European countries via the Yamal pipeline.

In terms of effectiveness, it is still early to judge the effect of the sanctions on the Russian economy, but the

provisional balance sheet appears mixed. In its October 2022 forecast, the IMF expects Russian GDP to contract by 3.4% in 2022, which is less than the 6% expected in July 2022. True, half of the country's foreign exchange reserves are frozen, several major banks have been cut off from the international payment system, and Ural crude oil is trading at a discount of about \$20 per barrel. However, Russia's economy seems to be holding up better than expected. The central bank has imposed capital controls and raised interest rates sharply, pushing the rouble up steeply. The trade balance has improved: higher world oil and gas prices have offset the "Russian discount", and increased sales to China and India appear to have partially offset the decline in exports to the EU. Thus, the existence of third countries claiming to be neutral, in a context of globalization, largely weakens the power of sanctions and raises questions about their relevance. Some countries, such as Turkey, play a major role in circumventing sanctions, as illustrated by the project discussed by V. Putin and R. T. Erdogan that aims to create a gas hub in Turkey intended to supply Russian gas to European countries[\[12\]](#).

Furthermore, the EU's heavy dependence on Russian oil and natural gas also calls into question the sanctions. Changing producers may be possible in the case of oil, because of the relative simplicity of transporting oil; sanctions would then imply a reworking – not without cost – of the trading network. In the case of natural gas, however, the very nature of the transport infrastructure limits the possibilities for substitution, as the bulk of European gas trade is based on a network of pipelines coming from Russia. Moreover, Europe's countries are unevenly dependent on Russia, with the easternmost European countries appearing to be the most vulnerable (Antonin, 2022[\[13\]](#)). In response to the sanctions, Russia has drastically reduced its gas deliveries to the European Union, which could have a strong impact on EU countries' growth (Geerolf, 2022[\[14\]](#)). But if the cost to the implementing country outweighs the cost to the sanctioned

country, then the sanctions will be counterproductive. The challenge for the implementing country is therefore to reduce the impact on its own economy, for example by providing the best possible support to the domestic entities that are most directly affected by the sanctions.

Defining the conditions for successful sanctions

It is impossible to predict the conditions required for sanctions to succeed, as each situation needs to be analysed in specific detail. However, certain conditions seem favourable for maximizing their performance. Although empirical studies based on the data of Hufbauer et al. (already cited) show that unilateral sanctions have a higher success rate than multilateral sanctions, there is no consensus on this result: based on new data covering 888 cases of sanctions – with a higher proportion of sanctions not involving the US – Bapat and Morgan (2009)[\[15\]](#) show that multilateral sanctions are more likely to succeed than unilateral sanctions, *provided that* there is either a single grievance against the targeted country or (if there are several grievances) that the sanctions are orchestrated by an international institution. Indeed, because of the presence of an international institution, each implementing country loses its ability to enter into a side agreement with the target country and to participate de facto in a strategy of circumvention. As a result, the target country is more likely to take the threats seriously and offer a compromise. In addition, multilateral sanctions have the advantage of conferring strong political legitimacy on the sanctions.

Furthermore, it is important to ensure that the final political objective is in line with the intermediate economic objective, so that the country issuing the sanctions is confident of its ability to maintain the sanctions over time (Lettre Trésor-éco, 2015[\[16\]](#)). Finally, sanctions should be limited to the most effective measures, and sanctions that have a display objective – whose performance has not been

proven – should be prohibited. The sanctions regimes that have a high success rate are those where the main measure targets a key export sector of the target country – without the implementing country being overly affected: the *Lettre Trésor-éco* (2015) estimates a success rate of 54% when the main measure of the sanctions concerns one of the main export resources of the target country, compared to an average success rate of 18%, all sanctions combined[\[17\]](#). Finally, it is important to ensure that the final objective is clear so as not to fuel the idea that sanctions are an instrument of imperialism; otherwise there is a risk of leading the population of sanctioned countries to harbour a sense of being subject to unjust aggression and to reinforce their rulers' legitimacy – which would be completely counterproductive.

[\[1\]](#) For a more detailed discussion of the performance of sanctions, the reader may wish to refer to the report [Matelly S., Gomez C., Carcanague S. \(2017\). Performance des sanctions internationales, Typologie : étude de cas. Rapport final PERSAN, June 2017, IRIS, CSFRS](#) [The performance of economic sanctions – A typology and case study], which has generally inspired and nourished the production of this text.

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[\[4\]](#) [Coville, T. \(2015\). "Les sanctions contre l'Iran, le choix d'une punition collective contre la société iranienne?". \[Sanctions against Iran – Choosing collective punishment of Iranian society?\], Revue internationale et stratégique, 97\(1\).](#)

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[17] *Lettre Trésor-éco* (2015), cited above, Table 2.