

# The Implications of Russia's Invasion of Ukraine for the EU Energy Market and Businesses

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**This paper analyses the potential impact of the Ukraine–Russia war on the EU energy market and businesses. It explores the risks spilling from disruptions in energy supply from Russia, rising energy prices and the prospects for the EU, which remains to be highly dependent on Russia's energy supply, with the war serving as a catalyser for speeding up Europe's greening transition.**

## Introduction

More than 6 months have passed since Russia's invasion of Ukraine. In addition to unprecedented humanitarian costs, this war poses serious economic threats worldwide. Among other things, the war jeopardizes global energy and food security; contributes to rising inflation due to a surge in commodity prices; disrupts supply chains, that altogether have adverse implications for businesses, thus constraining the growth of the global economy, which has not fully recovered from the global Covid-19 pandemic yet.

In the response to the war, the international community imposed wide-ranging sanctions, targeting Russian officials and oligarchs linked to Putin's regime; financial sanctions; export bans on some high-end tech products; an import embargo on coal, solid fossil fuels and, more importantly, an oil embargo, gradually curtailing Russia's largest source of central government revenue.<sup>1</sup> In turn, Russia has responded with rationing gas supplies

to Europe, which, while affecting the EU market, also backfires on the Russian economy. The latter is already weakened by the economic sanctions, resulting in Russia's import collapse, and human and financial capital exodus, with the number of international companies having withdrawn from Russia reaching a thousand, which affects 40% of Russia's GDP (Sonnenfeld *et al.*, 2022).

Russia accounts for 13% of world production of oil and 17% of gas (BP, 2021). Russia's share of Europe's supply of energy reaches 25% and 40% of oil and gas supply annually (European Commission, 2022). A reduction in the supply of gas and oil to Europe has forced Russia to seek alternative ways for redirecting its energy flows to the largest emerging economies of China and India, at a discounted price, given the inelasticity of energy supply and logistical hurdles, which give both economies some bargaining power when acquiring Russian energy resources. However, pivoting to the East is hardly a solution for Russia, given that the current share of the Asian markets in Russia's exports of energy is only a fraction of the EU market, especially in terms of gas supply. The market for gas is also more localized, given the liquefaction technology involved in transporting gas by ship, and the infrastructure and logistics challenges associated with redirecting gas transportation.

<sup>1</sup>The EU introduced the oil embargo, which bans 90% of Russian oil imports to the EU, to be phased out in an orderly manner (from 6 to 8 months) as part of its sixth package of sanctions coming into force in May 2022. The US embargo on oil and natural gas purchases from Russia was imposed already in March.

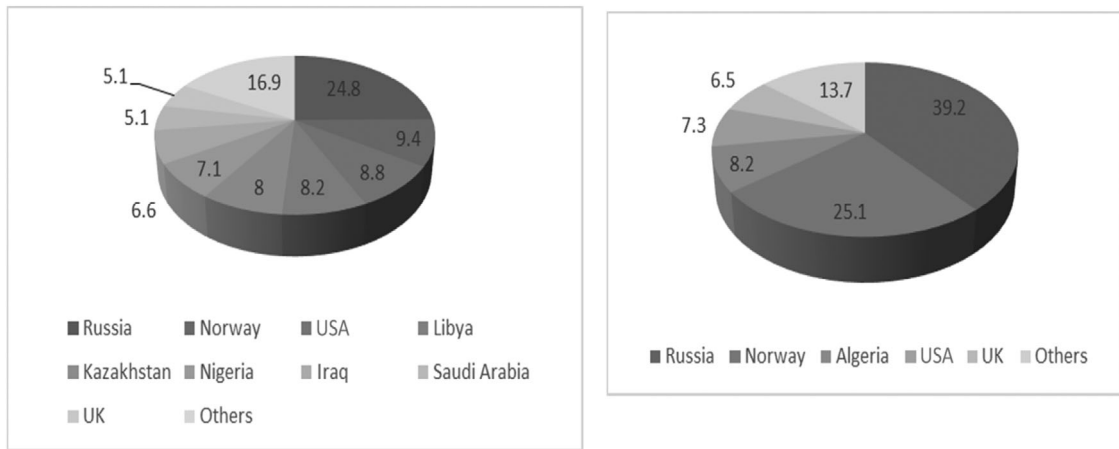


Figure 1. EU imports of oil and gas by trading partner countries, 2021  
Source: Eurostat (2022a) database (Comext) and Eurostat estimates.

This commentary discusses the anticipated costs of the energy shocks from a reduction in the supply of energy from Russia to the EU, drawing implications for businesses. It further explores various alternatives for the EU to reduce its dependency on Russian energy, and considers whether a redirection of energy flows from the EU to emerging economies is feasible for Russia, concluding on the implications of this war for the EU.

### The anticipated economic and business costs of Russia's energy supply disruption

A reduction of energy imports from Russia will directly affect the production capacity of every Western economy dependent on Russia's energy, in particular the EU, whose average monthly imports of energy products amounted to a total value of €25.8 billion in 2021, with Russia remaining its largest supplier (Figure 1).

The share of energy consumption from Russia varies substantially across the EU (BP, 2021). Central-Eastern European countries, in particular Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Poland, Slovakia and Slovenia, and North-Eastern European countries, including Austria, Denmark, Finland and Germany, are the countries most dependent on the supply of Russian gas, whereas Bulgaria, Hungary, Finland and Slovakia remain the largest importers of Russian oil (see Table A1 in the online

Supplementary Material). The oil embargo imposed by the EU foresees a gradual transition for the latter countries, to enable their smooth switching to alternative supplies of oil.

A shortage of oil supply globally has triggered a surge in energy prices. While oil prices started rising prior to the invasion, following a faster recovery of the global demand not matched by its supply, and given the sluggish recovery of world field production post-Covid-19, they skyrocketed over \$100 per barrel after Russia's invasion of Ukraine. As evidenced by some historical supply disruption episodes, an average of 7% oil supply cut, associated with these events, led to a 5% global supply cut, triggering a rise in oil prices by 62% on average, with each episode followed by a global recession (see Table A2 in the online Supplementary Material).

Soaring commodity prices have further fuelled inflation expectations. The EU average annual inflation has surged to more than 7% in 2022. The rise in gasoline prices cascades down to sectors and businesses, reducing their production capacity. Some recent data emerging from European business surveys names an increase in business costs, attributed to the scarcity and growing cost of raw materials and shipping, and supply chain disruptions, triggered by war-related production and trade destruction, as two major factors affecting business operation and performance following Russia's invasion of Ukraine (Deloitte, 2022).

According to the Deloitte European Chief Financial Officers (CFOs) survey, the automotive

sector, industrial products and services, consumer goods and retail are the sectors affected the most by supply chain problems, aggravated also by China's lockdown under its strict zero-Covid policy. Companies are responding to the supply chain challenges by diversifying their suppliers, localizing supply channels and shortening supply chains. Manufacturers' strategic responses to supply chain disruptions have focused on building up the stock of inventories. Accelerated digitalization of some business operations can also help smooth out some of the risks.

Among other factors adversely affecting business performance are rising interest rates in response to soaring inflation, which curtail the borrowing capacity of businesses, already ridden with debt, thus decreasing their investment activity. Soaring energy prices also undermine consumers' and business confidence. Following the Deloitte survey of EU CFOs, a net balance of business confidence, measured as the difference in positive and negative responses, has recorded a sharp drop from 32% in autumn 2021, when businesses had just started to recover their financial position following the relaxation of Covid restrictions, to -29% in spring 2022 (Deloitte, 2022). There are also pessimistic expectations about the end date of the war, with the majority of CFOs of the surveyed European businesses expecting it to take more than a year. Overall, high uncertainty triggered by geopolitical risk and a decline in business confidence further amplifies the effect of the energy price shock via its potential to significantly disrupt spending and investment, constraining growth prospects in the EU, with economic growth projected to be a mere 1.5% in 2023.<sup>2</sup>

### Alternatives to mitigate the energy cut-off from Russia

Since the oil market has a global dimension, a loss of oil supply from the affected suppliers can partly be compensated by an increase in oil supply from alternative global suppliers, as evidenced by the historical precedents mentioned above. The current spare capacity controlled by Saudi Arabia and the United Arab Emirates (UAE) is estimated to be 2–2.5 million barrels a day vis-à-vis

the expected shortfall of 4.8 million barrels a day in the case of countries backing economic sanctions against Russia, including the EU (Mufson *et al.*, 2022). Partly, the shortage can be covered through increased production from the UAE, Iraq and Kuwait, and possibly Venezuela, boosting oil output by over 1 million barrels a day. It is also feasible for the United States to increase its oil production by over 700,000 barrels a day in 2022. Finally, if trade sanctions are lifted on Iran in case of successful negotiations over the development of nuclear weapons, they can potentially add another 1.3 million barrels a day to the global supply of oil (Mufson *et al.*, 2022).

The gas market has a rather regional dimension, given its various infrastructure hurdles, and it is more problematic for Europe to reduce its dependency on Russian gas. In its attempt to do so, the European Commission (EC) has launched a plan to reduce Russian gas imports by about two-thirds from their current 155 bcm (billion cubic metres) a year by the end of 2022 (European Commission, 2022). The EU foresees such reduction via increasing imports of LNG gas from alternative suppliers, including the United States, Qatar, Egypt and West Africa, to the amount of 50 bcm; boosting the supply of pipeline gas by 10 bcm from existing trading partners (i.e. Norway, Azerbaijan and Algeria); saving on residential energy consumption by 14 bcm; using rooftop solar panel energy to add an extra 2.5 bcm; and, finally, increasing the use of renewables (20 bcm) and other sources (e.g. a rise in domestic biomethane production, 5 bcm) (Demsey *et al.*, 2022).

However, the plan has some deficiencies in its implementation, given the current global availability of LNG supply to accommodate Europe's extra needs, competition with Asian buyers for LNG and infrastructure issues. The latter concerns limited LNG import facilities, especially in Central-Eastern and North-Eastern Europe, which remain the most dependent on Russian gas. Spain and Portugal have some extra terminal capacity to store and re-gasify LNG, but pipeline capacity to transport this re-gasified gas to Central and North-Eastern Europe is constrained. Among other constraints to fulfilling this plan are the limited capacity to increase the use of clean energy (wind and solar), which remains rather a long-term prospect, and concerns about increasing reliance on nuclear energy and coal.

<sup>2</sup>[https://ec.europa.eu/commission/presscorner/detail/en/IP\\_22\\_4511](https://ec.europa.eu/commission/presscorner/detail/en/IP_22_4511)

## Potential implications of the oil and gas embargo on Russia

Russia has been pivoting to the East to compensate for the loss of the EU market. China is currently the largest global oil importer, importing about 11.1 million barrels per day, with Russia accounting for about 15% of Chinese total oil imports.<sup>3</sup> India imports 5 million barrels daily, but only 1.3% of these come from Russia.<sup>4</sup> With surging global energy prices, both India and China would be inclined to increase the supply of crudes and gas from Russia, at a discounted price.<sup>5</sup>

However, the prospects for redirecting oil and gas flows from the European market to Asia remain ambiguous due to the limited logistics infrastructure capacity for Russia to export both oil and gas to East and South Asia. To increase its energy supplies to China will require the construction of a new pipeline and terminals, as the existing ones already operate at their maximum capacity. The future of Russia's energy market is also a cause for concern, given the high cost of its production. The share in global oil production is likely to be adversely affected by losing access to Western technologies for oil extraction, refinery and transportation, with large Western multinationals such as BP, Shell, Exxon, Equinor and TotalEnergies having exited energy production facilities or halted new investments in Russia.

## Conclusions and policy implications

The need to reduce energy dependency, in particular on imports of gas from Russia, remains a compelling challenge for the European economy. The Russia–Ukraine war will speed up the greening transition of the EU, placed at the core of its twin objective for sustainable development, while embarking both on digital transformation and green transformation to transition to a 'zero carbon, zero waste' economy. However, the reduction of EU de-

pendency on Russia's energy resources remains an ambitious task this year, given the economic and logistic hurdles of diversifying imports of natural gas in particular.

The most economically efficient way is to target residential consumption of energy via turning thermostats down, but this is not easy to enforce. Boosting LNG global energy production, primarily in the United States and Qatar, and securing its supplementary exports to the EU is manageable, but rather in the medium term. Increasing reliance on renewables remains a longer-term perspective. While the EU economy is making steady progress in transitioning to the use of renewables,<sup>6</sup> there is a lot of heterogeneity across the EU countries, with a number of countries having a share of renewables still below 20%, as set out in the EU's 2009 Directive for 2020. Among such economies are those highly dependent on Russia's gas imports, including Hungary, Poland, Slovakia, Czech Republic and Germany. There are primarily welfare states, including Sweden (60%) and Norway (77.4%), which have the highest share of renewables in gross energy consumption among the EU and EEA countries (Eurostat, 2022b). In the context of the comparative political economy literature, some scholars posit that in welfare states, where workers feel more socially protected, they are more likely to support costly de-carbonization government policy. It is also the case that carbon-intensive firms in such countries have access to policymaking, directly influencing a policy design that lowers their compliance costs (Wood *et al.*, 2020). However, acceleration of the greening transition is only observed in a few European states, whereas for the rest of the region, it is believed to be a longer-term prospect. There is also evidence for many liberal economies becoming engaged in statist policies centred on increasing the subsidy of oil and gas industries (Wood *et al.*, 2020). Considering all of this, the EU economy is unlikely to implement its plan for weaning off Russian gas soon, and it should be prepared to face energy rationing next winter season that will inevitably constrain its production capacity, especially across more energy-intensive sectors, increasing the risk of stagflation in the region.

<sup>3</sup> Author's calculations based on BP (2021) data.

<sup>4</sup> Author's calculations based on BP (2021) data, reporting oil imports and intra-area trade of oil for 2020. Some estimates suggest that Russia's share in India's imports was around 2% in 2021 (Menon, 2022).

<sup>5</sup> There is no official information on the price paid by India and China to Russia for oil and gas supplies. Ural oil is selling at a discount of \$30 per barrel compared to Brent oil (Menon, 2022).

<sup>6</sup> In 2020, the EU economy overachieved its 20% target set in 2009 for the share of renewables in gross energy consumption. The target is increased to 30% for 2030 (Eurostat, 2022b).

Overall, the rising risk of geopolitical disruptions has forced EU businesses to adjust their business models with companies increasing their stock of inventories, diversifying their procurement markets, shortening and localizing their supply chains.

The EU policymakers should look at implementing policies to counteract energy price increases, such as providing lump-sum support to businesses, based on their past consumption, but also implementing measures to speed up businesses' transitions to the use of renewable energy. These can come in the form of R&D tax credits, creating incentives for businesses to engage in low-carbon innovation activities to a greater extent. Acceleration of the pace of digitalization of the EU economy could also potentially mitigate the risks from supply chain disruptions. However, it is critical to create a supporting infrastructure (e.g. a matching skilled workforce) for firms to benefit from digitalization.

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## Supporting Information

Additional supporting information can be found online in the Supporting Information section at the end of the article.

Table A1 Share of trade in value of Russia in national EU imports of oil products and gas, 2021  
Table A2 Major historical oil supply disruptions were followed by recessions