

Contributions to Economics

László Mátyás *Editor*

Central and Eastern European Economies and the War in Ukraine

Between a Rock and a Hard Place

 Springer

Contributions to Economics

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ISSN 1431-1933

ISSN 2197-7178 (electronic)

Contributions to Economics

ISBN 978-3-031-61560-3

ISBN 978-3-031-61561-0 (eBook)

<https://doi.org/10.1007/978-3-031-61561-0>

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Preface

During the period after the great financial crisis before the Covid pandemic hit, according to most economic indicators, Central and Eastern European Countries (CEEC) experienced a steady catch up to the European Union's average. Although the Covid shock had an understandably negative effect on these emerging economies, overall, they have proved to be quite resilient, not underperforming more developed EU countries.¹

Then, straight after Covid, Russia attacked Ukraine, and a second serious economic shock hit the region. As these countries are neighbouring the conflict zone, they were heavily affected by the events. The current volume explores the effects of the war on Central and Eastern European EU member states' economies and their likely economic outlook after the war. At the time of writing this volume, the war is still raging, with peace nowhere on the horizon; thus, all information and data available have to be taken with a pinch of salt. Nevertheless, the main economic facts, trends, and directions are already clearly visible, making an objective economic analysis feasible. This is also imperative, as decisions are being made that are likely to have a long-lasting effect on the region and Europe. Therefore, as far as possible, the studies are fact and data driven. As it is often the case, economics, policy, and politics are intrinsically intertwined. In editing this volume, however, we tried to focus solely on the economy, leaving aside the political side of events.

Chapter 1 of the volume deals with sanctions, i.e., measuring the extent the more than a dozen sanction packages imposed on Russia have affected CEEC. Surprisingly, it has been found that beyond energy supply and security, sanctions had some, but overall limited effects on these economies. Energy related effects, on the other hand, were mitigated by several factors, but mostly by flexible regimes in the form of exceptions granted to the hardest hit.

Chapter 2 looks at the overall macroeconomic picture of the CEE economies. Luckily, the early bleaker expectations were avoided, and the region appears quite resilient. The impact was mainly growth-related, in most countries taking the form

¹ For a detailed analysis, see [Mátyás \(ed\): Emerging European Economies after the Pandemic, Springer, 2022](#). In fact, the current book should be considered as a follow-up of that volume.

of a short but seemingly transitory recession and inflation, which turned out to be somewhat larger and more persistent than in Western Europe. These effects, however, were uneven across the CEEC, depending mostly on the fiscal space available and other country specific factors.

Dramatic changes in energy markets, energy security and its deep and wide-ranging effect on the CEE economies have been among the most visible and discussed shocks of the war. Chapter 3 scrutinizes them, along with likely mitigating policy tools, such as supply diversification, increased energy efficiency, an appropriate legal framework, and proper targeted incentives.

Another highly tangible effect of the war on the economy and society has been the surge in inflation. Many countries have experienced the largest inflation spike for over a generation, which obviously affects the way societies perceive the war. Central banks swiftly responded with a steady rate increase, gradually taming the alarming trend, but killing growth, at least in the short term. Chapter 4 presents a detailed analysis of these events.

Aggravated by the current war, budgets and, more generally, fiscal space have been under considerable strain since the Covid pandemic. The consequences are serious, but the stance taken on them is country specific, as the fiscal conditions have been quite different across the CEEC. Moreover, since some effects manifest themselves with a considerable lag, it is extremely hard to obtain a clear picture. Definitive answers are even more difficult to give if we consider the hard-to-predict burdens of the eventual reconstruction of Ukraine's economy. Chapter 5 does navigate readers through the maze of sometimes contradictory and not always up to the minute data and information, providing an analysis of where we are and where we are heading to.

Chapter 6 deals with external balances. The two most relevant negative shocks in this area were the deterioration of the current account balances mostly due to the surge in energy prices and the tightening of the external financial conditions that lead to substantial capital outflows. The magnitude of these, however, varied with countries, depending mostly on policy preferences and regimes.

Chapter 7 shows that while global trade slowed substantially in 2022 and 2023, both exports to and imports from Ukraine to the CEEC increased. Exports to Russia have also increased due to the obvious price effects. Overall, the terms of trade have deteriorated for the region, but as energy prices have declined, some considerable improvement can be noted. However, FDI to and from Russia and Ukraine has been minuscule, which perhaps comes as a surprise. Since 2022, IT related FDI originating in Ukraine has had a measurable job creation effect in some CEE economies.

Chapter 8 deals with Europe's largest refugee crisis since World War II. Although data is highly unreliable, the numbers are staggering. This represents a veritable demographic catastrophe for Ukraine. On the other hand, perhaps surprisingly, due to the positive attitude of governments and welcoming populations, Europe and the region were able to deal with this exodus relatively smoothly. It is safe to say that, despite the early burden and costs, the inflow of refugees had a positive effect on the CEE economies. The eventual return-rate, however, is hard to fathom, and may have a profound effect on the eventual reconstruction of Ukraine.

Chapter 9 focuses on the life of refugees, their access to education and the labour market. Despite the lack of hard data, it is safe to say that although in the early days they expected a quick return home, after two years of war there is a significant shift in their intentions. Refugees need a transparent legal framework for the transition from temporary to permanent residency in order to avoid the ‘inactivity trap’. It should also be considered that many of the refugees are women with children whose husbands stayed in Ukraine; beyond language proficiency, their participation in the labour market is conditioned by affordable housing, childcare, and schooling.

The last chapter in the volume is about the reconstruction of Ukraine. The task is gargantuan, as it involves not only the ‘reconstruction’ but also the modernization of the country. There are several major challenges, and the ways to deal with them are still to be worked out. Some of the most pressing questions are: How to finance reconstruction? How to deal with Ukraine’s colossal demographic deficit? How to handle the ‘rapprochement’ and eventual long-term EU integration without seriously disrupting the internal EU market? At the same time, how to help other EU candidate countries so they should not feel disenfranchised by the help and support provided to Ukraine? The success of this decades long process will have profound and long-lasting consequences on Europe’s future. Therefore, we should find procedures to carry out these tasks in ways acceptable to the people of Europe and Ukraine alike, on the one hand, and efficient and fully transparent on the other.

Overall, although this war has had a major impact on the CEE economies, some are much more affected than others, as can be seen throughout the chapters. Nevertheless most seem to have proved quite resilient. Also, this shock may have speeded up structural and policy reforms long overdue in some countries and may also promote green transition.

Let me remark that although there are certain overlaps between the chapters, the issues are always addressed from different perspectives and to different depths. Also, we know that some of our readers may only be interested in some of the topics, and this approach may help them understand the broader picture as well. Finally, it is worth mentioning that the manuscript was closed at the end of March 2024, data and events represent the best of our knowledge at this point in time.

Martin Luther King, Jr once said:

“The ultimate measure of a man is not where he stands in moments of comfort and convenience, but where he stands at times of challenge and controversy.” Perhaps this is also true for countries.

Acknowledgements

We address our thanks to all those who have facilitated the birth of this volume: the contributors who produced quality work, despite pestering, frequent requests, and onerous instructions from the editor, and our publisher Springer Nature, who had the foresight to publish a collection of analyses about the economic effects of this terrible ongoing war.

Comments and remarks received during the writing and editing process acknowledged at the end of each chapter have substantially improved the quality of the book. Editorial assistance by Eszter Timár has added much to the quality of this volume, and support received from György Bógel, Balázs Csontó, and Júlia Király during the editing process are also kindly acknowledged.

The final camera-ready copy of the volume has been prepared with L^AT_EX and Overleaf by the authors, the editor, and the tireless and always helpful contribution of Polad Gulushov and Kristóf Reizinger.

In memory of Robin Bellers, who lived and died for English language excellence.

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Chapter 1

Economic Sanctions

Júlia Király and Dóra Gyórfy

Abstract The chapter provides a brief overview of the concept, history, and effectiveness of sanctions, as well as a stocktaking of the sanctions against Russia and their potential impact on the Central and Eastern European economies (CEEE). Given the limited non-energy trade and financial ties with Russia, individual, trade, and financial sanctions are likely to have affected the CEEE only to a limited extent. Notwithstanding the heavy dependence of the region on imports of Russian commodities, the impact of energy-related sanctions was also mitigated by several factors. First, the sharp increase in coal, petroleum, and natural gas prices started before the war in Ukraine, and reversed in the second half of 2022 despite the ongoing announcements on sanctions. Second, in order to minimize disruptions to supply, sanctions related to oil included several exemptions for countries with limited alternative options. Third, against the backdrop of high dependence on Russian imports, no sanctions were introduced on natural gas. Nonetheless, the assessment of the impact of sanctions is a challenging task as it requires a distinction between the impact of the war and sanctions, and thus an understanding of a no-sanction counterfactual scenario under which there could still be major disruptions to supply, and shocks to prices given the elevated uncertainty caused by the war.

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1.1 Introduction

The Russian invasion of Ukraine was followed by an unprecedented number of sanctions in several areas, ranging from individual restrictions to trade and financial sanctions. As of February 2024, the European Union (EU) had imposed 13 comprehensive packages of sanctions since 23 February 2022, including a number of economic sanctions aimed “to impose severe consequences on Russia for its actions and to effectively thwart Russian abilities to continue the aggression” ([European Council, 2024](#)).

Throughout history, countries often resorted to sanctions in order to trigger a change in the target’s behavior by weakening its economic base, with the ultimate objective of protecting national interests and - in the case of modern sanctions - international norms.¹ Given their potential to incur significant costs for the target country, sanctions were described by U.S. president Woodrow Wilson in 1919 as “something more tremendous than war”, and “often referred to in English as ‘the economic weapon’” at the time ([Mulder, 2022](#)). Notwithstanding the sizeable economic costs of sanctions, however, there is mixed evidence as to whether sanctions are successful at achieving the desired change in the target’s behavior ([Morgan, Syropoulos & Yotov, 2023](#)). Moreover, the scope and duration of sanctions is often weakened by the sanctioning country’s concerns over negative spillbacks to its economy.

Following a brief overview of the concept, history, and effectiveness of sanctions, the chapter takes stock of the sanctions imposed on Russia since the start of the war in Ukraine, as well as the potential implications for Central and Eastern European economies (CEEE), with a few caveats. First, the chapter does not aim to assess the effectiveness of sanctions. While the public debate often focuses on whether sanctions against Russia have ‘worked’, the discourse is sometimes misleading and/or premature. Specifically, the effectiveness of sanctions should be assessed against their stated objective, i.e., to “thwart Russian abilities to continue the aggression” in this case ([European Council, 2024](#)). As of late-2023, however, it is premature to assess whether the strategy of sanctioning countries would eventually achieve their goal. Second, the chapter focuses on the potential impact on the CEEE as opposed to the impact on Russia. While the weakening of the Russian economy as a result of the sanctions could also affect the CEEE indirectly, the limited non-energy trade and financial ties between most CEE countries and Russia suggest modest effects on the CEEE via this channel. Third, the quantification of the impact of sanctions on the CEEE is a challenging task as it would require a comparison with a no-sanction counterfactual scenario, i.e., a scenario under which no sanction had been imposed and there was a credible commitment to not impose any sanction on Russia following the invasion of Ukraine.² Even in the absence of sanctions, however, there could

¹ In the context of sanctions during the interwar period, [Mulder \(2022\)](#) argues that “in the eyes of many internationalists” sanctions “also had a moral and legal purpose: to punish the crime of aggression”.

² The latter is key as an expectation of the introduction of sanctions could trigger movements in markets (e.g., commodity prices) even before the first mention, the official announcement, or the time when the sanction becomes effective.

be major disruptions to trade and supply chains and shocks to prices amid high uncertainty caused by the war. As such, the main objective of the chapter is to highlight potential channels through which sanctions could have affected the CEEE.³

Against this backdrop, the chapter provides an overview of the individual, trade, and financial sanctions imposed on Russia.⁴ Restrictive measures on private individuals and entities took the form of travel bans and asset freezes, with no significant impact on the CEEE. Sanctions affecting the financial sector affected the region mostly through the exposure of these banks to the CEEE, though not to a significant extent. Although there were several restrictions on non-energy trade, including bans on exports and imports, most CEE countries had moderate trade relations with Russia.

Given the heavy reliance on imports from Russia, the main channel through which the CEEE have been affected is energy trade. One of the earliest energy-related measures announced by the EU was the ban on imports of Russian coal. Although coal prices increased sharply in the first half of 2022, the impact of sanctions on the CEEE was mitigated by several factors, including the relatively low reliance on solid fossil fuels in total energy supply, the fact that the increase in coal prices can only partially be attributed to sanctions, and the quick reversal of the spike in prices.

Shortly after the announced restrictions on coal, the EU also unveiled an eventual ban on imports of Russian petroleum products, followed by the intention to prohibit maritime transportation of Russian-origin oil above a certain price cap in the fall of 2022. Despite the high reliance on Russian oil of CEE countries, the economic impact of sanctions was mitigated by a number of factors. Specifically, the surge in oil prices started well before the war in Ukraine, and the sharp increase in the first half of 2022 reversed during the remainder of the year despite further sanction announcements. Also, in order to minimize disruptions to supply, the EU's sanctions included exemptions for landlocked countries with limited alternative options, as well as for countries with capacity constraints.

In light of the heavy dependence on imports of Russian natural gas and the limited access to alternative sources of gas, the EU did not impose any sanction on imports of Russian natural gas. Supply, however, was affected by several developments, including Russia's decision to require payments for gas to be made in rubles by 'unfriendly' countries (i.e., a 'counter-sanction'), the suspension of gas flows via certain pipelines, as well as the explosion of the Nord Stream pipelines. Nonetheless, most CEE countries adjusted to the shock relatively smoothly, including by securing alternative sources via new liquefied natural gas (LNG) terminals and interconnectors. Moreover, the mild winter in 2022 and lower industrial consumption mitigated demand for natural gas, thereby contributing to the adjustment. Similarly to coal and oil prices, the spike in natural gas prices reversed in the fall of 2022.

³ The assessment of the impact of the war in Ukraine is more straightforward, as it does not necessitate a distinction between the war and sanctions in terms of their impact. For the implications of the war for energy and trade, see Chapter 3 and 7, respectively.

⁴ Throughout the chapter, the focus is on sanctions imposed by the EU, as in general they are binding for the CEE countries. As highlighted later, however, there are several country-specific exemptions from these restrictions.

In the first part of the chapter, we provide a general overview of sanctions (Section 1.2), focusing on the concept behind them (Section 1.2.1), their history (Section 1.2.2), and effectiveness (Section 1.2.3). This is followed by the stocktaking of sanctions on Russia and implications for the CEEE (Section 1.3), covering individual restrictions (Section 1.3.1), energy trade (Section 1.3.2), non-energy trade (Section 1.3.3), and developments in the financial sector (Section 1.3.4). Finally, Section 1.4 concludes.

1.2 General Overview of Sanctions

1.2.1 The Concept of Economic Sanctions

Sanctions could be defined as “the constellation of laws, authorities, and obligations laid out in a piece of legislation, government decree, UN resolution, or similar document that restrict or prohibit what is normally permissible conduct and against which performance will be assessed and compliance judged”, with the types of sanctions including diplomatic/political, military, technological, and economic (Nephew, 2018). Focusing on the latter, the classic work by Hufbauer, Schott, Elliott and Oegg (2007) defines economic sanctions as “the deliberate, government-inspired withdrawal, or threat of withdrawal, of customary trade or financial relations” to ensure changes “in the target state’s political behavior”. This definition contains the most important elements necessary to understand sanctions: the objective of sanctions, the sanctioning and the sanctioned entity, and the nature of sanctions.⁵

The overarching objective of modern sanctions is related to “the enforcement of norms and the international legal and economic imagination behind them”, i.e., “to protect international norms” (Mulder, 2022). In order to achieve this, economic sanctions aim to ensure changes “in the target state’s political behavior” (Hufbauer et al., 2007), by damaging “the target’s ability to obtain and use economic resources” (Nephew, 2018).⁶ An additional goal of inflicting punishment (Nephew, 2018) and retributing wrongful actions (Hufbauer & Jung, 2021) has also been emphasized in the literature. While this could be interpreted as a ‘moral’ consideration, it also aims to serve as a deterrent for other actors (Hufbauer & Jung, 2021). Finally, although technological sanctions form a different category, they also have economic implications in the long run, by impairing “the technological development of a country, either in specific ways [...] or more generally” (Nephew, 2018).

Historically, sanctions tended to be imposed by the international community such as the United Nations, but the identity of the sender has become increasingly

⁵ As noted in the definition, sanctions can also take the form of a threat, which might bring about the desirable consequences (Bergeijk, 2021).

⁶ In terms of the ‘desired’ change in behavior, Hufbauer et al. (2007) identify five goals: modest policy change, major policy change, regime change, disruption of military adventure, and the impairment of military potential.

heterogeneous over time (Bergeijk, 2021). While the U.S. had been the dominant sanctioning country until the turn of the century, China, the EU, and Russia have become increasingly active since then, and non-state actors have also started to push for sanctions (Hufbauer & Jung, 2021). The target of sanctions is usually a state, while sanctions against designated individuals or entities are relatively new, with the aim of targeting perpetrators of wrongful behaviour, thereby minimizing collateral damage (Hufbauer & Jung, 2021).

Economic sanctions primarily affect trade – typically in the form of restrictions on imports and/or exports –, and finance, including commercial finance, international aid, and development assistance, as well as access to target-country assets within the sender’s control (Hufbauer et al., 2007). More recently, the array of sanctions has grown, including pressure on private companies’ behaviour, cyber warfare, and private litigation (Hufbauer & Jung, 2021).

1.2.2 A Brief History of Economic Sanctions

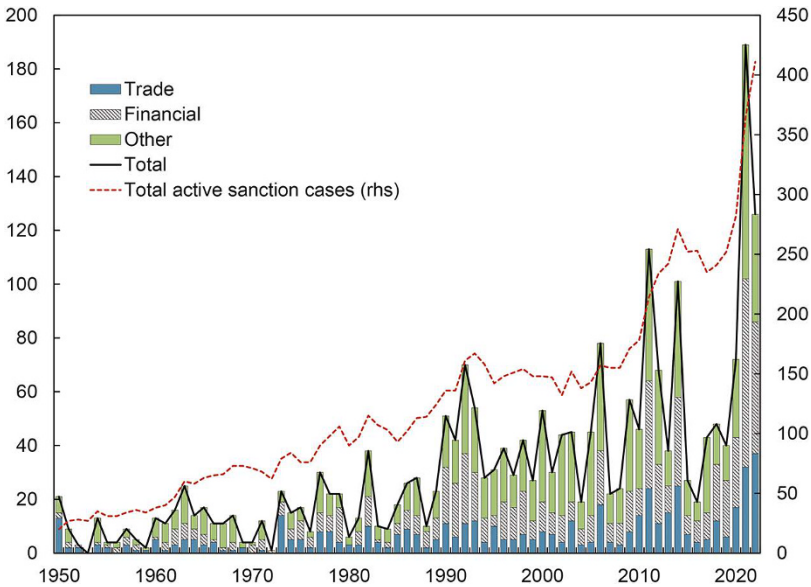
Although the history of sanctions goes back to ancient Greece with Pericles’s Megarian decree enacted in 432 BC, their extensive use as a method of coercion started only after World War 1 (WW1) (Hufbauer et al., 2007). By introducing the possibility of sanctions into Article 16 of the Covenant of the League of Nations, the designers of the post-WW1 world order aimed to transform the experience of economic blockade against the central powers into a peacetime coercion tool. Given the potentially devastating impact of a full economic blockade on the target state’s civilian population, the original objective was to use economic sanctions as a threat rather than actual policy, which made sanctions a kind of predecessor for the post-World War 2 (WW2) nuclear deterrent (Mulder, 2022). Following a steady increase after WW2, the number of new sanctions increased sharply over the past two decades (Figure 1.1).

Over time, both the scope of sanctioning countries and the type of sanctions changed. During the Cold War, trade and arms sale sanctions proliferated initiated mainly by the U.S., which was the dominant sanctioning country as it unilaterally imposed one third of total sanctions and was also active in multiple sanctioning coalitions (Morgan et al., 2023). Following the end of the Cold War, sanctions remained a critical element of global governance, as they were still viewed as a cheaper and easier tool of international coercion than sending in armed forces (Karns & Mingst, 2010). Also, in order to avoid the high humanitarian costs of general sanctions, new methods of targeted or ‘smart’ sanctions (typically travel and financial) had been devised, which aim to punish specific individuals and groups (Morgan et al., 2023). Since the early-1990s, the increase in the number of sanctions was partly related to the EU and the UN becoming more active. In the second half of the 2010s, however, the U.S. intensified its sanctioning activity, accounting for more than 40 percent of global sanctions in 2019 (Felbermayr, Kirilakha, Syropoulos, Yalcin & Yotov, 2022). Finally, the reasons for sanctioning have also broadened over time,

Fig. 1.1: Global sanctions (number of new sanctions)

Data: Syropoulos, Felbermayr, Kirilakha, Yalcin and Yotov (2023), authors' calculations

Note: For previous versions of the database, see Felbermayr, Kirilakha, Syropoulos, Yalcin and Yotov (2020); Kirilakha, Felbermayr, Syropoulos, Yalcin and Yotov (2021).



including not only aggression but also the restoration of democracy, fight against nuclear proliferation, terrorism, as well as human rights violations (Karns & Mingst, 2010).

1.2.3 The Effectiveness of Sanctions

Establishing whether sanctions are effective is a methodologically difficult endeavour. The objectives of sanctions are not always well-established, while the policy change following the introduction of sanctions could actually be the result of other factors. There are also cases when sanctioning does not take place as the threat of sanctions already induces policy change.

The pioneering research of Hufbauer et al. (2007) finds that only 34 percent of 174 post-WW1 sanctions can be considered at least partially successful. Those with modest goals such as the release of prisoners had a 51 percent success rate, while more ambitious objectives such as regime change or the disruption of military adventures were associated with a success rate of 31 and 21 percent, respectively. Focusing on

the post-Cold War period and including threats along with actual sanctions, [Schneider and Weber \(2019\)](#) find a somewhat higher success rate of 57.5 percent.

While empirical findings largely depend on sample selection and model specification, the survey by [Kaempfer and Lowenberg \(2007\)](#) highlights a few factors that could increase the chances of sanctions' success, including political and economic weakness, a democratic political system in the target country, strong pre-sanction ties, as well as high costs for the target. At the same time, high costs for the sanctioning countries, assistance to the target by third countries, and the ambitiousness of the targeted policy change hinder success. These findings reinforce the importance of asymmetry in the working of sanctions – a lesson learnt from the interwar period ([Mulder, 2022](#)): sanctions imposed by large countries on small, dependent economies have the greatest chance to succeed, while large, less democratic countries with strong allies are less likely to be affected by sanctions.

In a recent survey of economic sanctions, [Morgan et al. \(2023\)](#) emphasize differences in methodologies across research disciplines: while economists evaluate the economic costs of sanctions, political scientists look for policy change as a measure of success. This difference strongly impacts the assessment of sanctions. Specifically, economists found a strong negative economic impact of sanctions on trade, foreign direct investment, growth, and poverty rates in the target state ([Morgan et al., 2023](#)). In contrast, political scientists found that the objectives of sanctions are met only in a fraction of cases, as economic hardship in the target state does not necessarily yield policy change ([Morgan et al., 2023](#)).

The effectiveness of sanctions largely depends on the process of implementation and enforcement. For example, finding the right type of sanctions, building a coalition of sanctioning countries, and discouraging sanction violations require strong sanctioning capacity, as well as careful planning and monitoring that cannot be done on an ad hoc basis ([Early, 2021](#)). There is also a need to convince the private sector to voluntarily comply with the sanctioning regime, especially in the case of extraterritorial sanction provisions ([Early, 2021](#)). The consideration of enforcement underscores the need that sanctioning be seen as a process, with each actor adapting to changing circumstances – the sender to enforce the sanction, and the target to neutralize them. This also highlights the importance of context, thereby making case study research indispensable in understanding and improving the mechanism of sanctions ([Bergeijk, 2021](#)).

Finally, the history of economic sanctions has also shown that sanctions have major unintended consequences. Focusing on the interwar period, [Mulder \(2022\)](#) notes that these limitations include not only the collateral damage to the civilian population but also the spread of policies that induced a growing fragmentation in the world economy. The interwar history of sanctions also showed that sanctions are effective when used against smaller states, and much less so against large, authoritarian powers.

1.3 Sanctions on Russia and Implications for the CEEE

The first international sanction targeting Russian individuals or entities since the Cold War was the Sergei Magnitsky Rule of Law Accountability Act in 2012, which allows visa restrictions and asset freezes on perpetrators of human rights violators (Aslund & Snegovaya, 2021). The occupation of Crimea and the Donbas in 2014 was followed by further sanctions, including the prohibition of business with occupied areas, and personal sanctions on individuals involved in the occupation and election interference. Aslund and Snegovaya (2021) argue that while sanctions did not lead to the withdrawal of Russian forces from the occupied territories, they are estimated to have lowered Russian GDP growth by around 2.5-3 percentage points per year.

In 2022, Russia was hit by an unprecedented number of sanctions. As President Putin signed decrees on the recognition of “the independence and sovereignty of the so-called Luhansk People’s Republic (LNR) and Donetsk People’s Republic (DNR) regions of Ukraine” and the ordering of Russian troops to the separatist territories on 21 February 2022, a series of sanctions was announced within three days, including an executive order by the U.S. administration banning investment and trade with these regions, travel bans, and asset freezes by the EU on five individuals, and the first major sanctions package by the EU (Bown, 2023). Following the invasion of Ukraine on 24 February 2022, further sanctions were introduced (Figure 1.2). As of February 2024, the European sanctions had been announced in 13 different packages between 23 February 2022 and 23 February 2024, with the stated objective being “to weaken Russia’s economic base, depriving it of critical technologies and markets and significantly curtailing its ability to wage war” (European Council, 2023). The packages approved by the EU include several measures, including individual (asset freeze and travel bans) and economic (trade and financial) sanctions (Figure 1.2).

In the remainder of the section, we provide a brief overview of the individual and economic sanctions (energy trade, non-energy trade, and financial sector), as well as their potential impact on the CEEE.

1.3.1 Individuals and Entities

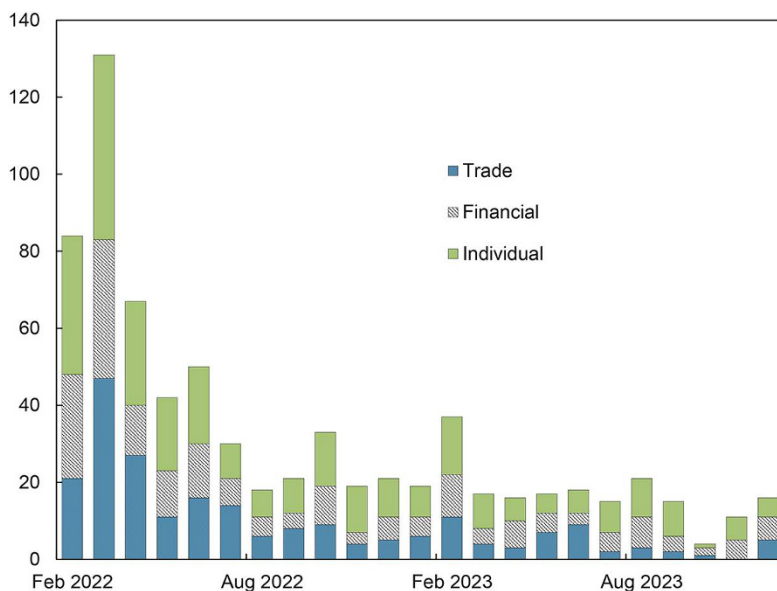
Individual sanctions, targeting those “responsible for supporting, financing or implementing actions which undermine the territorial integrity, sovereignty and independence of Ukraine or who benefit from these actions” in the form of travel bans and asset freezes, had been applied to more than 1,700 individuals and 400 entities (e.g., banks, firms in the defense sector and aviation), with €21.5 billion of assets frozen in the EU as of February 2024 (European Council, 2024).⁷ The impact of the travel ban on tourism and the effect of asset freezes on the CEEE are likely to have been marginal. The extent, however, differs across countries. In Bulgaria, for

⁷ For the latest list of individuals and entities subject to sanctions, see EUR-Lex (2024).

Fig. 1.2: New sanctions on Russia (number of sanctions)

Data: [Bown \(2023\)](#), authors' calculations

Note: Trade sanctions include restrictions on exports, imports, and trade support.



example, Russian visitors accounted for around 10 percent of tourist arrivals before the war ([IMF, 2022a](#)).

1.3.2 Energy Trade

Europe’s heavy reliance on imports of Russian energy dates back to the post-WW2 period. Following the construction of the Druzhba (Friendship) pipeline, first oil reached Czechoslovakia, Hungary, and Poland in the early-1960s. Over the next two decades, the Bratstvo (Brotherhood) and the Yamal pipelines gave rise to the steady flow of Russian natural gas. As a result, Europe’s pre-war trade ties with Russia had been dominated by energy-related products. In 2021, for example, mineral fuels constituted 62 percent of the EU’s imports from Russia ([European Commission, 2023](#)).

Against this backdrop, energy-related sanctions were not imposed by the EU in the immediate aftermath of the Russian invasion of Ukraine.⁸ Nonetheless, in early-March 2022, the EU announced ambitious plans to reduce its reliance on imports of Russian energy, as the Versailles Declaration aimed to – among others –

⁸ In contrast, the U.S. announced a ban on imports of Russian coal, oil, and LNG on 8 March 2022.

“phase out our dependency on Russian gas, oil and coal imports as soon as possible” (European Commission, 2022). Specifically, the plans included an expedited reduction in reliance on fossil fuels and an increasing role for renewables, the diversification of supplies and routes, the development of a hydrogen market, the improvement of the interconnection of European gas and electricity networks, as well as the improvement of energy efficiency.

The adoption of the Versailles Declaration was followed by the introduction of a series of sanctions, albeit to a different extent across fossil fuels. In addition to bans on imports of certain Russian fossil fuels, the sanctions also included restrictions on exports and investments targeting the Russian energy sector. For example, the EU’s 4th package, announced in March 2022, aimed to “prohibit new investments in the Russian energy sector, as well as a to introduce a comprehensive export restriction on equipment, technology and services for the energy industry” (Council of the EU, 2022g).

In the remainder of the section, we take stock of sanctions on coal, oil, and natural gas, as well as their impact on the CEEE. Notwithstanding the difficulties associated with the quantification of a no-sanction counterfactual scenario, energy-related sanctions did not seem to have a significant impact on the CEEE for several reasons. First, following a steady increase in 2021, energy prices skyrocketed after the Russian invasion of Ukraine but before the announcement of energy-related sanctions by the EU. Also, while energy price volatility remained elevated, the surge in prices proved temporary, with coal, gas, and oil prices returning to their pre-war level by the end of 2022. Second, there were no major supply disruptions, as (i) most countries succeeded in securing alternative routes or sources; (ii) countries having limited access to alternative energy sources and routes were exempted from sanctions, with the potential to even benefit from the discount on Russian energy in some cases; and (iii) there were no sanctions on natural gas, in which case the region had the largest dependence on Russian imports. Third, some sanctions, including those on exports of machinery and equipment or technology to Russia, would affect the capacity of the Russian energy sector only in the medium and long run, therefore there were no spillback effects on the CEEE in the short run.

1.3.2.1 Coal

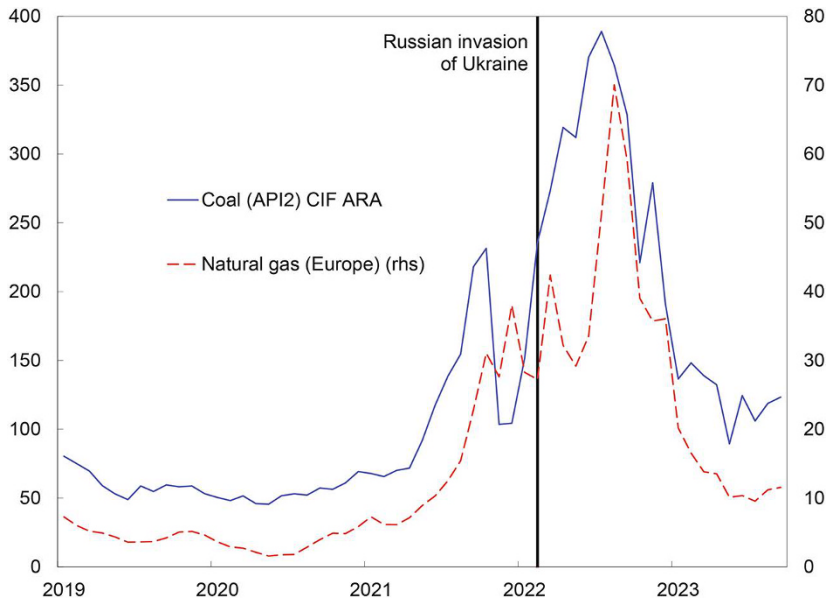
The Russian invasion of Ukraine was followed by an announcement by the EU in April 2022 on banning imports of Russian coal as of August 2022, as part of the 5th package of sanctions (Council of the EU, 2022a). Against this backdrop, coal prices surged in the first half of 2022 (Figure 1.3). Rising prices, however, cannot fully be attributed to sanctions.

Indeed, coal prices increased sharply already in the second half of 2021 on the back of a shift in demand from gas towards coal triggered by the increase in natural gas prices and the post-pandemic recovery in demand, especially from China (International Energy Agency, 2022). Following a temporary drop in late-2021, coal prices rose further in early-2022, driven by concerns around natural gas supply due

Fig. 1.3: Coal and natural gas prices (USD)

Data: [MarketWatch \(2023\)](#); [World Bank \(2023\)](#), authors' calculations

Note: Coal prices are based on Coal (API2) CIF ARA (ARGUS-McCloskey) Continuous Contract. API2 is the benchmark price for coal imported by Europe. Coal and natural gas prices are expressed in terms of USD per ton and mmbtu, respectively.



to tensions between Russia and Ukraine, and – reportedly – Covid-19-related staff shortages at the Russian railways used to transport coal ([Bloomberg, 2022c](#)). After the start of the war, coal prices skyrocketed, with API2 prices increasing by around 20 percent on the day of the invasion and doubling over the next few days, reaching a historic peak of USD458/t in early-March. In other words, the first wave of the surge in coal prices took place even before the announcement of sanctions on Russian coal.

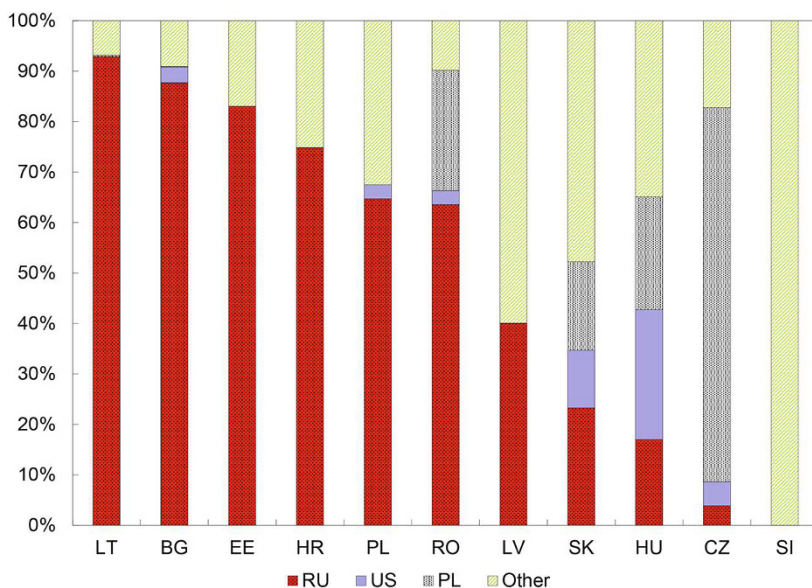
Following some normalization throughout March with the end of the heating season, coal prices increased sharply again until mid-2022. First, as the sanctions announced by the U.S. and the EU led to uncertainty around coal supplies, countries explored alternative sources of coal. In the first half of 2022, for example, coal imports at Antwerp-Rotterdam-Amsterdam (ARA) increased by a third, partly thanks to increased coal from Australia, Colombia, and the U.S. ([Bloomberg, 2022b](#)). Second, given that the EU ban was to become effective only in August 2022, demand for Russian coal increased with the aim of increasing inventories. Third, the surge in natural gas prices was again associated with an increase in demand for coal.

The impact on coal prices, however, differed across different types of coal and proved transitory. Specifically, the shift in demand from Russian coal to other coal resulted in a significant discount on Russian coal prices. For example, “Russian coal

at Baltic ports was sold at a 41 percent discount to ARA (Amsterdam Rotterdam Antwerp) prices in March, widening to a 67 percent discount in July” ([International Energy Agency, 2022](#)). Also, the surge in coal prices proved short-lived, with API2 prices decreasing to below USD200/t at the end of 2022 and below USD100/t in May 2023 (Figure 1.3). This could be related to several factors. For example, there was uncertainty around the execution of the ban by the EU. While sanctions were supposed to “prohibit EU operators from transferring coal and providing services – such as financing and insurance – to all shipments of such products originating in Russia”, an EC guidance issued in September 2022 indicated that the transfer of goods, including coal, to countries outside the EU “should be allowed to combat food and energy insecurity around the world” ([Bloomberg, 2022a](#)). Also, as natural gas prices normalized, the need to substitute coal for natural gas also declined.

Fig. 1.4: Imports of solid fossil fuels, 2021 (percentage of total)

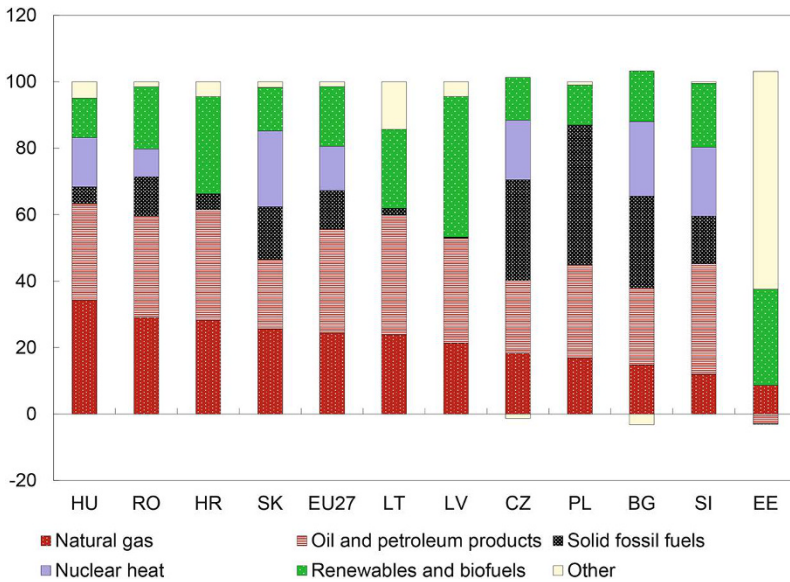
Data: [Eurostat \(2023f\)](#), authors’ calculations



The impact of developments in the coal market on the CEEE was relatively modest. Although the source of imports of solid fossil fuels had been predominantly Russia in most CEE countries before the war (Figure 1.4), solid fossil fuels typically constituted a relatively modest share in total energy supply (Figure 1.5). A notable exception is Poland where coal played an important role. Nonetheless, Poland announced a unilateral ban on imports of Russian coal in April 2022 (i.e., before the EU ban became effective). Reportedly, this was followed by some coal shortages, prompting Poland to suspend the ban on the use of lignite for heating ([Reuters, 2022b](#)). In

contrast, most CEE countries were less affected, given their low reliance on solid fossil fuels in total energy supply (e.g., Baltics, Croatia, Hungary, Romania).

Fig. 1.5: Total energy supply, 2021 (percentage of total)
 Data: Eurostat (2023a), authors' calculations



1.3.2.2 Oil

Shortly after the sanctions announced on Russian coal, the EU’s 6th package, unveiled in late-May 2022, included an eventual ban on imports of Russian petroleum products (European Council, 2022). Compared with solid fossil fuels, the reliance of the CEEE on oil and petroleum products was much higher. Specifically, oil and petroleum constituted around 20-30 percent of total energy supply in most CEE countries (Figure 1.5). Moreover, it was almost entirely imported from abroad (Figure 1.6), with a relatively large reliance on Russian imports, albeit to a varying extent across the CEEE (Figure 1.7). For example, Russian imports amounted to around 60-75 percent of total imports in Lithuania, Poland, and Slovakia, and less than 10 percent in Bulgaria, Croatia, and Slovenia (Figure 1.7). Given the large overall reliance of the region on Russian oil, sanctions had the potential to affect the CEEE through higher prices and supply disruptions. The final impact, however, seemed rather limited for several reasons.

At the time of the announcement of the EU’s 6th package, Brent oil price was USD126 up from USD101 on the day of the invasion (Figure 1.8). The surge in oil