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Article

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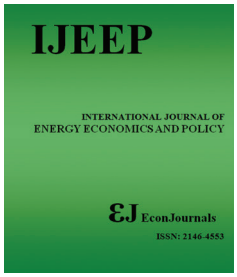

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The Economic Impact of Russia's Ukraine Conflict on the EU Fuel Markets

Stavros Kalogiannidis[1]*, Fotios Chatzitheodoridis[2], Dimitrios Kalfas[3], Stamatis Kontsas[1], Ermelinda Toska[2]

[1]Department of Business Administration, Faculty of Economic Sciences, University of Western Macedonia, Koila, 50100 Kozani, Greece, [2]Department of Regional and Cross Border Development, Faculty of Economic Sciences, University of Western Macedonia, Koila, 50100 Kozani, Greece, [3]Department of Agriculture, Faculty of Agricultural Sciences, University of Western Macedonia, Terma Kondopoulou, 53100 Florina, Greece. *Email: aff00056@uowm.gr

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ABSTRACT

The recent Russian invasion of Ukraine has had significant effects on the global economy. The purpose of study is to display how Russia's aggression and the international sanctions imposed have affected the European economy, especially the petrol and gas market. Albeit the goal of sanctions was to press and hurt Russia, seems to harm in equal to the European economies mainly through immediate effects on the supply of energy. If the war in Ukraine lasts, estimated that the energy prices will stay high, and the European governments will feel uncertain about the available quantity and adequacy of energy resources.

Keywords: Ukraine, Russia, War, Economic Implications, Fuel Market
JEL Classifications: F51, P28, P18, H56

1. INTRODUCTION

In February 2022, when the world was just starting to recover from the COVID-19 epidemic, Russia attacked Ukraine (World Food Programme, 2022). The invasion heightened regional tensions between the West and Russia and dampened global economic prospects (Van Metre et al., 2015). Moreover, the ex-ante comprehension and determination of battle's implications on the global supply chain are impossible. However, the United States (US) and the European Union (EU) have underlined the possibility of increased global instability due to Russian aggression. In this worrying context, the diplomatic reactions have included imposing sanctions on Russia, a fact that had never been enforced before. Specifically, Germany has decided on spending an extra $110 billion on the military and has strengthened Ukraine for the first time by the mission of weapons. On the other side, Denmark and Sweden have maintained a neutral stance on the ongoing conflict, albeit they are both focused on increasing their military expenditure. However, Switzerland has withdrawn its neutrality for the first time and has joined the sanctions drive, whereas the US and the United Kingdom (UK) have stopped importing oil and gas from Russia (FAO 2022).

Among the countries that have reacted against Russia's invasion of Ukraine, the EU has declared intentions to decrease imports of Russian gas by two-thirds in a single year, to achieve independence from Russian fossil fuels long before 2030, beginning with gas. This is one of the most critical actions that the EU has taken (Blanchard and Pisani-Ferry, 2022). The EU will increase biomethane and renewable hydrogen production and imports, as well as increase LNG and pipeline imports from countries other than Russia. It also wants to speed up projects to improve

energy efficiency, boosts renewable energy and electrification, and fix infrastructure bottlenecks so that fossil fuel use in homes, buildings, industry, and the power grid can drop more quickly (Benton et al., 2022). If all of the Commission's "Fit for 55" recommendations were put into place by 2030, annual fossil gas use would have dropped by 30%, or 100 billion cubic meters (bcm) (OECD 2022). With the new "REPowerEU" measures, it could stop using at least 155 billion cubic meters of fossil gas, which is about the same amount imported from Russia in 2021. Over two-thirds of that drop could happen in less than a year, ending the EU's overreliance on a single supplier (Ibarra, 2022). Specifically, during the last 5 years, an average of 57-60% of EU energy has been derived from importing fossil fuels like gas, oil, and coal. Even though renewable energy production has significantly increased in the EU, coal, lignite, and gas production has decreased, thus making the EU dependent on imports. In 2021, Russia supplied about 45% of all the gas the EU imported (Blanchard and Pisani-Ferry, 2022; United Nations, 2022b). In this context, the specific article examines how the war in Ukraine has jeopardized the global economy with prolonged repercussions. Therefore, it is of the utmost importance to comprehend how the invasion impacted business and pricing all over the globe, in addition to what this indicates for the future.

As the COVID-19 pandemic remains a global health emergency since countries are experiencing a spike with the cases on the rise. Concretely, on March 27, 2022, another 0.5 million cases were added, bringing the total number of cases in progress to 60 million. After COVID 19-related shutdowns during the last 2 years, the economy has been recovering quickly, which has put pressure on supply networks and caused prices to rise. However, the problem is further exacerbated due to the food and nutrition security disturbance through shocks to economic and social systems (Jackson, 2021; Carducci, et al. 2021). Likewise, in their works, Lang and McKee (2022), and McKee and Murphy (2022) have formulated the same approach. On the other hand, Osendarp et al. (2022) assert the possibility of large price increases and disruptions in global food, fertilizer, and fuel systems leading to the rise of millions of undernourished people in low and middle-income countries. Therefore, it is a global emergency for the governments, donors, and other stakeholders to take action to prevent acute food insecurity, and to protect vulnerable populations and especially children from the devastating effects of malnutrition (Osendarp et al., 2022; Keats, et al. 2021). In this framework, the Western countries, the USA, Canada, the UK, and Europe unavoidably will face serious economic problems (Mbah and Wasum, 2022). Furthermore, taking into account that Ukraine and Russia are important food suppliers, as well as Russia is a big exporter of oil and gas, and the fact that the exports from Ukraine have already been stopped, it is expected that the conflict between the two countries is going to be severe (Aurora, 2022; FAO, 2022).

The objective of the paper is to focus on the European economic implications on fuel (petrol and gas) due to Russia's invasion of Ukraine. For that purpose, the study mentioned the effects on global fuel markets, and consequently on the European economy. The study followed the methodology of secondary research based on secondary data from journal articles, documented news in the media, government policy documents, and organizations' reports related to Russia's invasion of Ukraine. The literature review's goal is to contribute to the knowledge concerning the economic implications of Russia's invasion of Ukraine on energy safety. The findings could be utilized for future studies in the same investigation area.

2. LITERATURE REVIEW

According to Koval et al. (2022), comprehension of the academic concerns related to the major events of modern life, especially concerning the development of those, is vital. The increasing internationalization of knowledge, mainly through papers in prestigious scientific journals, contributes to this as a source of the soft power of the states involved, especially in the context of a conflict relevant to the political and economic interests of powerful as well as weak states. In this section, the study attempts to briefly describe the causes of Russia's invasion of Ukraine as well as the impacts of this aggression on the global economy. There is an emphasis on the description of trends in oil markets across Europe and the way that the countries globally are relied on Russian oil and gas. Focusing on securing an affordable energy supply, there is a summary of sanctions that the majority of the countries have imposed as an international response to Russia's aggression.

2.1. Causes of Russia's invasion of Ukraine in 2022

Russia's invasion of Ukraine has been explained in a variety of ways, outside the traditional explanations. There are groups of versions, those who are sympathetic to Russia's position and from the other side, the pro-Western explanation. The following section is a version of a synthesis of the events that led up to the invasion.

It is generally stated that the crisis in Ukraine is not contemporary, as it practically began with the dissolution of the former Soviet Union, exists to the present day, and is related to a range of issues, such as political, nationalist, and religious (Malyarenko and Wolff, 2018; Harris, 2020; Charap and Darden, 2014; Bond, 2015; Stanisław, 2021; Braithwaite, 2022). Likewise, Barrington (2022) in his study argues that there are also issues of language, ethnicity, regional divides, and other demographic factors on important political attitudes in Ukraine. From that point of view, Bauer (2022) focuses on a historical retrospective that essentially starts from the ninth century and the time of the Varangians (Vikings) who pre-settled in the Ukrainian region to reach the current escalation in Ukraine. On the other side, Kanet (2022) focuses on the Russian policy, especially for the regions that are very close to powerful Russia. Also, Mudrov (2022) refers to the attitude of Belarus at the controversial moment and specifically at the backsliding of the country's strategy towards neighboring Ukraine, statements that are based on his previous works related to the wider region (Mudrov, 2019; 2020; 2021; Mudrov and Zakharov, 2022).

The pro-Russian argument has explained the invasion of Ukraine as a reaction to the control exerted by the Western powers, combined with the mistreatment that the inhabitants in Russian-controlled rebel territory have suffered by the Ukrainian government, and enhanced by the committed genocide against its people by utilizing its armed forces (Ibarra, 2022). The government of Russia further

has alleged that the goal of Ukraine to become a member of the military alliance NATO constituted an existential danger to the safety of Russia's national security. However, such a decision of Ukraine would push NATO eastward and closer to Russia's border, which would constitute a danger to Russia's very existence. For that reason, the government of Russia has declared that if such a wish were to come to fruition, it would present Russia with an existential danger since it would put NATO closer to Russia's borders. Moreover, this would make it simpler for nations from the West to enter Russia, which would put the safety of the country's citizens in peril. Therefore, the government of Russia has asserted that these two problems compelled it to initiate a military involvement in the crisis that is taking place in Ukraine.

In addition, Russia has claimed that there is a broad variety of possible solutions to the crisis, including military action and diplomatic dialogue (AGRA, 2022; Blanchard and Pisani-Ferry, 2022). However, when Ukraine refused to talk to Russia before the invasion, Russia declared that the least dangerous option was chosen. Russia's strategic choice included the invasion of Ukraine to overthrow the pro-Western government in Kyiv, install a new government, and sign a peace treaty with the new Ukrainian government. Hence, Russia needed to take these steps to accomplish its goals of establishing a new government and coming to an agreement with Ukraine. As a result of the peace deal, there will be limitations placed on the nation's ability to join either NATO or the European Union (Ozili, 2022; United Nations, 2022b; Van Metre et al., 2015).

From a different approach, according to several news outlets in the West, Russia has assumed the aspirations of Ukraine to become a democratic nation free of Russian control and to seek partnership with the West in matters of politics, security, and commerce, including the possibility of joining NATO and the European Union, as a threat to Russia's national security (Ozili, 2022). These aspirations include the possibility of joining NATO and the European Union. Therefore, in the opinion of Western-leaning media, Russia is against Ukraine's attempts to embrace democracy and engagement with the West. These efforts are being opposed by Ukraine. This is because Russia's national security may be put in jeopardy as a result of Ukraine's western links to the EU and NATO (Ozili, 2022; Aurora, 2022; Schwarzenberg, 2022; UNCTAD, 2020).

Nevertheless, some opinions argue that the international media has created the timeline of the escalation leading to beautifying the results (Bigg, 2022; Aloisi and Daniel, 2022). Also, the authors Green et al. (2022) have examined in detail the legal justifications for the use of military force that were put forward by Russia and emphasize substance and credibility absence in the context of "jus ad Bellum" as it is applied nowadays. In particular, the purpose of the "special military operation" was presented as the "de-militarization and de-Nazification" of Ukraine, nevertheless, it turned into a bloody conflict due to the resistance (Makowski, 2022). In the same path, Mälksoo (2022) has examined the irreconcilable Ukrainian rationale of sovereign rights, on the one hand, and Russia's imperialist views, on the other, that are at odds and have become the basis of the existing conflict. Also, the academic interest is focused on the pre-involvement era (Alim 2020; Götz, 2016), as well as the Crimean crisis (Biersack and O'Lear, 2014; Blockmans, 2015).

Concerning Russia's strategic approach in the battle of Donbas, Potočňák and Mares (2022) in their article underline that it was based on the "Trojan Horse strategy," which has not previously been implemented. Also, Götz and Staun (2022) deal with Russia's strategy, but from a different perspective. Moreover, Charalambides (2022) focuses on the wars in Crimea, Georgia, and Syria as case studies to conclude that Russia is creating strategic arcs and making "pincer movements" to restructure the regional and global system to its advantage.

The consequences of the war are about to be depicted with the upcoming demographic crisis (Matsuura, 2022), an argument which is based on past studies (Ghobarah et al., 2004; Plümper and Neumayer, 2006). The majority of refugees are women and children and are headed mainly to the neighboring countries of Poland, Romania, Moldova, Hungary, and Slovakia (Purvis, 2022). In this critical situation, the EU public health systems should be adapted to respond to the increased waves of refugees (Zenner et al., 2022; Jankowski and Gujski, 2022). Finally, there are many papers related to the situation in Ukraine that could be mentioned such as (Garner, 2022; Saunders, 2022).

Furthermore, in their study Kruszewska and Lavrenova (2022) focuses on the problems of education as well as the challenges of internet platforms for the organization of distance education in Ukraine during the war. Also, Kurapov et al. (2022) in their study have underlined the effects of the war on the mental and emotional world of students and workers at Ukrainian universities. Also, the Russian doctors, nurses, and paramedics (Russian doctors nurses paramedics 2022) have expressed their concerns related to illegal situations (Iacobucci, 2022).

Finally, Grossi and Vakulenko (Grossi and Vakulenko, 2022) in their study relied on an accounting analysis based on humanitarian aid, military as well as other types of support and created a model of immediate reactions. The model allows the visualization of the global economic and financial situation and results on how governments and international institutions could better deal with future crises. From the other point of view, Mardones (2022) attempts a short-term estimate of economic impacts in 189 states. Whereas, Flockhart and Korosteleva (2022) deal with the transformation of the world order that has started during the last 10 years. Therefore, the Russian war in Ukraine, in all its dimensions, has exacerbated a global cost-of-living crisis not seen in at least a generation, jeopardizing lives, livelihoods, and our aspirations for a better world shortly (United Nations, 2022a).

3. METHODOLOGY

The research method used in the study was fundamental research, often known as basic research or pure research. Fundamental research is motivated by curiosity and the desire to advance knowledge in a certain research area, and it does not often produce

results with immediate practical implications. We chose this form of research because it adds to the academic body of knowledge in the research topic. Fundamental research tends to generalize about the phenomena, and its philosophy might be described as "collecting information for the sake of knowing." Basic research aims to address why, what, and how questions, and it tends to contribute to the reservoir of fundamental knowledge in the study domain.

Before the invasion of Ukraine, the cost of energy had been increasing due to several causes, such as the COVID-19 pandemic, energy supply limits, and escalating tensions between Russia and Ukraine. The price of a barrel of oil ranged between $80 and $95 before the invasion, and rose far past $100, as a direct result of the invasion (AGRA, 2022; Ozili, 2022). Because Russia is the second-largest oil producer in the world sending the bulk of its crude oil to European refineries, the invasion may make it more difficult for European oil marketers and companies to get Russian energy supplies. In addition, Russia is the largest natural gas supplier to Europe, supplying about half of the continent's total supply. Due to Russia's large share of oil exports, the Russian invasion of Ukraine is predicted to disrupt the energy supply and result in a long-term increase in energy prices (Peixoto et al., 2022; Ozili, 2022). In case Russia stifles energy exports to Europe and the rest of the globe in retaliation for the US, the consequences might be disastrous.

As a consequence of Russia's retaliatory curbs on energy exports, the global energy supply will be severely disrupted, resulting in a jump in energy prices. Oil prices are likely to rise over $140 per barrel as a result of the war between Russia and Ukraine, decreasing global GDP predictions and bringing recession in some European and non-European nations. Gas prices for residential users are expected to climb as a result of the prospect of a worldwide energy supply disruption. Even though the US can unleash its energy reserves to aid with global energy shortages, growing energy demand will take a long time to meet due to continuing discussions over energy trade and rising energy costs throughout the globe (Pirani, 2018).

According to Aurora (2022), Russia may be obliged to impose an oil export cap as retaliation for sanctions implemented as a result of the West's participation in Russia's regional dominance struggle. This would be in response to the penalties it has been subjected to. As a consequence, there's a danger that energy costs may rise, restricting the economy's expansion. This is because, in addition to manufacturing goods and services, businesses will have to spend more money on importing raw materials, resulting in higher overall costs. As a consequence, input and output prices will increase, and some people may no longer be able to buy expensive goods and services. This will result in a reduction in the number of goods and services purchased by consumers, as well as a reduction in product and service supply, resulting in a reduction in economic output. Oil and gas prices will increase, varying the ratio of money that households spend on consumption. This means that after taxes, households will have less money to spend, resulting in lower consumer expenditure (OECD, 2022; World Food Programme, 2022).

Rising energy prices and inflationary pressures are already having a significant effect on European economies, with many forecasting a halt in GDP growth as a result. The war and its impact on energy supplies are predicted to increase and accelerate inflation, as well as a decrease in GDP in European countries, until the end of 2022. They used simulations to see how our "expanded" and "extended" scenarios might affect the possibility of gas supply shortages throughout Europe (FAO, 2022; Blanchard and Pisani-Ferry, 2022; Ashraf et al., 2022). These simulations looked at what would happen if gas supplies were turned off in several nations, taking into consideration the present gas infrastructure's constraints.

In each of these scenarios, various technical obstacles, such as LNG regasification in Europe, throughput in European pipelines, and others, are envisaged. In any of these two circumstances, there is a chance that gas will be rationed. Russian gas imports might be cut in half, according to some estimates. During the coming year, there will most likely be supply shortages in eighteen different countries (compared to their energy consumption). The impacts would disproportionately affect Central and South-Eastern Europe. Because South-western Europe's massive LNG imports are expected to compensate for any potential Russian gas danger, the region will be largely spared from the effects of a power outage. Twenty-two nations are projected to face supply constraints as a result of a 100% reduction in Russian gas supplies.

Finally, energy price increases over time, not only for natural gas but also for oil, would affect businesses whose material inputs are affected by energy price changes. The price of petroleum, for example, has a significant impact on the cost of materials used in the chemical industry. In a similar line, industrial and high-tech businesses depend on energy-intensive material inputs. Because of the high cost of energy in these sectors, price inflation will almost probably occur farther down the value chain, placing downward pressure on margins (Rivlin et al., 2022; Ashraf et al., 2022).

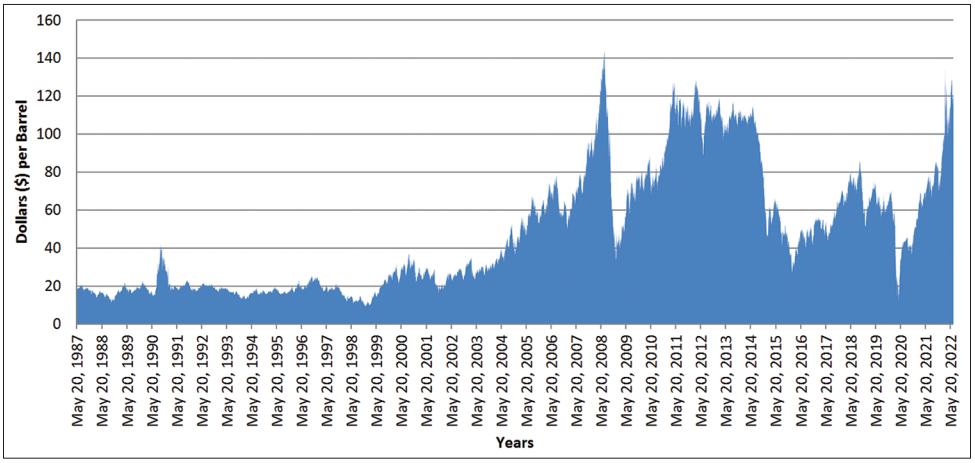
3.1. Trends in Oil Markets across Europe

Russian President Vladimir Putin has ordered Russian forces to invade Ukraine after weeks of tensions. Brent futures, which had been heading upward before the crisis, peaked at $105/b on February 24 before retreating and finished the day at $99/b as all signs pointed to Russia's crude oil and natural gas sales being exempt from sanctions. However, when financial institutions started to refuse to finance Russia-related operations such as obtaining letters of credit or clearing payments, and some firms were unwilling to acquire Russian petroleum, Brent surged over $110 for the first time since 2014 (Figure 1).

Brent started at the beginning of the year 2022 with less than $80 per barrel to fluctuate in early July close to $120 per barrel (Figure 2).

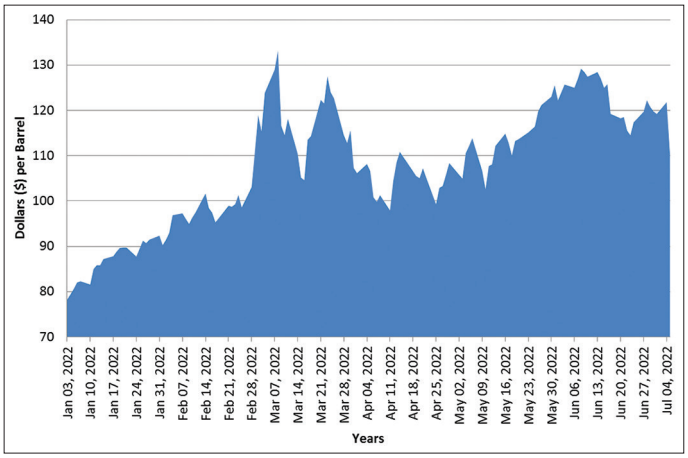
In the past few months, oil prices have gone up because the market fundamentals have deteriorated. For example, the rebound in oil demand was a pleasant surprise, OPEC+ returned fewer barrels than they were supposed to under their current deal, and OECD (2022) crude and products stockpiles are still going down (Figure 3). With the geopolitical situation getting

Figure 1: Daily Brent price Source, from May 20, 1987 to July 05, 2022.



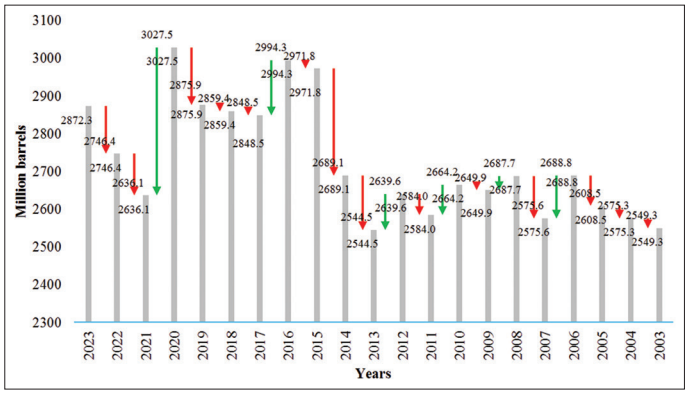
Source: U.S. Energy Information Administration (https://www.eia.gov/dnav/pet/hist/RBRTED.htm)

Figure 2: Daily Brent price Source, from January 03, 2022 to July 05, 2022.



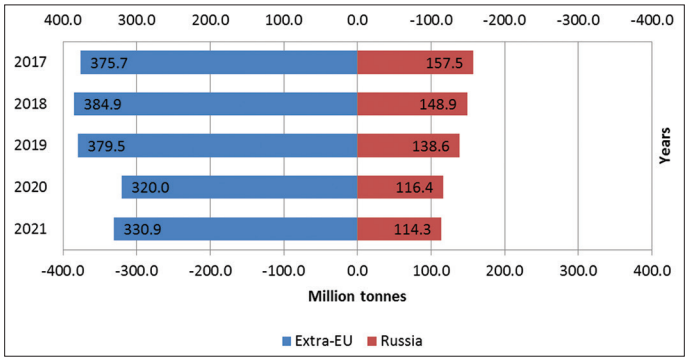
Source: U.S. Energy Information Administration (https://www.eia.gov/dnav/pet/hist/RBRTED.htm)

Figure 3: OECD end of period commercial crude oil and other liquids inventory annual.



Source: U.S. Energy Information Administration (https://www.eia.gov/dnav/pet/hist/RBRTED.htm)

Figure 4: Europe imports of petroleum oils, 2017 - 2021 (Million tonnes) by origin



Source: Eurostat database (Comext) and Eurostat estimates (Eurostat - Statistics Explained, 2022)

worse and the chance of supply interruptions going up, oil prices are increasing because people are worried about the amount of spare production capacity (AGRA, 2022; Blanchard and Pisani-Ferry, 2022). The Russia-Ukraine conflict adds to a wide range of geopolitical risks related to the oil market and spillovers from other energy markets, especially the gas market, where high gas prices have made oil demand accelerate because people are switching from gas to oil.

Russia is also Europe largest fuel supplier, as it exports approximately 600.000 b/d of diesel, accounting for more than 40% of the continent's total diesel imports (Figure 4). The European diesel market is already tightening, as seen by the price for a relevant date will be that day's specified price (ICE) gasoil futures' significant backwardation, high diesel margins, and a decline in European middle distillate stocks (Ibarra, 2022; United Nations, 2022b). This is due to a combination of growing demand and restricted supply as economies open up. Higher expenses, particularly the cost of hydrogen, which is required for desulfurization, have prevented refineries from ramping up output rapidly enough. This was true even before the situation between Russia and Ukraine deteriorated. Any reduction in Russian diesel imports would exacerbate Europe's diesel imbalances. Some European clients may be unwilling to purchase Russian products, but unlike crude, finding a substitute for Russian diesel may be far more difficult. Europe, for example, may not get any assistance from Asia, where gasoil balances are equally tight due

to China's reduced exports and India's increased usage of diesel (Schwarzenberg, 2022).

Furthermore, there are a few problems with making more diesel, like getting Russian crude, which is a big part of what European refineries eat, and higher refining costs, especially since gas prices have gone up so much, which makes it more expensive to remove sulfur from goods. This could cause European refineries to buy more light sweet crude, which would help these crudes, especially West African (WAF) crudes. Russia is also a major source of feedstocks for refineries, like vacuum gasoil (VGO) and fuel oil, which may become harder to get. BP put off loading any fuel oil from the Black Sea until late February 2022 (United Nations, 2022b).

3.2. Impact on the Global Economy

The global economic system has not been substantially harmed as a result of Russia's invasion of Ukraine. Foreign banks with significant operations in Russia are the only financial sectors that have suffered significant harm as a result of the invasion. Overall, the financial sector has remained unscathed, although many worldwide financial institutions have been damaged as a result of numerous states' measures to impose financial restrictions on Russian firms and wealthy individuals. However, if pro-Russian groups respond to Western financial sanctions by launching a large cyber-attack on the global payment system, the war might have an indirect influence on the global banking system. Every day, the potential global damages from a cyber-attack on the global payment system might be as high as $1.8 billion in the United States of America (UNCTAD, 2020).

Even before the conflict, the oil and gas industry was already in a state of distress. Already in peril were the energy markets, particularly those in Europe. Especially in Europe, before the invasion, the use of energy on a global scale had already begun to exceed the supply. As a result of the recovery of demand that occurred following the COVID-19 pandemic, it was expected that the supply-demand imbalance would climb to 2% in 2022 (Blanchard and Pisani-Ferry, 2022; Kalb, 2015; OECD, 2022). This may not seem like much, but it translates to approximately two million barrels of oil per day, which is almost comparable to the volume of Middle East and North Africa supplies that were cut off for more than 5 years as a direct consequence of the Arab Spring (Ashraf et al., 2022).

The supply crunch that the world is experiencing right now is unprecedented. And there is no way to rectify it on time (AGRA, 2022). Even before Russia invaded Ukraine, analysts expected that the supply-demand gap in the energy market would not be filled until the year 2030. The whole world was ready for even more intense competition in the energy market, which would drive up the prices. There are a variety of reasons why there are not any readily available practical solutions to bridge the gap. While coal may satisfy certain energy demands, it jeopardizes the industry's and the world's commitment to decarbonization. While coal may be utilized to supply part of the industry's and the world's energy demands, it would imperil the industry's and the world's commitment to decarbonization. These are just a handful of the difficulties confronting the energy industry right now. Other considerations include the time required to expand the capacity of alternative energy sources such as renewable, nuclear energy, and natural gas (especially liquefied natural gas) (Peixoto et al., 2022; Ashraf et al., 2022).

The value of financial markets throughout the globe declined after Russia invaded Ukraine, which caused the crisis in Ukraine. When news spread that Russia was invading Ukraine, investors quickly sought refuge elsewhere (Astrov et al., 2022; Benton et al., 2022). During the period of the invasion, the price at which equities were traded on major stock exchanges reached its lowest point in time. Table 1 displays the shifts that occurred in various economic indices during February, which was the month that Russia invaded Ukraine, in comparison to January, which was the month before. The actions taken by the central bank in response to Russia's invasion of Ukraine are also included (Ozili, 2022).

The growth of the global economy could slow down by up to 0.7%age points due to the crisis and sanctions. When the effects on aggregate demand, like less spending and investment because of more uncertainty and rising consumer prices, are taken into account, these effects could be bigger almost twice (a loss of GDP growth of 1.3%age points) (food and energy). This would decline global GDP growth to between 3.1% and 3.7% in 2022, which is less than the IMF's original prediction of 4.4% (IMF, 2022).

However, the latest economic estimate from the Commission says that economic activity in the euro area and the EU will grow by 2.7% and 2.3%, respectively, in 2022 and 2023. Inflation in the EU will peak at 6.8% in 2022 and then drop to 3.2% in 2023 (Aurora, 2022). Still, the Commission says that "the conflict has changed the picture by causing more disruptions in global supply, putting more pressure on commodity prices, and making things less clear." The EU is the first advanced economy to be affected, as it is close to Russia and Ukraine, depends heavily on imported fossil fuels,

Table 1: Country-specific economic consequences after the invasion

Selected countries	Some economic indicators
Netherlands	In February 2022, business confidence dropped to 8.5 points from 9.0 points in January 2022
Denmark	In February 2022, the manufacturing confidence index declined to -2 points from -1 points in January 2022
France	From 2.9 percent in January 2022, annual inflation is anticipated to grow to 3.6 percent in February 2022
Ukraine	Due to the Ukraine-Russian war, the PFTS stock market remained closed
Italy	In February 2022, the manufacturing confidence index fell to 113.4 points from 113.7 points in January
European Union	The consumer confidence index in the EU decreased to -10.20 points in February from -10 points in January of 2022
Slovakia	In February 2022, the Consumer Confidence Index decreased by 0.9 points to -22.3 from 21.4 in January
Iceland	In February 2022, Iceland's annual inflation rate increased to 6.2 percent from 5.7 percent in January

Source: (OECD 2022)

especially from Russia, and is very integrated into global value chains (UNCTAD, 2020; United Nations, 2022b).

Moreover, OECD (2022) remarks that in the year leading up to March 2022, the average cost of energy for households in the EU increased by 41%, while the cost of fuel for personal transportation decreased by 38%. Also, EU household budget surveys show that there are "significant differences" in how much energy people spend in different countries and their own homes (FAO, 2022). Even though everyone's living costs are going up, some families spend a bigger portion of their budgets on energy than others. This shock may make existing differences worse, as shown in Figure 5. Higher home and transportation energy prices also make the gap between urban and rural areas worse because "households in rural areas and small towns spend 10–80% more of their overall budget on home energy and transportation costs than their urban counterparts" and have less money (Blake and Bulman, 2022; Ibarra, 2022; OECD, 2022).

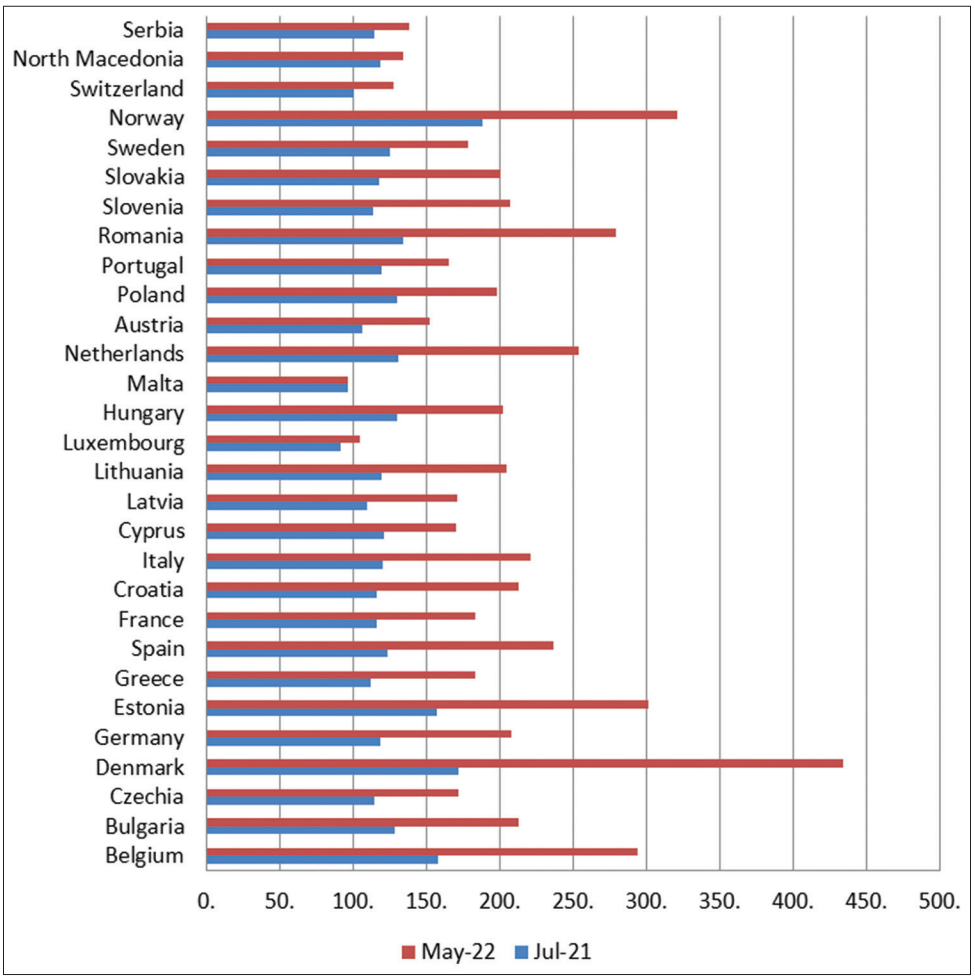
Therefore, in case of supply issues due to Russia's invasion of Ukraine, the consequences will affect mainly Europe, and to a lesser degree the rest of the globe. Goods prices might hit new all-time highs. A reduction in Russian oil and (particularly) gas shipments to Europe would almost definitely need government intervention and might result in energy rationing in all energy-intensive businesses. In this context, countries have begun to prepare for potential shortages. The EU has devised a strategy to wean itself from Russian oil and gas. By the end of 2022, Germany intends to ban importing oil from Russia. Embargoes have been imposed by both the United Kingdom and the US. Furthermore, the world's seaborne markets are now unwilling to acquire Russian commodities. As a result, 70% of Russia's oil exports by sea were stranded at the beginning of March due to a lack of customers.

Eventually, the invasion of Ukraine by Russia has shown how volatile the energy market is. Moreover, getting less oil and gas from Russia might be a crucial step toward ensuring that everyone has adequate energy. However, reducing dependency will be difficult. Countries will need to develop new energy sources, in parallel with technical, financial, and geopolitical expertise, as well as investment and cooperation. Also, countries will need to collaborate with oil and gas firms to prepare the future energy grid, as well as how consumers and businesses will utilize it (UNCTAD, 2020; Ashraf et al., 2022).

3.3. Global Reliance on Oil and Gas

According to Astrov et al. (2022), Russia's invasion of Ukraine has increased the concerns about the disruption of Russia's supply. Also, the recent and unplanned disruption of supplies in Libya is just adding to the existing concerns. In this situation, the ongoing depletion of already held stockpiles also plays a significant role. These factors in combination with the latest drop

Figure 5: Domestic producer prices – energy



Source: Eurostat (https://ec.europa.eu/eurostat/web/energy)

of 260.000 boe/day in predicted oil demand in 2022 from China, will keep oil prices high and markets tight (Ashraf et al., 2022).

Moreover, one of the reasons that lead us to believe that oil companies will not be able to swiftly boost their production shortly is that they have underinvested in both existing and new locations. During the pandemic, fewer investments were created in newly established industrial facilities. This is shown by the fact that OPEC+'s production levels have dropped below their quota by up to 1 mmb/d. Also, it is especially noticeable among manufacturers in the US, who are thought to be responsible for around half of the supply imbalance. This is due to some variables, such as the recent focus of oil companies on satisfying investors' need for consistent earnings rather than boosting production (that expectation has not changed even with the current market dislocation). A similarly complicated tale has emerged in the gas industry, most notably for liquefied natural gas (LNG) importers in Europe and the Asia-Pacific area (Pirani, 2018; Zhang et al., 2022).

To satisfy the needs of power producers and other industries, the demand for natural gas, which is frequently seen as a more ecologically friendly and cost-effective alternative to hydrocarbon-based energy, has been continuously increasing. However, the demand growth in Europe has been muted due to the COVID-19 epidemic, with the quantity of gas stored dropping to levels not seen in 10 years, as it is depicted in Figure 6.

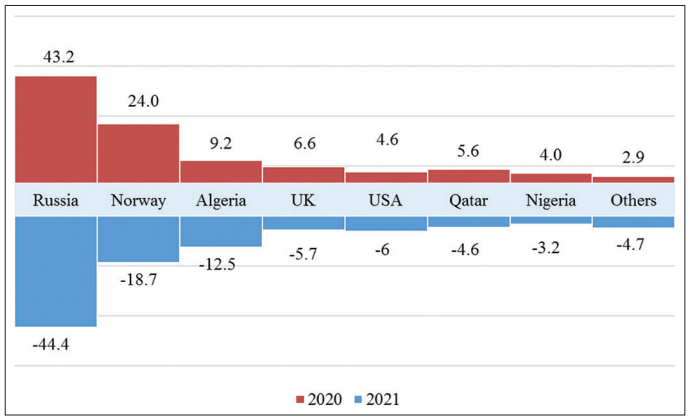
On the contrary, LNG demand in Asia has continued to rise, with an anticipated demand increase of 10% in 2022 (Figure 7). Regional supply shortages were more widespread as a consequence of the tight market, and competition for LNG to cover supply gaps got even fiercer (FAO, 2022; Ashraf et al., 2022).

Even before the invasion, it was anticipated that all of these problems would cause supply limitations that would last until 2022. As a consequence of this, it was anticipated that the upward pressure on energy prices would continue (for instance, TTF 30 dollars/MMbtu in late 2021). Finally, Accenture price forecasts are based on elasticity analysis considering possible worldwide supply/demand gaps from, for example, a 25% or 50% European gas supply interruption as indicated under the chosen scenarios (Ashraf et al., 2022).

3.4. The Reliance on Russian Oil and Gas

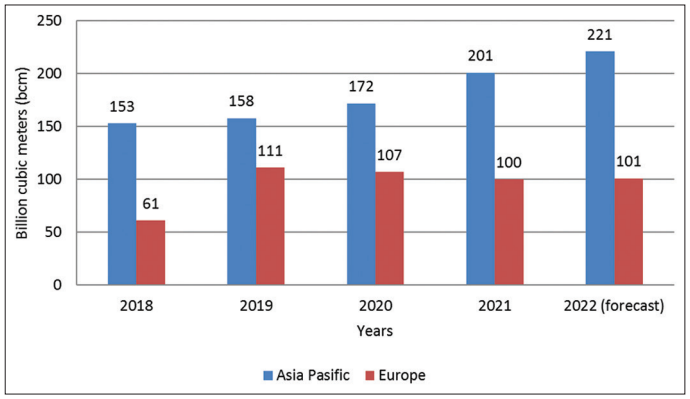
Russia accounts for approximately one-sixth of worldwide oil and gas output, as the world's third-largest oil producer (and second-largest crude oil exporter) and second-largest natural gas producer (and largest exporter). Russia's influence is considered obvious particularly in Europe, taking into account that it provides more than 20% of the continent's oil and 30% of its natural gas. Specifically, several European countries, including Germany, Austria, Finland, Poland, Slovakia, and Hungary, import 50-100% of their oil and gas from Russia (Astrov et al. 2022; OECD, 2022; Ashraf et al., 2022). Therefore, in the scenery of Russia's invasion of Ukraine, Europe's dependency on Russian oil and gas supply has turned into a threat to its existence.

Figure 6: Extra-EU imports of natural gas, net mass shares (%) of main trading partners, 2020 and 2021.



Source: Eurostat database (Comext) and Eurostat estimates (Eurostat - Statistics Explained, 2022)

Figure 7: LNG net imports for Asia and Europe (Ashraf et al., 2022)



Provided that import laws for oil and gas have yet to be established, there are some possible hazards. Specifically, Russia has already begun the process of cutting off gas supplies to Poland and Bulgaria (Schwarzenberg, 2022). Also, Russian pipelines to the EU might be shut off if one nation moves unilaterally to restrict gas imports or if the infrastructure is destroyed. The second scenario is frightening because Ukraine's pipelines might transport more than one-third of Russian commodities to Europe. If Europe ran out of gas for an extended time, it would be difficult to locate other energy sources. LNG imports might be a long-term option (Blanchard and Pisani-Ferry, 2022; OECD, 2022). However, Europe has extremely little liquefaction and terminal capacity. According to estimates, they will not be expanded until at least the end of 2023. Even with increased capacity, the supply gap that may occur if there are major issues with Russian supplies can only be partially covered. Even if gas is delivered into Europe, it will be unable to travel freely across nations due to a lack of interconnectors.

Furthermore, some refineries, mostly in Germany and Central and Eastern Europe, import crude oil from Russia. Historically, refinery capacity has been greater than demand (Ashraf et al., 2022). As a result, facilities have not been used to their maximum capacity, and refiner revenues have been reduced. Long-term high oil costs and inflation may continue to cause consumers to utilize less gasoline. If Russian crude oil supplies are shut off, the margin impact might

be even larger since some refiners cannot afford to replace them (Astrov et al. 2022; Ibarra, 2022). Finally, predictions of 83 million barrels per day (mmb/d) in oil product demand before the invasion might be reduced to 79 mmb/d or lower this year. Demand, on the other hand, is expected to rise in the coming years. And if Russia's oil (crude and product) supplies are disrupted, refiners would undoubtedly struggle to obtain replacement feedstocks. Already, diesel prices are approaching all-time highs (Astrov et al. 2022).

3.5. Securing an Affordable Energy Supply

According to Aurora (2022), any disruptions in supplies induced by the Ukrainian invasion would very certainly affect Europe and, to a lesser degree, the rest of the globe. There is a possibility commodities prices will hit all-time highs. A reduction in Russian oil and (particularly) gas exports to Europe will almost certainly need government action and might result in energy restrictions across all industries that rely on this resource. Also, countries have started to prepare for the prospect of supply interruptions. Specifically, the EU has decided to wean itself off Russia's oil and gas by implementing a plan. It is planned that Germany will cease importing oil from Russia by the end of the year 2022. The US and the UK have both put an embargo on the shipment of goods. In addition, global seaborne markets are now uninterested in accepting Russian exports because of the country's human rights record.

The instability of the energy markets was jolted into sharp relief by Russia's invasion of Ukraine. Also, ensuring energy security requires the decreasing dependence level of Russia's oil and gas, which turns out to be a significant challenge. For a fruitful effort, countries will need to ensure alternative energy sources in parallel with scientific, financial, and geopolitical expertise, investment, and cooperation. Additionally, cooperation among countries and oil and gas companies is required to imagine the future energy system and the use of energy by consumers and businesses (Rivlin et al., 2022; Zhang et al., 2022).

3.6. International Response to Russia's Invasion during the War

As regards the international response to Russia's choice, many Western countries were opposed to the invasion of Ukraine. A lot of countries have officially declared against Russia's strategy and other countries, like the US, the UK, the EU, and France, have responded by imposing sanctions on Russia. Specifically, Russia was forced to do some of the following:

- Some Russian institutions are being barred from utilizing the SWIFT global payment system. SWIFT is a high-security network that connects 11,000 financial institutions in 200 countries to enable payments (Blanchard and Pisani-Ferry, 2022)
- Germany has stopped the accreditation of Russia's Nord Stream 2 gas pipeline, which would transport energy to Europe
- New Zealand banned the shipment of commodities to Russian military and security personnel
- To severely constrain Russia's capacity to grow its military and aerospace sectors, the US barred the transfer of war technology to the country. The embargo will prevent the US from exporting semiconductors, telecommunications, encryption security, lasers, sensors, navigation, avionics, and marine technology to Russia (United Nations, 2022b; Ozili, 2022).

The Russian Central Bank and other Russian financial institutions were denied to access their dollar foreign reserve holdings that were kept in the US. As a result, they were not permitted to engage in any transactions using US currency. Also, the US banned all oil and gas imports from Russia (OECD 2022).

The EU implemented some financial sanctions on a substantial portion of Russia's state-owned businesses as well as 70% of the country's banking sector. Also, Russians were prohibited to make deposits in EU banks of more than €100.000, opening accounts with EU central securities depositories, or purchase euro-denominated assets (Rivlin et al., 2022). The EU has made it illegal for the shares of Russian companies that are held by the Russian government to be traded on markets inside the EU. Therefore, it is now against EU legislation to sell, donate, transport, or export oil refining technology to Russia. Moreover, the EU has placed restrictions on the ability of Russian airlines and the Russian space industry to purchase aircraft, replacement parts, or other equipment. The EU will no longer provide visas to notable Russian citizens. Russia was not allowed to compete in any cultural or sports events organized by the EU, including the Eurovision Song Contest and the UEFA Champions League. The UK has planned to stop buying oil from Russia entirely by the end of the year 2022 (Aurora, 2022).

4. DISCUSSION

Since the early 2000s, Ukraine has been bouncing back and forth between the West and Russia This implies that Ukraine has been unable to completely join an alliance with the West and has refused to hand over complete power to Russia. However, when Ukraine attempted to join the North Atlantic Treaty Organization in 2008 (NATO), the US backed this proposal, while France and Germany opposed it when Russia said that Ukraine should not join NATO. Since 2010, Russia's opposition to Ukraine joining NATO has been a contributing factor in the escalation of tensions between the two countries.

Based on Kang and Meernik (2005) argument, there are two aspects to appraise how conflict impacts individuals. One is the school of thinking known as "war renewal," while the second is known as "war destruction." According to the "war rejuvenation," conflicts may improve economies by lowering the influence of special interests, introducing new technology, and expanding human capital. According to the "war destruction," wars are damaging and provide little economic value. Also, according to Schneider (2017), many individuals believe that the Great Depression led many parliamentary democracies to collapse. Civil conflicts in the Middle East have made it impossible to shift our perspectives on sovereignty or to divorce sovereignty from governance. Instead, those who disagree want to get control of the perks that come with being recognized throughout the globe. Civil conflicts in the Middle East will not end soon or peacefully under these circumstances (Kalb, 2015).

Several studies have addressed the issue of conflicts' impact on the economy. For example, the Lancet Journal focused on how wars between countries affected the economic growth of many different countries (The Lancet, 1914). It is underlined that differences in economic development between countries are always linked to the number and type of conflicts. The length and severity of the war affect the reaction of the economy after its completion, concerning the level of economic development and the growth-enhancing factors of the country. Also, Pirani highlighted the effects of civil wars on different economies (Pirani, 2018). They declared that conflicts hurt the basics of the economy and the way that the international community responds to civil wars has a big effect on economic growth. Additionally, Blanchard, and Pisani-Ferry (2022) figured out that the economy is affected by all civil wars and supported that the economy quickly recovers after long civil wars, but it keeps getting worse after short conflicts.

The primary purpose of the study was to determine how Russia's invasion of Ukraine will affect the European economy, particularly in terms of gas and oil. Regarding the economic and financial impact of the war, early economic data suggest that there have been significant shifts in global economic statistics as a result of Russia's invasion of Ukraine. Also, the total economic repercussions of Russia's invasion of Ukraine will not be understood until after the conflict has been resolved. Nevertheless, due to the crisis in Ukraine, oil markets are expected to be volatile in 2022, and OPEC is expected to make more money from exports than it has in 8 years. Even if prices go down from where they are now, sales will still go over $1 trillion, which is the highest level since 2014. In 2020, OPEC's export income fell to $321 billion, which was the lowest in 17 years. In 2021, Saudi Arabia's oil export income could go from $207 billion to $210–380 billion, while the UAE's income could go from $50 billion to $80-100 billion (Ibarra, 2022).

Ukraine is a very important path for Russian natural gas to arrive in European countries. Due to its proximity to Russia, Ukraine has the biggest system for moving natural gas in the world. Through Ukraine, between 2.9 and 3.3 trillion cubic feet (tcf) of Russian natural gas have been transferred to European markets every year. Even though there is fighting, Ukraine still gets money from gas that moves through its borders. Also, Austria, Bosnia, France, Germany, Romania, Slovakia, and Turkey are among the countries that get some or all of their Russian natural gas through Ukraine (Aurora, 2022). However, Russia's natural gas shipments through Ukraine have been stopped in the past because of disagreements between Russia and Ukraine about the supply, price, and obligations of natural gas. The market should pay attention not only to whether or not sanctions will directly affect the oil industry but also to how self-sanctioning will affect the whole oil supply chain, from marketing to finance to shipping (World Bank Group, 2022). Companies have already stopped buying Russian barrels because they are afraid of energy sanctions and don't know how banking sanctions will affect them. This has driven prices to new multi-year highs and cut shock-absorbing plans like SPR releases (Peixoto et al., 2022; United Nations, 2022b; Zhang et al., 2022).

Also, dealers who have Russian oil on their books are having trouble clearing cargoes. This is shown by the fact that differentials are growing and shipping and insurance costs are going up. In a time when tensions are getting worse and worse, it's also important to remember that if Russia struggles to empty its barrels and things get worse, weaponizing energy could be the next step in its fight with the West. Since it is still early in the game, it should also be thought about what would happen if Russia suddenly stopped sending oil. This will put a lot of stress on market balances and prices in the short term and for most of 2022 (FAO, 2022).

The study shows that people already thought that global inflation would affect consumer spending in 2022 and beyond. The mood of consumers has been getting worse for the past 2 years. Rising gas prices have made people rethink how they get around. Energy costs are going up because of the war, so people will likely cut back on spending even more. Even though energy prices might go up, the fundamentals of consumer spending are still good. Before the pandemic, households saved less money than they do now. Nominal wages are still going up. Also, in the last 2 years, the stock market and home prices have gone up, which has added to the wealth of households.

If the invasion keeps going, the cost of living will go up in most of Europe, including Germany and the UK. Inflation is already at 5.5% in the United Kingdom, for example. Because of this, customers are already spending more money on less. Because of the battle, the prices of oil, gas, food, and food parts will all go up. This will make living costs go up because mortgage deductibles, car prices, and electricity costs may all go up a lot. There will be consequences for poor countries that have to buy their energy from other countries. Developing countries will have to pay more for energy imports, which could lead to higher prices for fuel, food, and other goods, even if their income stays the same. As a result, inflation and the cost of living will rise in developing countries (UNCTAD, 2020). The effect on both rich and poor countries could lead to higher global inflation and higher costs of living.

5. CONCLUSION

This literature review study focused on how Russia's invasion of Ukraine affected Europe and the world economy, especially when it came to changes in the oil or fuel markets. This review has shown that the invasion's effect on the world economy was a disruption of the global supply chain. This showed up in the form of shocks to the energy and trade supply. It prompted energy costs, commodity prices, and food prices to rise, resulting in an increase in inflation in several nations throughout the globe. Due to this, geopolitical conflicts harm not just the nation being penalized, but also the economy of other countries. The Russian-Ukraine war has shown that imposing sanctions on a combatant nation is not the best course of action. This is especially true when the countries at war are trading partners of countries that are not at war.

After ignoring Russian crimes in Georgia and Syria for years, NATO and the EU were shocked when Russia invaded Ukraine and hit back with sanctions that had never been seen before. Now that they know how dangerous it is to get their energy from Russia, they will start a long and hard process to change their energy policy. Shortly, this will go against environmental rules

that are meant to cut down on carbon emissions. The first sign of this is that Germany has agreed to buy gas from Qatar. High oil and gas prices have given producers who aren't subject to Western sanctions more money, power, and clout. In the medium to long term, the new energy policies that are being put in place today will improve the security of the countries that use energy and cut carbon emissions. The fighting in Ukraine will speed up the move away from hydrocarbons, which will hurt the power of oil and gas producers around the world, especially in Europe.

6. RECOMMENDATION AND SUGGESTIONS FOR FUTURE RESEARCH

Political leaders should make remarkable diplomatic efforts to combat crises and deter aggression like in the case of the conflict between Ukraine and Russia, applying international policy conversation as a method of resolving disagreements. In the future, academic interest and research should be able to identify whether or not resolving conflicts via dialogue results in a high level of success or is beneficial in restoring and securing peace in countries that go to war to protect regional power.

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