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# The Effect of Russia-Ukraine Crisis on Price Fluctuations and Trade in Energy Sector in Indonesia

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## ABSTRACT

Energy is an important factor for the sustainable development of a country. The political crisis that occurred between Russia and Ukraine has had a significant impact on trade and commodity price fluctuations, especially in the energy sector. The sanctions imposed on Russia caused global supply cuts from that country which resulted in limited availability of commodities so that prices rose. The increase in global commodity prices also had an impact on the country of Indonesia. This study aims to analyze the impact of the Eastern European crisis on Indonesia, especially trade and commodity price fluctuations in the energy sector. The method used in this research is a literature study so that relevant information is obtained. then the information is analyzed as Strengths, Weakness, Opportunities, and Threats. The results of the study show Indonesia’s economy is currently still quite good, the increase in oil energy commodity prices is detrimental while gas, coal, and CPO are profitable for Indonesia. The crisis that has occurred has had a beneficial or detrimental impact on the Indonesian state.

**Keywords:** crisis, economy, energy, Indonesia, SWOT analysis

## ABSTRAK

Energi merupakan faktor penting bagi keberlangsungan pembangunan suatu negara. Krisis politik yang terjadi antara Rusia dan Ukraina telah memberikan dampak yang signifikan terhadap perdagangan dan fluktuasi harga komoditas terutama di sektor energi. Sanksi yang diberikan terhadap negara Rusia membuat terputusnya pasokan global dari negara tersebut yang mengakibatkan keterbatasan ketersediaan komoditas sehingga mengalami kenaikan harga. Kenaikan harga komoditas global juga memberikan dampak terhadap negara Indonesia. Penelitian ini bertujuan untuk menganalisis dampak krisis eropa timur terhadap Indonesia khususnya perdagangan dan fluktuasi harga komoditas di sektor energi. Metode yang digunakan dalam penelitian ini dengan studi literatur sehingga didapat informasi yang berkaitan. kemudian informasi tersebut dianalisis Strength (kekuatan), Weakness (kelemahan), Opportunities (peluang), dan Threats (kendala). Hasil penelitian menunjukkan perekonomian indonesia saat ini masih cukup baik, kenaikan harga komoditas energi minyak yang merugikan sedangkan gas, batu bara, dan CPO menguntungkan bagi Indonesia. Krisis yang terjadi telah memberikan dampak yang menguntungkan maupun merugikan terhadap negara Indonesia.

**Kata kunci:** analisis SWOT, energi, ekonomi, Indonesia, krisis

## INTRODUCTION

The development of the times will always be followed by an increase in population, economic development, and increased energy consumption. The increase in energy consumption also pays attention to the existing availability so that it is directly proportional to the increasing competition in obtaining these energy sources. Energy sources are very important, especially in the sustainability of the industrial sector owned by developed countries. Therefore, to fulfill the need for energy sources, a country producing energy commodities or producers is needed (Rachmat, 2018).

In March 2020, WHO declared coronavirus disease or Covid-19 a global pandemic. The emergence of this epidemic not only brings a great threat to human health but also changes people's production and lifestyle. The increasing number of people affected by COVID-19 has forced a country to impose a policy in the form of a lockdown to reduce cases of transmission. This policy caused global supply chains to be cut off and the world entered a period of economic stagnation. This has led to a slowdown in the global economy, a crash in energy markets and stock markets (Wang et al., 2022).

Not finished with the Covid-19 problem, recently the Russia-Ukraine Crisis was a continuation of the crisis in 2014. Starting in February 2014, Russia controlled Crimea, causing an uprising that occurred in Eastern Ukraine. Russia is amassing troops on the Russia-Ukraine border and Moscow's lack of commitment to the April 2014 Geneva agreement which aims

to defuse a situation that is accelerating tensions between the US and the European Union, on the one hand, Russia on the other. Finally, it was the most severe confrontation between 'East' and 'West' that impacted foreign policy in the long term, especially in the energy sector during the crisis. (Goldthau & Boersma, 2014). The Russian-Ukrainian crisis had an impact on the world's economic and energy sectors. Russia and Ukraine are countries that play an important role in this sector. Russia as a producer country has the largest natural gas reserves in the world, the second-largest coal reserves, and is also the third-largest energy consumer (Pardesi, 2006).

The recent Russia-Ukraine conflict has seen Russia receive potential punitive sanctions that could disrupt global supply chains and trigger price increases. This can also cause *Stagflation Shock* where growth is lower than high inflation so it can be detrimental to importers. Exporting countries will also have an impact due to uneven price spikes so domestic demand will also weaken. Indonesia as an exporting country will also be adversely affected by both the economy and energy (Trinh, 2022). The conflict between Russia and Ukraine has a negative impact on global economic growth which will also affect economic recovery, such as in Indonesia. For Indonesia, if this conflict continues, several countries will prohibit the entry of commodities, one of which is oil, which can cause fuel prices to rise. Another impact has an impact on government spending in subsidizing energy which can swell so that the state budget is depressed (Putra, 2022).

## LITERATURE REVIEW

### *A. Geopolitics and Geoeconomics of Indonesia*

In Högselius, P. (2018) it is stated that the concept of “Geopolitics” is as complex as the concept of “energy”. In the most general sense, geopolitics is a field of scientific study included in Political Geography and International Relations which studies the interaction between geographical factors, politics, and international relations (Högselius, 2018). Classical geopolitical theory is an example of “located knowledge” that constructs a world image in support of a particular foreign policy. Sir Halford Mackinder (1861–1947), perhaps, was the most famous and influential geopolitician to emerge in the late 19th century. Most of his ideas were used to justify President Reagan’s nuclear policies, and academics and policymakers continue to discuss the merits of the “Heartland” theory (Flint, 2021). Geopolitics has always been an interesting part of energy discussions because conventional energy sources such as oil, gas, and coal are physical-geographical variables that have strategic importance. This can explain that energy geopolitics is a “creative force” in national and international politics. when viewed from the regional aspect, Indonesia has a competitive advantage. Geographically, Indonesia is an archipelagic country located on the equator as the main route of international trade traffic. In addition, Indonesia has abundant natural resources including biodiversity and animals as well as mining products.

Geoeconomics as the study of spatial, cultural, and resource strategy aspects with the aim of obtaining a sustainable competitive advantage. Geoeconomics is a continuation of geopolitical thinking applied in the era of globalization (Søilen, 2014). In contrast to geopolitics, the concept of geoeconomics examines economic activities with a focus on networks, connections, and cross-border relationships. The study of economic strategy in the concept of Geoeconomics includes markets, customers, competitors, suppliers, industry in general. The forms of threats faced are currency wars, economic diplomacy, competitive intelligence, economic wars, indirect strategies, state capitalism, supporting forces of economic power.

### *B. Indonesia in Global Energy Politics*

The development of industrialization and the growth of society have increased the need for energy, which further complicates energy politics.

Energy with abundant reserves in this large developing country must understand the status and dynamics of big countries in energy politics. Global attention to energy issues has increased since the oil crisis phenomenon in the 1970s which caused dramatic changes in the global energy landscape (Novita, 2020). The wealth of natural resources owned by Indonesia, such as oil and gas to coal, is highly valued by many countries with advanced industries because they need a source of energy supply so that their energy needs are still met. In recent years, energy security has become an international rumor and has made it into international politics in several countries. (Angga, 2018). Many countries ranging from Europe such as the UK to Asia such as China and India are currently grappling with an energy crisis. The UK is struggling with a natural gas shortage, which has sent gas and electricity prices soaring, while China and India are facing crises for coal, which is their main source of power generation. The development of energy trade such as oil and gas to coal domestically and internationally has made it a major position and has a very valuable tactical price for national and international political needs (Angga, 2018).

Indonesia currently participates in nearly 100 international energy forums, of which only a few have entered the field operational stage. Several international energy collaborations have progressed at the operational level, including resource cooperation between Indonesia and Japan in technology transfer and institutional development, new and renewable energy between Indonesia and the Netherlands such as micro-hydro as a power plant, Then Indonesia and China in the investment sector, and collaboration between Indonesia and Norway in reducing carbon emissions (Farid, 2016). And for others, several collaborations were later discontinued. Many are still limited to norm-setting, such as Memoranda of Understanding (MoU), Letters of Intent (LoI), and several others. (ESDM, 2011).

Indonesia is a major player and influences the sale and purchase of oil and gas in the Asia Pacific region, which is a producer, exporter, and importer of crude oil. Several large countries such as South Korea, Japan, China, India, and Singapore import crude oil from Indonesia. However, Indonesia as a crude oil exporter also imports and is the largest in the Asia Pacific. This is due to the large use of oil when supplies and oil production are limited which causes Indonesia to be unable to

depend solely on domestic production. (Athiqah, 2016). The large oil and gas reserves made Indonesia a member of the Organization of Petroleum Importing Countries (OPEC) or the Organization of Petroleum Exporting Countries in 1962. Through OPEC, Indonesia became part of the country that has energy reserves, especially export-oriented oil. OPEC is a place for Indonesia to show its role in geopolitics, while on the other hand, OPEC has a bad impact on Indonesia's efforts to ensure sovereignty and stability of domestic energy, because Indonesia is not ready to manage its energy. Indonesia finally ended its membership as a member of OPEC in 2008 as a result of the non-achievement of requests for oil production allocations and unstable domestic oil prices which are also related to world oil prices (Angga, 2018).

On the other hand, foreign investment has been opened again for the mining industry since the early 1990s, when there has been an escalation in domestic coal production, exports, and sales. The commodity boom in the 2000s brought huge profits to many coal exploration and exploitation companies. In 2008 the financial crisis occurred which caused the value of commodities to experience a drastic decline, creating a favorable situation. Several external factors in merchandise exports influence Indonesia's exports, reaching approximately 50% of Indonesia's total exports (Indonesia Investments, 2018). Apart from slowing global growth and falling demand for commodities, other factors also played a role. During the lucrative commodity boom era of the 2000s, many new mining companies were established in Indonesia, while existing ones continued to increase their investments to expand production capacity. (Indonesia Investments, 2018).

The process of applying and using energy creates unfavorable externalities, especially with rumors of climate change. The use of fossil energy affects the environment in the form of growth in carbon emissions. Coal mining activities in many countries contribute to increasing deforestation, thereby reducing the absorption of carbon emissions by the environment. The growing world concern about environmental damage directly causes the use of energy to be inefficient. Therefore, Indonesia is one of the countries that has received international criticism for its severe environmental degradation (Novita, 2020). Meanwhile, in the new and renewable energy (EBT) market, nuclear

energy is relatively low and cannot be utilized compared to fossil energy. However, Indonesia is one of several national NRE producing countries, in addition to New Zealand, China, the Philippines, and Japan. Indonesia's national renewable energy production is dominated by geothermal resources (Athiqah, 2016). Although global awareness to reduce dependence on fossil fuels has already been established, the development of renewable energy does not indicate dependence on the fossil energy sector such as coal may decrease drastically shortly so that coal and oil, and gas are still important sources of energy. With the increasing demand for fossil energy, a country with high fossil energy reserves such as Indonesia will become the destination of several large countries to meet their energy needs. This situation is an opportunity and a risk regarding international politics in the energy sector that countries will immediately implement to secure their energy needs (Angga, 2018).

### *C. SWOT Analysis*

SWOT analysis is an analytical method by identifies various factors that are formed in order to formulate a strategy. SWOT analysis is used to evaluate strengths, weaknesses, opportunities, and threats. This analysis is subjective and descriptive in order to get a solution to a problem. The resulting solution aims to identify and maintain strengths and increase the benefits of existing opportunities while reducing weaknesses and avoiding threats (Nur'aini, 2016). The application of the SWOT analysis in this paper is to determine the advantages and opportunities of the Russian-Ukrainian conflict on the Indonesian economy and energy sector so that the government can add and maintain the advantages and opportunities of the conflict. This analysis is also useful to find out the problems and threats posed by the conflict so that the best solution can be found.

## **METHODS**

### *A. Study literature*

The literature study method was used in this research by looking for references related to the Influence of the Russian-Ukrainian Political Crisis on Trade and Fluctuations in the Energy Sector in Indonesia. These references can contain data on the energy sector to the Economy in Post-Conflict Indonesia. Literature and data can be found in books, journals, research report articles, and trusted websites on the internet. The results of these various literature studies will be used



to discuss its impact on the energy industry, the state of the Indonesian economy, and how the Indonesian government is trying to deal with the conflict.

**B. SWOT Analysis**

Data analysis can use the SWOT technique in this study with an approach that is divided into Strengths, Weaknesses, Opportunities, and Threats (Rangkuti, 2006). The SWOT analysis technique aims to maximize the strengths and opportunities, on the other hand, to minimize the weaknesses and threats that occurred in the Russian-Ukrainian Political Crisis on Trade and Fluctuations in the Energy Sector in Indonesia. The analysis can be carried out if the objectives have been determined. There are strengths and weaknesses in internal factors while external factors have opportunities and threats.

**RESULTS AND DISCUSSION**

**A. Indonesia’s Macroeconomic Condition Post-Conflict**

Geopolitical tensions between Russia-Ukraine have an impact on the decline in world economic recovery, which has the potential to be lower than before but persists. Along with the decreasing number of cases affected by Covid-19, economic growth in Indonesia is still strong because it is influenced by household consumption which continues to improve, non-construction investment, as well as positive growth in government consumption. Estimates of Indonesia’s export performance remain good but not as high as in the previous quarter (Nugrahawan, 2022).

This conflict also affected Indonesia’s macroeconomic conditions. Coordinating Minister for the Economy Airlangga Hartarto explained that the impact of the ongoing conflict for Indonesia would affect the increase in commodity prices, including oil and wheat. These commodities are the ones that have the most impact on Indonesia due to the country’s high level of consumption. This increase was the result of the conflict between Russia and Ukraine which hampered the supply of world commodities (Karnadi, 2022).

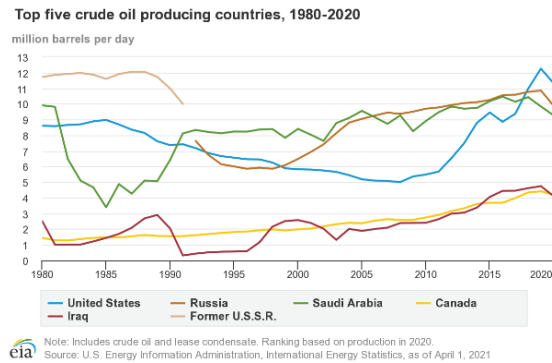


Figure 1. Chart of the top five crude oil-producing countries (EIA, 2021).

Based on data from the US Energy Information Administration (EIA), Russia is the second-largest crude oil producer in the world after the United States. Since 2020, Russia has been able to produce 9.87 million barrels of crude oil per day, so the percentage of Russia’s influence in contributing crude oil to the world’s energy sector is 13% (Fig. 1) (EIA, 2021).

The increase in world crude oil prices will have an impact on Indonesia due to the high consumption of these commodities. From BP Global Company data, in 2020 shows that Indonesia’s oil consumption is 1,564 mbopd, which is 1.7% of the world’s consumption percentage. Meanwhile, the production itself is 0.7 mbopd with a production percentage of 0.8% of the whole world (Dale, 2021). To cover this need, Indonesia needs to import from other countries. The increase in global oil prices is directly proportional to the current increase in Indonesian fuel prices. On March 3, 2022, PT Pertamina raised the price of non-subsidized fuel types Pertamina Turbo, Dextrite, and Pertamina Dex in the range of Rp. 850 - Rp. 1,600 per liter (Rahadian, 2022).

Russia and Ukraine are the world’s largest wheat-producing countries. Based on data from USDA, it was recorded in 2020 that Russia’s wheat income was 75.5 million metric tons (MT) and that of Ukraine was 33 million MT. This income places Russia as the fourth-largest wheat producer and Ukraine as the seventh-largest in the world (USDA, 2022). This supply can cover a quarter of the world’s wheat needs. The disruption of the supply chain due to the conflict has caused the price of wheat to increase, while Ukraine is

the second-largest exporter of wheat supply to Indonesia (BPS, 2021).

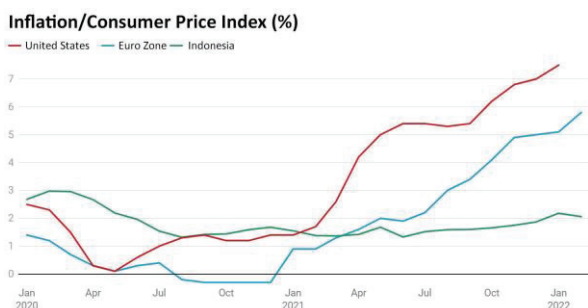


Figure 2. US, Euro zone, and Indonesia year-on-year inflation charts (CNBC, 2022).

Inflation in Indonesia is still not problematic. In January 2022 inflation was recorded at 2.18% year-on-year (yoy), in contrast to February 2022 which decreased by 0.02%, bringing inflation to 2.06% yoy. Compared to western countries such as the United States, it showed the highest increase of 7.5% yoy. Meanwhile, in the Eurozone, the increase in inflation was the highest of all time at 5.8% yoy (Fig.2) (CNBC, 2022).

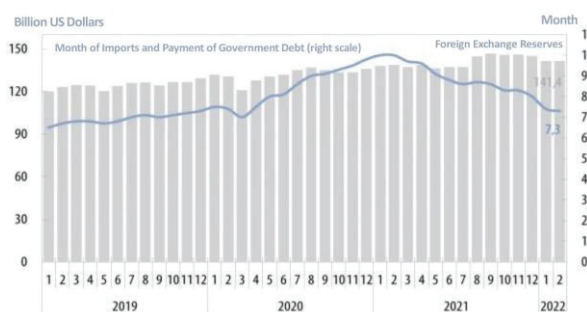


Figure 3. Graph of Indonesia's foreign exchange reserves (Nugrahawan, 2022).

Indonesia's foreign exchange reserves are still quite large and adequate, which even increased by 0.07% at the end of February 2022 to a total of US\$ 141.4 billion, different from the previous month which reached US\$ 141.3 billion (Fig. 3). This increase occurred due to the withdrawal of government foreign loans and was supported by tax and service revenues (Haryono, 2022). Foreign exchange reserves play an important role in the economic condition of a country. Bank Indonesia assesses that good foreign exchange reserves can maintain the macroeconomic stability of a country (Putri et al., 2017)

Rising commodity prices can be both beneficial and detrimental. Indonesia's economic

growth will face formidable challenges in the first quarter of 2022. The increase is expected to increase the mining and fishery industry sectors which contribute to the structure of the Gross Domestic Product (GDP) by 10.43% and 11.39%, respectively. However, Indonesia's economic pace can be restrained due to rising oil prices. The potential increase in fuel and LPG prices can make public consumption costs high and have an impact on increasing inflation which is not caused by an increase in people's purchasing power. Indonesia's trade balance is still profitable because other mainstay export commodities, such as coal, which contributes 6.8%, could increase (CNBC, 2022).

### B. Impact on the Oil and Gas Industry

The conflict between Russia and Ukraine has had a significant impact on the global energy market which has experienced price volatility from 2020 to 2022 (Reynolds, 2022). The conflict also has an impact on the resilience of global energy commodities and world economic growth (Aryanto, 2022). One of the global energy commodities affected by the conflict between Russia and Ukraine is oil. The Russian invasion of Ukraine has not resulted in a complete loss of oil supply to the market, but there has been a significant price spike (IEA, 2022).

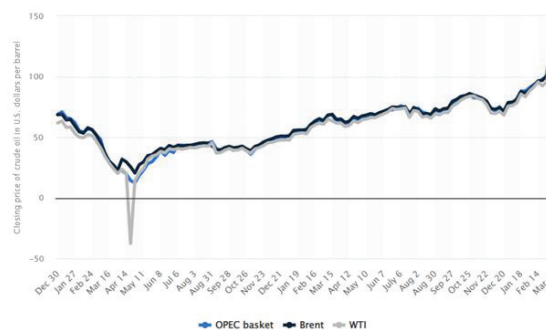


Figure 4. Graph of OPEC, Brent, and WTI Oil Prices December 19, 2019 – March 14, 2022 (N.Sönnichsen, 2022)

On March 21, 2022, the OPEC basket crude oil price stood at USD 113.84/barrel, Brent oil USD 115.62, compared to USD 112.23 for WTI oil (Fig. 4) (N. Sönnichsen, 2022). An increase in oil prices is a result of the imposition of sanctions by several countries against Russia, causing world oil supplies to fall (Bousso et al, 2022). Russia is the third-largest oil producer behind the United States

and Saudi Arabia. In January 2022, Russia's oil production reached 11.3 mb/d with details of 10 mb/d of crude oil and 960 kb/d of condensate, and 340 kb/d of NGL. The amount of production is quite large, in comparison to US oil production of 17.6 mb/d and Saudi Arabia's 12 mb/d. Russia is also the second-largest oil exporter in the global market after Saudi Arabia with total exports of 7.8 mb/day in December 2021 (IEA, 2022).

Indonesia as one of the oil and gas importing countries has not escaped the impact of the Russia-Ukraine conflict, this shows that national energy policies are still vulnerable to external problems (Margenta et al, 2022). Based on data from SKK Migas, Crude Oil production in Indonesia is around 700,000 bpd. Meanwhile, crude oil consumption reached 1.5 million bpd (Martha, 2022). So that the existing crude Oil on imported to meet domestic needs.

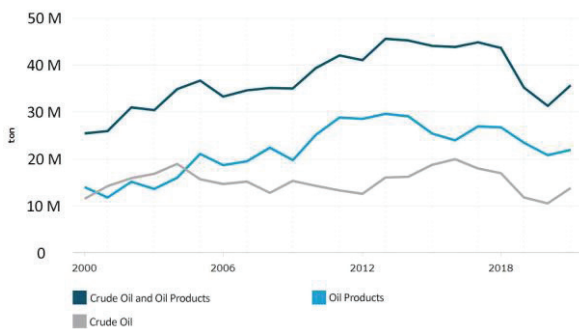


Figure 5. Import volume of crude oil and processed oil 2000-2021 (Kusnandar, 2022).

Based on Badan Pusat Statistik (BPS) data, there was an increase in the volume of national oil imports by 14.07% in 2021 with a surge value of 79.07% to US\$ 25 billion (Fig. 5) (Kusnandar, 2022). From these data, it can be seen that the volume of Indonesia's imports in the oil and gas sector is still very high. Thus, the increase in world oil prices has an impact on the country's economy.

Indonesia, which is still facing a pandemic and a national economy that has not yet fully recovered, must face an increase in world oil prices which has a large enough impact on the Indonesian state budget (Putri, 2022). Based on the 2022 Indonesia state budget, it is estimated that the world oil price will be USD 63/barrel. However, the Russia-Ukraine conflict caused an increase in world oil prices to more than USD

100/barrel. This increase will put pressure on state budget revenues and expenditures. In terms of expenditure, it will burden the 2022 APBN. The budget allocation is in the form of an energy subsidy of Rp 134.02 trillion with a budget deficit target of 4.85 percent. An increase in world oil prices of USD 1/barrel can increase the fuel compensation burden to Pertamina by Rp 295 billion (Anggela, 2022). In lightening the burden on the state budget, there is an option to increase fuel prices. Without increasing the price of fuel, there will be an increase in inflation of 0.7% and if the price of fuel is increased by Rp. 500/liter, the increase in inflation will be 0.5% (DEN, 2022).

In general, Indonesia's oil supply is not too affected by the conflict between Russia and Ukraine because domestic oil is imported from the Middle East and Africa so the domestic oil supply is safe (Putri, 2022). Based on the oil and gas statistics book of the Ministry of Energy and Mineral Resources, the countries that import oil and gas to Indonesia in 2020 are Saudi Arabia with 30 million barrels, Nigeria with 19 million barrels, Malaysia with 6 million barrels, and the USA with 3 million barrels (Adriawan et al, 2020)

In Indonesia's APBN revenue, the increase in world oil prices brings a positive side to the gas export sector. In the Russia-Ukraine conflict, apart from making oil prices high, gas prices also increased. Gas prices correlate with the value of Indonesian exports in terms of increase. In October 2021, Indonesia's gas exports managed to reach USD 781 million, then increased in November to USD 961 (Aryanto, 2022).

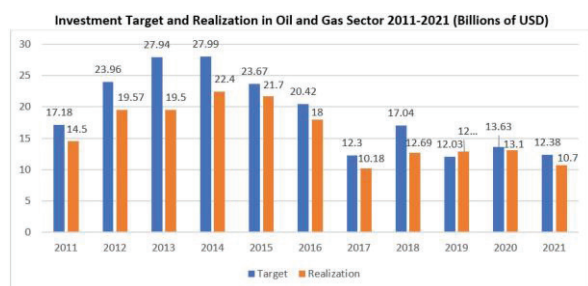


Figure 6. Investment Target and Realization in Oil and Gas Sector 2011-2021 (Rahadian, 2022).

Based on SKK Migas data (Fig. 6), the realization of oil and gas investment in 2021 is only 86% of the target of USD 12.38 billion, which is USD 10.7 billion. The value of this investment must be overcome by taking advantage of the rapid increase in world oil. The production

target of 1 million barrels of oil per day in 2030 can be achieved by increasing investment needs (Rahadian, 2022). However, finding investments to meet these needs during a conflict climate will not be easy (Margenta et al, 2022), so the government needs to make radical policies, such as an investment climate and increasing incentives (Martha, 2022).

### C. Impact on the Coal Industry

The existence of various supply problems caused by confrontation and sanctions by the West on Russia has resulted in the value of commodities such as coal increasing drastically so that the highest value has been in the last few years. Russia is one of the largest coal exporting countries in the world (CNBC, 2022). Meanwhile, Indonesia and Russia will invest in new export capacity to boost their economic growth in line with expected coal demand. Based on data in 2020, 18% of coal export trade is held by Russia with a total of 212 million tons. The export destinations include China at 29 million tons, South Korea at 23 million tons, Japan at 21 million, several European countries at 54 million tons, and other countries whose total export volume in 2021 will reach 212 million tons (IEA, 2021).

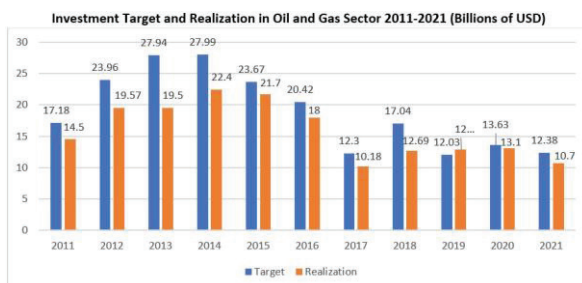


Figure 7. Graph of the increase in coal prices (Ministry of Energy and Mineral Resources, 2022)

As oil and gas prices continue to rise, this can extend to other fossil energies such as coal. In 2021, the government has set the reference coal price of *harga batubara acuan* (HBA) in November 2021, which is \$215.63 per metric ton (MT), an increase of 33% (Fig. 7) from the previous month. Recently, global coal prices have rebounded since Russia invaded Ukraine on February 24, 2022. For example, in the Newcastle (Australia) ICE market, the March 2022 contract price has reached \$418.75/MT. Newcastle's ICE contract for April 2022 has reached \$478/MT. Meanwhile, in Indonesia, the Ministry of Energy

and Mineral Resources set HBA in March 2022 for \$203.69/ton, an increase of \$15.31 from \$188.38/ton in February last year. Russia, which is one of the largest natural gas producing countries in the world, is experiencing a confrontation that has resulted in western countries, especially Europe, stopping their energy imports, such as oil and gas, to coal, so that these countries look for their main energy sources to other countries. (Iswirno, 2022).

HBA is a value obtained from several average indices such as the Newcastle Export Index (NEX), Global coal Newcastle Index (GCNC), Indonesian Coal Index (ICI), and Platt's 5900, and the average index price in the previous month, concerning quality at calorie is 6322 kcal/kg GAR, total moisture is 8%, total sulfur is 0.8%, and ash is 15% (ESDM, 2022). After that, the price will be used directly to buy and sell coal commodities (spot) within one month of delivery to the point of sale on the transport vessel (FOB Vessel) (ESDM, 2021).

Europe is the region most vulnerable to rising energy and commodity prices, due to its dependence on Russia. As in other countries in the world, the impact in Asia-Pacific will soon be felt through higher import prices, especially prices in the energy sector (Coface, 2022). Despite all the turmoil in the outside world, Indonesia's energy security is still in a fairly safe position, this is because the domestic energy reserves are still very large, especially in fossil fuels such as coal. This position is an opportunity to increase state revenues, such as increasing the number of coal exports. The role of coal is still a top priority in the energy sector to date.

Indonesia's trade balance still tends to show a surplus despite the increase in oil and gas import prices which are higher than oil and gas exports. This is inseparable from the increase in product exports in the natural resource sector, such as mineral fuels including coal and manufactured products (BI, 2021). Coal contributes 6.6% of non-oil exports (Kementerian Perdagangan, 2022). the coal export ban that occurred in early 2022 brought its contribution down to 6.8% with prices typically reaching 13% to 14%. Not long after, coal exports were reopened due to the Russia-Ukraine conflict which also increased the price of coal as a substitute for other cheaper energy sources. (Cantika, 2022).

### D. Impact on the New Renewable Energy Industry



After the Russia - Ukraine conflict, the transition to new and renewable energy resulted in an urgent need to implement it given that the European Union imports 90% of its gas consumption, with Russia providing around 45% of these imports. Russia also accounts for about 25% of oil imports and 45% of coal imports (McPHIE, 2022). This also contributed to the suppression of supporting commodities from the construction of EBT facilities such as metal mineral ores to crude palm oil (CPO). Meanwhile, these commodities cannot be separated from Indonesia, which is an exporter of these materials, which of course can increase state income. In Indonesia itself, NRE is still a minority as an energy contributor, unlike fossil energy as the main energy. In 2020 fossil energy accounts for about 80% of energy while NRE is in the range of 20% (Fig. 8) (IEA, 2021). The soaring price of fossil energy caused by the Russia-Ukraine conflict has prompted an increase in the use and development of EBT in Indonesia. Moreover, the use of EBT in Indonesia has continued to increase in recent years (IEA, 2021).

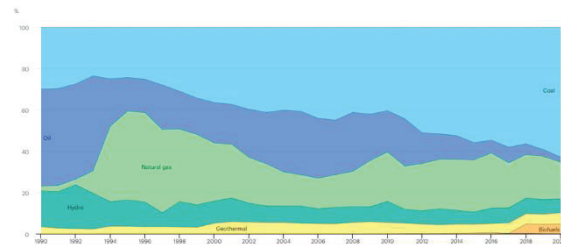


Figure 8. Graph of energy use by energy type (IEA, 2021)

Not only coal exports, but Indonesia also exports other energy commodities such as crude palm oil (CPO). The occurrence of fluctuations in the prices of fossil products in the world due to the conflict between Russia and Ukraine is considered to be a momentum for the world to accelerate the development of renewable energy (EBT) (CNBC, 2022). CPO is the main ingredient in making biodiesel as an alternative to fossil fuels whose prices continue to rise along with the volatile situation of the Russia-Ukraine war. However, with the increase in the price of crude oil, the price of CPO also soared to a value of MYR 7,074/ton which increased by around 50% in March 2022. (CNBC, 2022)

**D. SWOT Analysis**

Table 1. SWOT Analysis

<p><b>Strengths (S):</b></p> <ul style="list-style-type: none"> <li>• Prices and exports of coal increase</li> <li>• Prices and exports of gas increase</li> <li>• Prices and exports of CPO increase</li> <li>• Inflation decreases</li> <li>• Foreign reserves increase</li> </ul>	<p><b>Weaknesses (W):</b></p> <ul style="list-style-type: none"> <li>• Prices of non-subsidized fuel increase</li> <li>• Prices of imports of commodities increase</li> <li>• Supply of imported commodities decreases</li> <li>• Decreases in capital market</li> </ul>
<p><b>Opportunities (O):</b></p> <ul style="list-style-type: none"> <li>• Indonesia's geopolitics is becoming more strategic</li> <li>• The economy is improving</li> <li>• The improvement in the energy sector in Indonesia</li> <li>• The use of renewable energy is increasing</li> </ul>	<p><b>SO Strategy:</b></p> <ul style="list-style-type: none"> <li>• Increasing the production of export commodities</li> <li>• Expanding export markets</li> <li>• Developing NRE</li> <li>• Improving the quality of human resources</li> <li>• Inviting and facilitating foreign investors</li> </ul>
<p><b>Threat (T):</b></p> <ul style="list-style-type: none"> <li>• Swelling of the State Budget</li> <li>• Inflation</li> <li>• Decreased foreign exchange reserves</li> <li>• Threat of diplomacy</li> <li>• Reduced investment in the oil sector</li> </ul>	<p><b>ST Strategy:</b></p> <ul style="list-style-type: none"> <li>• Increase export volume</li> <li>• Increase and maintain diplomacy</li> <li>• Improve policy national</li> <li>• Improving the fiscal attractiveness of upstream oil and gas</li> </ul>
	<p><b>WO Strategy:</b></p> <ul style="list-style-type: none"> <li>• Accelerating the transition of renewable energy</li> <li>• Optimizing the availability of the country's natural resources</li> <li>• Expanding energy distribution</li> <li>• Strengthening the investment climate in Indonesia</li> </ul>
	<p><b>WT Strategy:</b></p> <ul style="list-style-type: none"> <li>• Improving domestic economic regulations</li> <li>• Always conducting evaluations</li> <li>• Monitoring global commodity prices and supply</li> <li>• Strengthening Indonesia's position in the eyes of the world</li> </ul>

## CONCLUSION

The conflict between Russia and Ukraine has an impact on the Indonesian economy, especially with rising commodity prices which can be beneficial or detrimental. Currently, Indonesia's foreign exchange reserves are still quite large and inflation has decreased or deflation.

The crisis had a significant impact on world oil commodities in terms of supply and price because Russia is one of the world's oil exporters. Indonesia as an oil-importing country has also received the impact of the increase in world oil prices. However, Indonesia's oil supply is still safe because it does not import oil from Russia. In addition to oil, coal was also affected by the conflict that occurred, this conflict resulted in the closure of coal supply which led to an increase in energy commodity prices. The Indonesian government also increased the reference coal price by 33% from the previous month (November 2021) which was the impact of rising prices in the fossil energy sector. However, Indonesia's trade balance is still in surplus due to rising export prices in the natural resources sector.

Rising commodity prices in the energy sector have resulted in western countries increasing the process of transitioning fossil energy to renewable energy, one of which is the use of *crude palm oil* (CPO) as biomass. Of course, this commodity cannot be separated from Indonesia as the largest CPO exporter in the world. With the increase in the price of crude oil, the price of CPO also soared.

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