

A STUDY OF THE IMPACT OF THE RUSSIAN WAR ON GLOBAL MARITIME TRADE

PROJECT REPORT

*Submitted to the School of Maritime Management, Indian Maritime University in
partial fulfilment of the requirements for the award of degree,*

Master of Business Administration in Port and Shipping Management

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CERTIFICATE OF THE GUIDE

**School of Maritime Management
Indian Maritime University, Chennai.**

This is to certify that the project report entitled “**A STUDY OF THE IMPACT OF THE RUSSIAN WAR ON GLOBAL MARITIME TRADE**”, submitted to the School of Maritime Management, Indian Maritime University, Chennai Campus., in partial fulfilment for the award of the degree of Master of Business Administration in Port & Shipping Management, is a record of work carried out entirely by **MENANDER. K**, Reg. No. **2003304020**.

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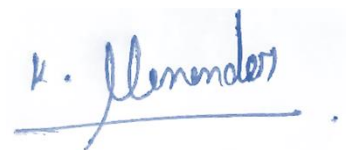
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DECLARATION

I, **MENANDER. K** (Reg. No.: 2003304020) hereby declare that the project report titled “**A STUDY OF THE IMPACT OF THE RUSSIAN WAR ON GLOBAL MARITIME TRADE**” submitted for partial fulfilment of the requirement for the degree of “Master of Business Administration in Port and Shipping Management” is my original work done under the supervision of **DR. LEKHA RAVI**, Assistant Professor, School of Maritime Management. This submission represents ideas of mine in my own words and where ideas or words of others have been included. I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission.

PLACE: Chennai

DATE: 25.05.2022

A handwritten signature in blue ink that reads "K. Menander". The signature is written in a cursive style and is underlined with a single horizontal line.

(**MENANDER. K**)

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ABBREVIATIONS

ASEAN	Association of Southeast Asian Nations
BPCL	Bharat Petroleum Corporation
CAD	Current Account Deficit
DPIIT	Department for Promotion of Industry and Internal Trade
EIL	Engineers India Limited
EU	European Union
FDI	Foreign Direct Investment
FPI	Food Price Index
FY	Fiscal Year
GAIL	Gas Authority of India Limited
GDP	Gross Domestic Product
GTAP	Global Trade Analysis Project
IOCL	Indian Oil Corporation Ltd
LDC	Least Development Country
LIFDC	Low-Income Food-Deficiency Country
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
MENA	Middle East and North Africa
MSP	Minimum Support Price
NATO	North Atlantic Treaty Organization
RUB	Ruble
UNCTAD	United Nations Conference on Trade and Development
WTI	West Texas Intermediate

EXECUTIVE SUMMARY

The purpose of this project is to study and understand the Russian and Ukraine Invasion and its affect global maritime trade. It also stimulates and helps to understand the how other countries are manage his economy fall-down. Based on these war situations how India manages and react with the global maritime trade.

Russia's invasion of Ukraine poses the greatest threat to European peace and security since the Cold War's end. On February 21, 2022, Russian President Vladimir Putin delivered a weird and at times insane address in which he laid out a large list of grievances as grounds for the "special military operation" announced the next day.

The report shows the problems intended for this invasion for Russian and Ukraine and other countries. Project describes about Skyrocketing Prices for basic commodities like Rice, Wheat, Crude Oil, Nature Gases, etc. War affects maritime trade how shipping companies are managing the war situation. Courtiers like Sri Lanka, Egypt the entire global economy will feel the effects of slower growth and faster inflation.

The study tries to give an insight for the reader of the report about the current problems faced by the maritime sector based on the Russian Ukraine War. This study gives the brief information about the challenges faced country, and how the war situation affect trade between various countries. The study gives complete report about where the problem occurs and how to world country manage it. And expected to highlights the current scenario of global maritime trade.

The Project Report describes about the how the war affects world trade, how counties manage the situation on balancing the maritime trade. India continues export and import with Russia. Other benefits India gains for the Russia Ukraine war situation. And the challenges faced Russian economic based on maritime trade by this war environment. Many countries ban Russian products import, how Russia manage the situation, elaborate about what are the losses happens Russian side.

Finally, how the countries faced the problems based on the war situation. Describes about the normal people suffering based on the war, how world country faced alternative ways to find the solution, and countries manage and risk mitigation for the war. And various countries how manage the risk for effect of this war, business and management implications of countries. It touches in general about the War Reverberating Across World's Regions and how invasion effects hit other Countries.

CHAPTER-1

INTRODUCTION

1.1 History of the Maritime Industry: -

Since the start of time, humans have used water to assist them delivery shipment from one region to another. The first “ships” were single logs that small cargo have become related to and floated down river for alternate. Eventually, logs have been tied collectively to hold larger cargos.

About 5,000 years ago, the primary principal alternate routes have been shaped among cutting-edge day India and Pakistan alongside the Arabian Sea. Due to bandits attacking caravans, land tour has become risky and mariners started to tour at the sea. They used an astrolabe to navigate the waters. An astrolabe is a device that anticipated the location of the sun, moon, planets and the stars.

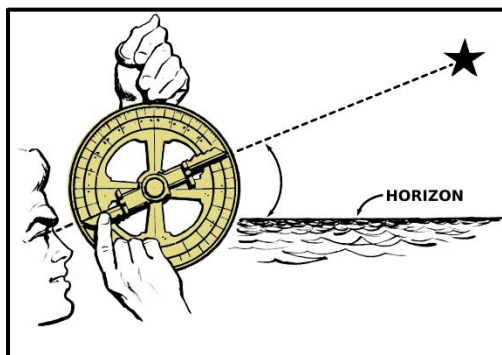


Fig.1.1 Astrolabe is an ancient astronomical instrument

At the same time, the Romans were building fleets capable of traveling the Mediterranean Sea in approximately a month. They transported low-value products such as grain and building supplies. It was far less expensive to carry these goods by sea than by land. The Romans quickly expanded their shipping lanes to include trips over the Indian Ocean.

Between the 7th - 13th centuries, the Arab Empire began to build economic routes via Asia, Africa, and Europe. Because the rivers in the Islamic territories were not easily navigable, sea travel was required. These improved vessels, known as caravels, significantly decreased the time it required to deliver goods.

Advances in navigation and shipbuilding enabled Europeans to across the Atlantic during the Age of Discovery, which lasted from the 15th through the 19th century. This opened up trade channels for tobacco to Virginia and Maryland, as well as silver to Mexico and Peru.

A wide variety of items could be traded between Asia, England, France, Denmark, Portugal, and the Americas. Trade companies grew. The Dutch East India Company was the most prosperous.

During the 19th and 20th centuries, the Suez Canal allowed transportation between Europe and Asia to bypass Africa. The Panama Canal was built to connect the Atlantic and Pacific Oceans.



Fig.1.2 Panama Canal Route Map



Fig.1.3 Suez Canal Route Map

Cruise ships were developed around the same time to transport people around the world. Container shipping emerged in the late twentieth century, giving a boost to the shipping industry we know it today.

1.2 About the Industry: -

The use of ships to transport goods by sea is considered to as maritime trade. Because of the danger inherent in a mode of transportation, agreements related to this type of trade have various unique rules that have evolved from customs and regulations since ancient times.

Maritime transport is critical to the global economy since it accounts for over 80% of global trade, which has a major influence on economic development. Both maritime transport and its associated operations have a significant overall economic impact, influencing a wide variety of industries directly or indirectly.

Maritime transportation is essential to worldwide trade and the global economy. Around 80% of global trade by volume and more than 70% of global trade by value is conducted by sea and managed by ports globally.

Maritime trade flows have an impact on both the economic development and the ecosystems of the affected regions. Shipping routes are constantly changing and are expected to be impacted by the effects of climate change, while ships are a significant source of pollution. Maritime transport is one of the region's priority sectors for creating jobs, reducing inequality, increasing competitiveness, and unleashing vital economic forces to propel the regional economy forward.

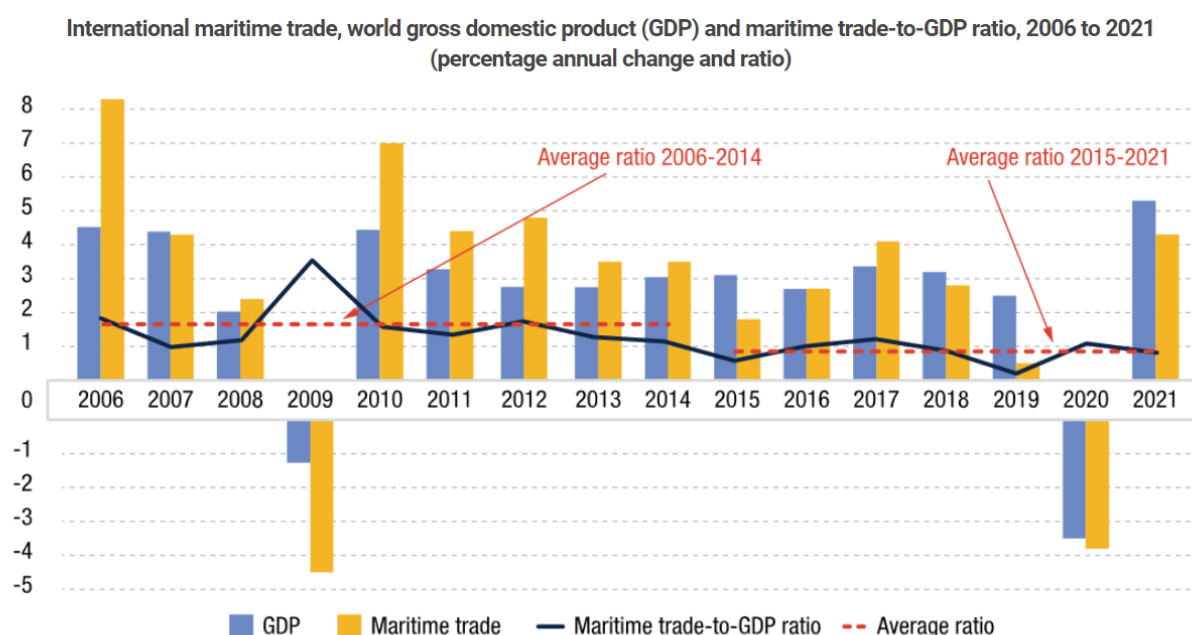
Seaports have both direct and indirect benefits on the area economy, creating new jobs and adding value that adds to GDP growth. Maritime cargo transit lowers transportation costs, boosts area employment, and stimulates other port-related and surrounding activity.

Maritime trade during COVID in 2020

According to the survey, maritime trade fell by 3.8 percent in 2020, representing an initial shock, but it recovered later in the year and is expected to rise by 4.3 percent in 2021. The medium-term outlook for marine trade is still optimistic, but there are "growing dangers and uncertainties."

The COVID-19 pandemic hindered maritime transport, although the outcome was less severe than anticipated. Because of the shock in the first half of 2020, maritime trade contracted by 3.8% in 2020. However, there was an embryonic, although asymmetric, recovery in the second half of the year, and by the third quarter, volumes had returned for both containerized trade and dry bulk commodities. However, tanker shipping has yet to return completely.

It was also attributable to the release of pent-up demand for automobiles, as well as restocking and inventory-building. The recovery was quite quick because, unlike the global financial crisis of 2009, the downturn was not internationally coordinated.



Source: UNCTAD calculations, based on the Review of Maritime Transport, various issues, data from UNCTADstat and table 1.1 of the UNCTAD Trade and Development Report 2021. From recovery to resilience: The development dimension.

Fig.1.4 Graph shows Relation between Maritime Trade, GDPⁱ

In 2021, marine trade is expected to expand by 4.3%, paralleling the rebound in merchandise trade and global output. The medium-term picture is also encouraging, albeit susceptible to growing risks and uncertainties, and has tempered in line with predicted lower global growth. Over the last two decades, marine trade has grown at a compound annual rate of 2.9 percent, but UNCTAD predicts that trend to decline to 2.4 percent between 2022 and 2026.

1.3 The problem intended to be studied: -

The Russo-Ukrainian War is a conflict between Russia and Ukraine that is still continuing. On February 24, 2021, Russian President Vladimir Putin initiated a military assault against Ukraine. The armies entered Ukraine from multiple sides, signalling the start of a war in Europe over Russia's demands for a stop to NATO's eastward expansion. Putin has denied plotting an invasion for months. He announced that he had ordered "a special military action" to safeguard Russian citizens who were victims of "genocide" in Ukraine.

Skyrocketing Prices

- The Russia-Ukraine conflict is causing significant disruptions in shipping and air freight. According to supply chain firms, Russian military are blocking off shipping routes, logistics firms are suspending services, and air freight charges are soaring.
- Russian soldiers are closing shipping routes, logistics companies are suspending services, and air freight and tanker costs are extremely high, according to supply chain firms. "Portions of the Black Sea and the Sea of Azov have become unsafe or impassable." "There have been missile assaults on vessels and commercial shipping lane closures," said Christian Roel-offs, CEO of container marketplace Container x-Change.

Affect Maritime Trades

- Odessa's port is Ukraine's largest and a significant grain export port. The country is a major exporter of crops like as wheat, barley, and corn. Russia and Ukraine control approximately 29% of the worldwide wheat export market.
- Many logistics companies have also ceased supplies to and from Russia as well as Ukraine, while container shipping firms are avoiding Russia, accounting for 14.5 percent of the worldwide shipping workforce.

Country's Economics affects

- The conflict is a major setback for the global economy, slowing growth and raising costs. Beyond the suffering and humanitarian crisis caused by Russia's invasion of Ukraine, the entire global economy will suffer from slower growth and higher inflation.
- Aside from the very real human cost, war has serious economic costs – infrastructure damage, a decline in the working population, inflation, shortages, uncertainty, a rise in debt, and disruption to normal economic activity.

War could be catastrophic for Shipping Industry

- Russia's invasion of Ukraine has sent shipping scrambling for information, with persons and cargo movements restricted. Maersk and Hapag-Lloyd ceased operations in Ukraine.
- The world's largest shipping business, Mediterranean Shipping Company, located in Switzerland, has announced the suspension of all container traffic to and from Russia. So have the other two members of the top three global shipping companies, Denmark's Maersk and France's CMA CGM. Similar announcements had already been made by Singapore-based Ocean Network Express and Germany's Hapag-Lloyd. Only humanitarian deliveries, such as food and medication, will be made by the firms.

Crude Oil Price Hike

- Record oil price increases will exacerbate the already negative future for carriers as fuel costs climb, according to Alperin. "We're in for unprecedented backlogs and delays, as well as some of the highest transportation and beyond prices on record."
- Crude oil is Russia's most valuable export, accounting for \$123 billion in export revenue. The conflict in Ukraine has called attention to Russia's global exports. Russia is a major source of wheat, metals, and fertilizer's, in additional to oil and gas. Russia exported more over 45 percent, or 4.7 million barrels per day, of the 10.1 million barrels per day (b/d) of crude oil and condensate produced in 2021.
- Oil prices have been climbing for weeks and have reached record highs. Oil prices, which were already high, have since risen to more than \$110 a barrel.

1.4 Objective of the study

The objective of the study is to emphasize and analyse the processes of “War Effect on Global Maritime Trade”.

The objectives are as follows:

- To study the effect of Russian & Ukraine War on World Trade.
- To study the challenges faced by Russian economy due to this war.
- To study the risk mitigation measures adopted by different nations.

1.5 Scope of the study

- To give an insight for the reader of the report about the current problems faced by the maritime sector based on the Russian Ukraine War.
- This study gives the brief information about the challenges faced country, and how the war situation affect trade between various countries.
- The study is expected to highlight the current scenario of global maritime trade.
- The study gives complete report about where the problem occurs and how to world country manage it.

1.6 Research Methodology

- The study is based on the secondary data to arrive at the conclusion of the study and has analysed and evaluated the data from published in newspapers, books, Various magazines, Web content, Published articles and journals of the researches.
- In this report will be using the data in the form of graph diagrams, pie-chart, and histogram to assess the current growth statistics.

1.7 Limitations of the study

- Since the study is on vast area, time was the major constrain during the research.
- Highly confidential data are restricted to use for the research.
- Since the topic is a dynamic one and is happening currently this study is further limited in analysis.

1.8 Chapter Scheme

Chapter 1:

It gives introduction about the Maritime sector. It discusses the review about Russian Ukraine War how effect global maritime trade. It discusses the objectives of reports, Scope of study, and the limitations of the report.

Chapter 2:

Review of literature Identify 10 research paper (or) articles related to impact of war on trade, and international relations between Russia, Ukraine and USA.

Chapter 3:

It describes about the how the war affects world trade, how countries manage the situation on balancing the maritime trade. India continues export and import with Russia. Other benefits India gains for the Russia Ukraine war situation.

Chapter 4:

It describes about the challenges faced Russian economic based on maritime trade by this war environment. Many countries ban Russian products import, how Russia manage the situation, elaborate about what are the losses happens Russian side.

Chapter 5:

It describes about the countries faced the problems based on the war situation. Describes about the normal people suffering based on the war, how world country faced alternative ways to find the solution, and countries manage and risk mitigation for the war.

Chapter 6:

It describes about the findings of the project. It also discusses about the conclusion of the report.

CHAPTER-2

REVIEW OF LITERATURE

2.1 Review of Literature: -

The report is about **“The impact on trade and development of the war in Ukraine”**¹ published by **“UNCTAD Rapid Assessment”** released on 26-Mar-2022. UNCTAD has published a fast evaluation of the impact of the Ukrainian war on trade and development, as well as connected concerns in finance, technology, investment, and long-term development. They corroborate a rapidly deteriorating global economic outlook, fuelled by rising food, fuel, and fertiliser prices, increased financial volatility, divestment from sustainable development, complex global supply chain reconfigurations, and growing trade costs. Civil unrest, food shortages, and inflation-induced recessions cannot be ruled out, especially given the global economy's and developing world's frail position as a result of the COVID-19 (coronavirus disease) pandemic. As airlines are forced to travel longer routes and spend more money on fuel, the war will have a detrimental influence on global air freight capacity and raise air cargo pricing. Food and gasoline price increases caused by the war are already increasing inflation in many countries.

“HANS-CHRISTIAN HAGMAN” is discussed in his report on **“Geostrategic aspects of the Ukraine war”**² published in **“Raisina Debates”** dated on 20-Apr-2022. Regardless of the idea, author explain regarding Russian for, it's rare for significant global actors to make such major mistakes that jeopardise their entire global standing and even future chances. The primary consequence is that Russia will be perceived as an aggressor and a monster for the coming years. If Russia employs weapons of mass devastation, the stain will be far more severe. It is also true that the United States, as the world's largest oil and gas producer, benefits from high energy prices and growing European reliance on US LNG. The globe is already experiencing rising protectionism on various fronts, including trade wars between the United States and China, as well as the aftermath of COVID's abnormal consequences on supply, value chains, and demand. The Russian invasion has significantly lowered commodity prices, particularly in the food, energy, and mineral industries. Countries that rely heavily on Russian/Ukrainian grain, fertiliser, and wood, or have severed energy relations, have paid a high price. The war provides additional impetus to transition to more sustainable alternatives. Many countries that have received Russian oil, gas, and coal are attempting to diversify. However, this comes at a cost, and few solutions are carbon-free in the short run.

¹ <https://unctad.org/webflyer/impact-trade-and-development-war-ukraine>

² <https://www.orfonline.org/expert-speak/geostrategic-aspects-of-the-ukraine-war/>

Here the author “Aditi Gupta Economist” discusses about “Impact of Ukraine crisis on India”³ which provides information on While the Russia-Ukraine issue will have no direct influence on bilateral commerce, the rise in oil prices as a result of the situation poses significant threats to the Indian economy. Higher oil prices put foreign stability and currency movement at danger. Furthermore, aside from the direct impact of rising prices on inflation, the pass-through effect on other sectors may not be as transitory as the RBI anticipates. Furthermore, given the growing yields, the government may need to adjust its budgetary approach. India imports more than 80% of its total oil consumption and is the world's third largest crude oil importer. Oil imports increased to US\$ 125.5 billion in FYTD22 (Apr'21-Jan'22), owing in part to economic recovery and increasing oil prices. However, with oil prices now at an 8-year high, imports of oil are certain to increase. We forecast oil imports at US\$ 155.5 billion in FYTD22. Figure 2.1 depicts the annual increase in oil prices.

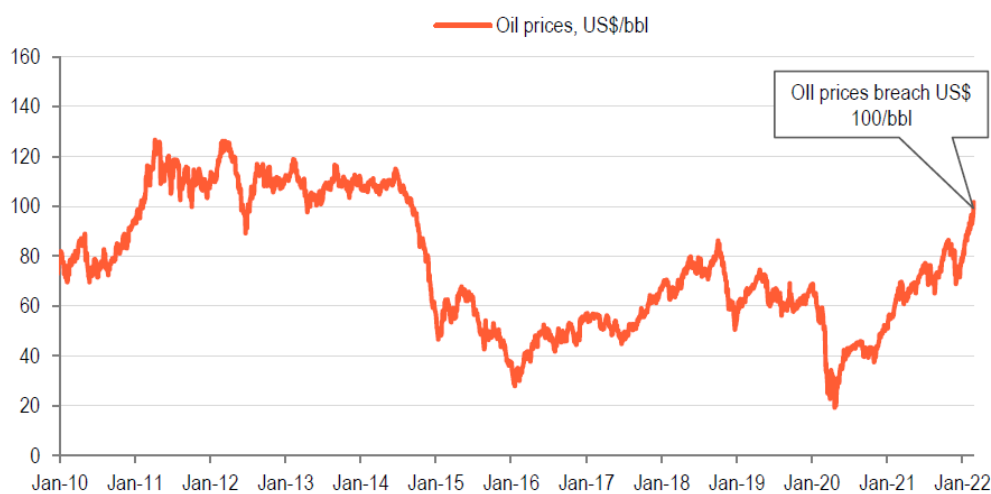


Fig.: 2.1: Oil Price Have Risenⁱⁱ

In this report “The importance of Ukraine and the Russian Federation for global agricultural markets and the risks associated with the current conflict”⁴ released by “Food and Agriculture Organization of the United Nations” are option that has, The Russian Federation and Ukraine are two of the world's largest producers of agricultural commodities. Both countries are net agricultural exporters, and they both play key supply roles in global markets for foodstuffs and fertilizers, where exportable resources are commonly concentrated in a few countries. This concentration may make these markets more sensitive to shocks and volatility. In 2021, the Russian Federation or Ukraine (or both) were among the top three global exporters of wheat, sunflower seeds, maize, rapeseed, and sunflower oil, while the Russian Federation was also the world's top exporter of nitrogen fertilisers, the

³ <https://www.bankofbaroda.in/-/media/project/bob/countrywebsites/india/economic-scenario/data-releases/impact-of-ukraine-crisis-on-india-25-12.pdf>

⁴ <https://www.fao.org/3/cb9236en/cb9236en.pdf>

second largest supplier of potassium fertilisers, and the third largest exporter of phosphorous fertilisers. Many countries that rely heavily on imported foodstuffs and fertilisers, including many in the Least Developed Country (LDC) and Low-Income Food-Deficiency Country (LIFDC) categories, rely on Ukrainian and Russian food supply to meet their consumption demands. Many of these countries were already dealing with the detrimental consequences of high international food and fertiliser prices prior to the conflict.

“World Trade Organization” 2020 press released on, **“Russia-Ukraine conflict puts fragile global trade recovery at risk”**⁵. World merchandise trade volume is predicted to expand 3.0 percent in 2022 (down from 4.7 percent earlier) and 3.4 percent in 2023, but these statistics may be revised due to uncertainties over the outcome of the Ukrainian conflict. At current market exchange rates, global GDP is predicted to rise by 2.8 percent in 2022, after expanding by 5.7 percent in 2021. If geopolitical and economic uncertainty persists, output growth should accelerate to 3.2 percent in 2023. In 2022, the CIS region's imports are expected to fall by 12.0 percent and GDP will fall by 7.9 percent, but exports are expected to expand by 4.9 percent as other nations continue to rely on Russian energy. Due to poor import demand in Europe and Asia, regional differences may diminish. In 2021, the volume of merchandise commerce increased by 9.8 percent. This trade's US dollar value increased by 26% to US\$ 22.4 trillion. In 2021, the value of commercial services trade increased by 15% to US\$ 5.7 trillion. The crisis in Ukraine will also have an impact on the services trade, particularly container shipping and passenger air transport.

“Felbermayr, Gabriel Mahlkow” in his article **“Cutting through the value chain: The long-run effects of decoupling the East from the West”**⁶ published by **“Kiel Institute for the World Economy (IfW Kiel), Kiel”**, has discussed that, The consequences of war on global commerce, non-tariff barriers, global value chains, and a global trade model based on Russia, China, and the European Union. With rising political tensions between China and Russia on one hand and the EU and the US on the other, it appears just a matter of time until protectionist policies induce a decoupling of global value chains. This study uses a computable general equilibrium trade model calibrated with the most recent version of the GTAP database to evaluate the impact on trade and welfare of doubling non-tariff barriers - both unilateral and reciprocate - between the two blocks. Imposing trade restrictions reduces bilateral imports almost entirely. Furthermore, changes in price levels result in increased imports and decreased exports of the dominant country group from and to the rest of the world. The targeted country group boosts exports to the rest of the globe while decreasing imports. Because of Russia's smaller relative size, forcing a trade war on it could bring significant damage to the Russian economy.

⁵ https://www.wto.org/english/news_e/pres22_e/pr902_e.htm

⁶ <https://www.econstor.eu/bitstream/10419/251202/1/1795133694.pdf>

The author “**Mimansa Verma**” releases the article of “**How will the Russia-Ukraine war impact the Indian economy?**”⁷ published by Published March 15, “**In Deep Sea**”. According to Sunil Sinha, research director and chief economist at India Ratings, the Russia-Ukraine situation has increased uncertainty in global trade and would have an impact on oil and other commodities. Despite the fact that India does not have a major merchandise trade with Russia, it stands to lose economically as a result of supply disruptions created by Western sanctions. In response to the United States' ban on all Russian oil and gas imports, Brent crude prices jumped to nearly \$130 per barrel last week, up 43 percent from the beginning of February. India imports close to 85 percent of its crude oil requirements. The 14-year peak in world oil prices will now result in broader price pressures. This has increased the likelihood of a greater import bill and, as a result, an expansion of India's current account deficit (CAD). According to Nomura Research, the CAD is likely to increase to 2.6 percent of GDP in fiscal year 2023, up from 1.7 percent last year. This is anticipated to weaken the rupee, which recently hit a record low of 76.98 per dollar. Because of its historic strategic cooperation with Russia, India had chosen a neutral posture. This Cold War-era cooperation encompasses numerous fronts—diplomacy, nuclear energy, defence, and technology—making Russia an important element of India's nation-building process, particularly during its infancy. However, this is unlikely to protect India from the horrors of a conflict of this magnitude. Especially when, in the global geopolitical framework, both India and Russia are increasingly intertwined with two other nations, China and the United States.

The author “**Joseph Glauber and David Laborde**” discuss the topic on “**How will Russia’s invasion of Ukraine affect global food security?**”⁸ According to the material, Russia's invasion of Ukraine poses major threats to global food security, necessitating a variety of actions from states and international organisations. The situation remains unpredictable, introducing significant uncertainty into an already tense global marketplace. The vulnerability of net food-importing countries that rely heavily on Ukraine for supply, such as the MENA area, is of acute concern. The global response to the Ukrainian issue should include a strong global food security component, as well as measures to guarantee that any sanctions imposed on Russia do not negatively affect third parties who rely on Russian goods. Food and fertiliser exports should be allowed to continue unhindered as much as feasible; otherwise, mitigation packages should be supplied to affected third-party countries. Sanctioning those industries will simply worsen global shortages and penalise people who are already food insecure. With agricultural prices increasing, several governments may strive to protect domestic producers by banning exports. In this framework, both sanctions aimed at enforcing international laws and export limits used to protect domestic consumers must be tailored to maintain global food security, and the implications for third parties must be carefully considered.

⁷ <https://qz.com/2141310/how-will-the-russia-ukraine-war-impact-the-indian-economy/>

⁸ <https://www.ifpri.org/blog/how-will-russias-invasion-ukraine-affect-global-food-security>

“Martin Arnold and Valentina Romei”, in his publishing of **“Global trade falls 2.8% as Russia’s war in Ukraine hits container traffic”**⁹ published in **“Financial Times”**, in the year of 2022. They discussed the impact of war on global trade and container traffic. The fall reflects a dramatic decline in port activity in both countries, with the EU suffering more than China or the United States. According to the Kiel Institute for the World Economy, the value of global trade declined 2.8% between February and March as a result of Russia's invasion of Ukraine, which resulted in a dramatic drop in container ship traffic between the two nations. Shipping container traffic in Russia's three busiest container ports, Vladivostok, St Petersburg, and Novorossiysk, has been cut in half in the last month as a result of sanctions imposed on the country and the withdrawal of numerous western brands, according to the institute. Ukraine's principal Black Sea port of Odesa has been "practically cut off from international marine traffic." The Ukraine conflict had a chilling effect on EU trade, lowering exports from the bloc by 5.6% in March and imports by 3.4%. The impact on the United States was milder, with exports falling 3.4% and imports declining 0.6%. According to the Kiel Institute, the greatest impact was on trade with Russia, with imports into the country falling 9.7 percent from the previous month and exports falling 5%. Its indicator collects shipping data in real time from 500 ports, seasonally modifying the value of exports and imports to provide a gauge of commercial activity.

In this report **“Russia-Ukraine War: What Impact Can It Have on India's Economy?”**¹⁰ the author **“Srikanth Srinivas”** gives that choice, doing business in the fog of conflict, however remote, is laden with unknown risks. While the US is not overly reliant on Russian oil—according to the Energy Information Agency (EIA), it bought an average of 672,000 barrels per day, or 8% of its needs in 2021; Canada supplies 51% of US oil imports—the impact would be felt elsewhere. Crude oil prices might skyrocket—to as much as \$150 per barrel, according to some analysts—wreaking havoc on the Indian economy. Many commentators are concerned that the impact on India's economy will be severe; others are confident that India's economy is immune to the consequences of a distant war. Most businesses and individuals are confident, or at least hopeful, that the crisis will be resolved swiftly. Nonetheless, trade tensions between the United States and China have continued for a long time, and the global economy has responded. China's support for Russia. Three possibilities exist: a difficult but controllable short-term scenario in which the dispute is resolved and tensions de-escalate within two months, a second, more adverse scenario in which the effects of persistent sanctions are felt if the conflict lasts six to nine months, and a third, worst-case scenario in which the conflict lasts 12-18 months.

⁹ <https://www.ft.com/content/ae48f5b4-4928-4582-803c-6c2e02615154>

¹⁰ <https://www.businesstoday.in/magazine/economy/story/russia-ukraine-war-what-impact-can-it-have-on-indias-economy-326628-2022-03-20>

CHAPTER-3

EFFECT OF RUSSIAN WAR ON WORLD TRADE & INDIA

3.1 Maritime World Trade impacted by War: -

While many countries were still healing from the COVID-19 epidemic, the economic damage and energy crises caused by the Russian-Ukraine war is massive, affecting the maritime industry as well.

The Russia-Ukraine conflict has had a significant impact on businesses, particularly the maritime sector, because the two nations are among the world's largest exporters of raw materials. Many sectors are facing supply chain challenges as well as macroeconomic pressures.

3.1.1 The economic impact: -

The economic consequences of the war have left many people around the world worried how the fighting would affect their finances. Many banks and trading firms began to engage in a "self-sanctioning" regime against Russian organisations in the shipping and commodities sectors in late February.

Almost two weeks after the invasion of Ukraine, gasoline prices reached all-time highs, with oil reaching \$139 per barrel at one point. Meanwhile, many tankers will be inaccessible to businesses, which will have a substantial impact on oil and vessel pricing.

3.1.2 How ship operations have been affected

Taking the container industry as an example, we can observe how the war has impacted it in two ways:

- 1) It has contributed to growing oil prices.
- 2) As a result, numerous nations have imposed sanctions on Russia in order to isolate it.

Bunker price increases are likely to put additional upward pressure on transport costs in an already historically expensive market.

Cargo shipments have halted as the Ukrainian ports of Odessa and Mariupol have been shuttered, damaged, or attacked. Odessa's port, in particular, is Ukraine's largest and a key grain export port. It's worth mentioning that Russia and Ukraine account for roughly 29% of the worldwide wheat export market.

3.1.3 Sanctions against Russia

Following Russia's illegal invasion of Ukraine, NATO, the EU, the US, and the UK imposed sanctions on Russia and continue to add to the designated entities lists, ensuring that all members and countries conduct meticulous investigation and verification using the updated lists.

There have previously been sanctions to:

- ✓ Travel, luxury goods, and vodka (all Russian flights have been banned from US, EU, UK, and Canadian airspace).
- ✓ Individuals are being targeted (business leaders known as oligarchs)
- ✓ Oil and gas (the United States has banned all Russian oil and gas imports, and the United Kingdom will phase out Russian oil by the end of 2022). The EU intends to switch to alternate supplies and become independent of Russian energy by 2030).
- ✓ Financial measures.

3.1.4 Impact on seafarers

Russia and Ukraine together account for roughly 15% of the world's 1,89 million sailors. After being stranded at sea for several months due to the COVID-19 pandemic, the present conflict in Ukraine is causing hundreds of thousands of seafarers to be stranded for an unknown period of time, which might have a significant impact on marine transport.

Three Panama-flagged ships have been struck by missiles in the Black Sea since the crisis began on February 24. One of these has sunk, while the other two have incurred damage and remain in the region. Fortunately, no crew members were killed. The local ports are closed, and ships are refusing to leave for fear of being attacked by missiles or undersea mines in the Black Sea.

As of March 14, there were approximately 100 foreign-flagged vessels and hundreds of seamen trapped in Ukrainian ports. At the same time, missiles struck vessels, causing them to sink. Since the war of Ukraine on February 24, Russia has taken control of water passages in the Sea of Azov and the Black Sea.

3.1.5 The worsening shipping snarls and escalated freight rates

Russian soldiers are closing shipping routes, logistics companies are suspending services, and air freight and tanker charges are increasing, according to supply chain firms.

The world's largest container carriers, Mediterranean Shipping Co. and A.P. Moller-Maersk A/S, have blocked bookings for Russian freight, with Maersk reporting "Ripple Effects" and "Significant Delays" across the region.

3.2 Did India gain due to the Russian war?

3.2.1 India's grain exporters went up: -

The Ukrainian conflict has given an odd opportunity for certain Indian Agri-exporters dealing in wheat, maize, millet, and processed food. Since the crisis broke out last month, the world has been turning to India to fill the massive hole in equities left by the turmoil in Europe's breadbasket. Ukraine is one of the world's leading wheat exporters, with Russia and Ukraine accounting for 25% of the worldwide wheat market. Russia exported \$8.14 billion in wheat in 2019 (Pre Covid-Period), while Ukraine exported \$3.11 billion.

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3.2.2 India grabs the opportunity: -

Indonesia, Turkey, Morocco, Bangladesh, Bangladesh, the Philippines, Tunisia, Yemen, Nigeria, and Thailand all purchase more than \$100 million in wheat from Russia and Ukraine. India is now in a position to supply wheat to those countries.

According to the Ministry of Commerce and Industry, India exported approximately 2 MT of wheat in 2020-21, and the country has already exported 6 MT during the April-January period of the current fiscal year 2021-22. While the war has disrupted the wheat supply chain, it has created a chance for India to export to countries that have traditionally not been Indian wheat importers.

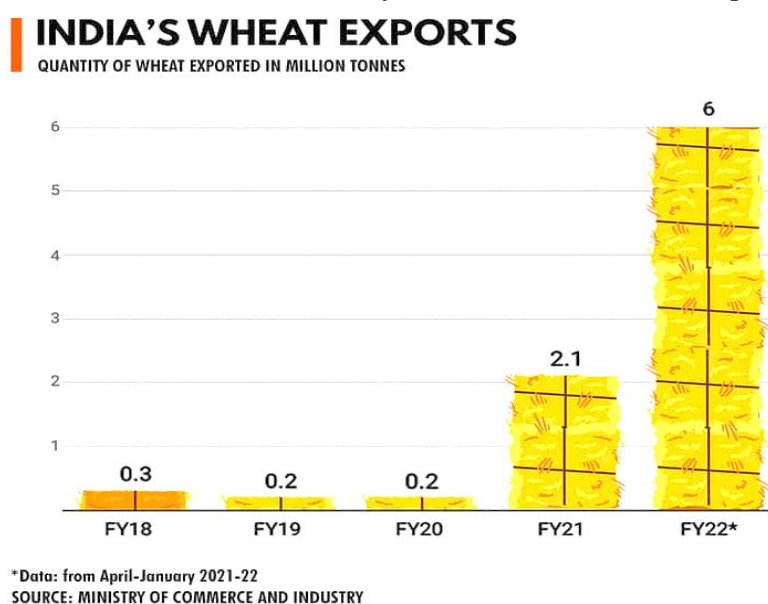


Fig.: 3.1 India's Wheat Exportsⁱⁱⁱ

Fig.: 3.1 shows, India wheat exports from 2018 to 2022 March, according to data from the Indian Ministry of Commerce and Industry. The figure for 2018 is 0.3 million tonnes exported. Following that, Covid has an impact on international trade. So, it's consistently 0.2 million tonnes in 2019 and 2020. And, following the Covid time, demand will rise globally. So, by 2021, it will have reached 2.1 million tonnes. When compared to prior years, it is a fantastic value this year. Finally, from January to March 2022, they surpassed 6 million tonnes. Based on the conflict between Russia and Ukraine. Other countries export a lot of wheat, but the world influences their exports. The central government had announced on **May-13** to limit wheat exports in order to contain rising wheat prices and manage food security in India. The ban would not apply in cases where prior commitments were already made by issuing letter of credit.

Wheat export demand is expanding not only from India, but also from Canada and Australia. Indian wheat does not match certain criteria, such as protein content & pesticide levels, but owing to the war, countries are ignoring the rules and acquiring it. Wheat from Haryana and Punjab is not exportable due to poor protein content, while wheat from Madhya Pradesh, Uttar Pradesh, Gujarat, and sections of Rajasthan may increase our exports.

Ukraine banned the export of wheat, oats, millet, sugar, cattle, and cattle by-products earlier this month, mostly to ensure that the nation, ravaged by Russian missiles, has enough supplies to feed its own population while the country's supply chains are severely disrupted.

The Indian government pays farmers a minimum support price (MSP) at which it commits to take up their stock. This MSP used to be higher than the market rate, but the recent surge in global commodity prices has made India a competitive supplier, according to the International Agriculture Trade Report issued in July 2021 by the US Department of Agriculture.

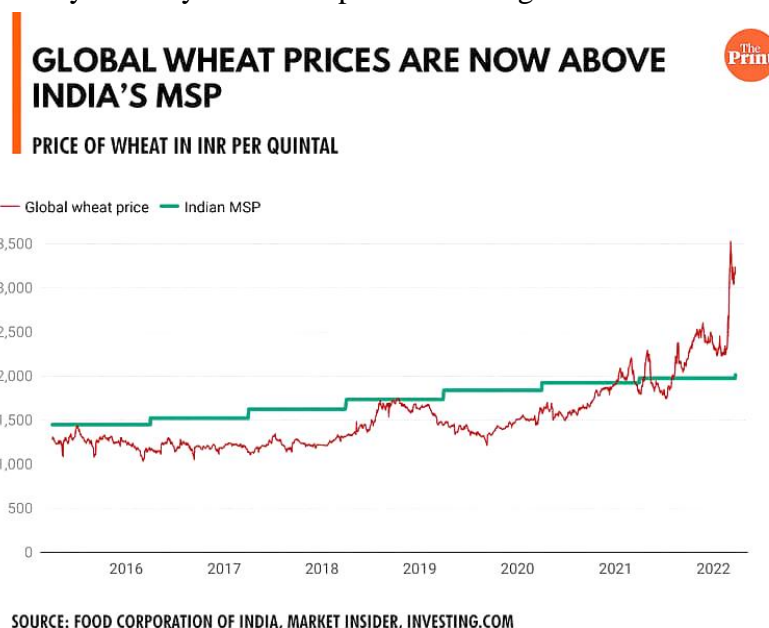


Fig.: 3.2 Comparisons on Global Wheat Price and India MSP^{iv}

As of March 22, the worldwide price of wheat had already reached 378 euros, or approximately Rs 3,167 per quintal, well exceeding the MSP set for this year at Rs 2,015/quintal.

3.2.3 Grain Gains: -

Ukraine & Russia are also significant producers of maize, barley, and sunflower oil. Corn is nearing its greatest intraday level since 2012, while soybean oil and palm oil are at all-time highs. China, the world's largest importer of corn and soy and one of the top importers of wheat, is taking steps to secure critical supply in global markets, helping to drive up prices even further.

Other governments are also making precautions to protect domestic food supplies. Hungary has prohibited grain exports. Argentina, Turkey, and Indonesia have also taken steps to strengthen their grip on domestic products. And Moldova, despite being a modest shipper, has temporarily banned wheat, corn, and sugar exports.

"Our company regularly sends 50-60 containers (20 ft) of wheat throughout the year," Kunal Shah, a partner at Mumbai-based trading firm Kunal Corporation, said. However, we have already placed an order for 40 for the upcoming fiscal year." He says that if the prices were more competitive, his firm would have aggressively promoted maize. The pricing of maize per tonnes in Mumbai is \$325, while it is \$300 in Pakistan.

The road ahead would not be easy for Indian exporters. The first problem stems from high ocean freight charges, which were first driven by a shortage of containers following the pandemic's breakout and subsequent lockdowns throughout geographies. In the last year, freight charges to Africa have more than doubled. The industry is no longer competitive.

The second issue is to achieve a compromise between India's ambitions to be a worldwide leader in wheat exports and managing domestic food inflation. After all, wheat is a basic grain for the majority of Indians, and any unexpected price increase risks causing a reaction.

3.2.4 India is Snapping up cheap Russian Oil: -

Ever since beginning of March, 6 million barrels have been loaded and are on their way to India, where they will be discharged in early April, accounting for roughly half of the total volume discharged last year. If China purchases oil from Russia, which is largely believed to be discounted, crude prices may be affected.

Russia is also the world's largest exporter of crude oil to global markets, ranking second only to Saudi Arabia. Russia is the world's third largest oil producer, trailing only the United States and Saudi Arabia.

According to analysts and media reports, India may begin purchasing even more inexpensive oil from Russia at a 20 percent discount. Based on current crude prices, that would imply a savings of more

than \$20 a barrel. At a time when global energy prices are rising, India has taken advantage of lower pricing to increase its imports from Russia.

After the United States and China, India is the world's third-largest consumer of oil, with more than 80% imported. However, Russia supplied only about 2% of its total oil imports (12 million barrels of Urals crude) in 2021.

India imports more than 80% of its crude oil needs. In the current fiscal year through February, the government purchased 193.5 million tonnes of crude oil at a cost of \$105.8 billion. During the time, the country's overall consumption of petroleum products was 183.3 million tonnes. The majority of the country's crude oil originates from the Middle East and the United States. In total, the country purchased approximately 12 million barrels of oil from Russia in 2021, accounting for only 2% of total imports. India's domestic production exceeds that figure.

3.2.5 India is now setting sights on its coal from Russia: -

According to the International Energy Agency's 2021 India energy projection study, coal accounts for over 70% of India's electrical output. China is the world's largest consumer and importer of coal, with the United States ranking second. Russia is the world's sixth-largest coal producer.

Markets believe that India and China would increase their Russian coal imports, mitigating some of the impact of the EU's formal embargo on Russian coal imports.

The European Commission suggested a ban on Russian coal last week as part of a new wave of penalties on Russia for its invasion of Ukraine. India's coal imports from Russia increased to levels not seen in more than two years in March, indicating that the country's appetite for coal is increasing. Even while the rest of the world shuns Russian commodities, the Asian behemoth is eyeing Russian coal.

3.3 Trade Losses from Ukraine Post-War: -

Some European, Middle Eastern, African, and Central Asian countries acquire 75 percent of their wheat from Russia and Ukraine. The greatest danger is a halt in the production or transit of grains and seeds from Russia and Ukraine. Ukraine's percentage in global exports of foodstuffs such as seed oil, corn, and wheat. It accounts for more than 40% of all seed oil exports.

Ukraine's position as the world's leading exporter of sunflower oil. According to the Observatory of Economic Complexity, a data visualisation website, the top markets for sunflower oil are India, China, Turkey, and the Netherlands. Ukraine accounts for more than 13% of global corn exports and more than 5% of global wheat exports.

3.3.1 Ukraine Export to the world: -

Ukraine has risen dramatically in grain export rankings over the last decade, ranking third in wheat and fourth in corn this year, yet the ongoing war with Russia has markets concerned about Ukraine's export ambitions. This potential export interruption comes at an inopportune time, as the globe is still struggling to recover from last season's historic supply constraints and multiyear high prices across all grains and oilseeds.

If Ukraine's exports are disrupted, much of its grain would be destined for Middle Eastern and African countries that rely significantly on imports. More than 40% of Ukraine's yearly corn and wheat shipments have recently gone to the Middle East or Africa.

Grain exports are an important part of Ukraine's economy. More than three-fourths of the country's domestic corn and wheat output is likely to be exported this year. In comparison, the United States accounts for one-fifth of the world. Ukraine is expected to account for 12% of world wheat exports this year, 16% of corn exports, 18% of barley exports, and 19% of rapeseed exports.

Ukraine's share of agricultural exports in 2021/22 is ranked first in Sunflower Oil exports, second in Barley, third in Wheat & Rapeseed, and fourth in Corn.

3.3.2 Russian Invasion Affects Ukraine Trade: -

According to the United Nations, over eleven million people have fled their residences in Ukraine so far, with 5.3 million fleeing to neighbouring countries. Since the beginning of the war, half of all Ukrainians have lost their work. Only 2% were able to secure temporary employment. Investment in re-education and skill development is critical to improving this situation.

Ukraine produces enough food to feed 400 million people globally, including 50% of the world's sunflower oil supply, 10% of the total world's grain supply, and 13% of the world's corn supply. As of present, the Russian attack will prevent up to 30% of agriculture fields in Ukraine from being planted or harvested this year. Furthermore, supply lines from Ukraine have been interrupted due to the shutdown of Black Sea ports and the limited capacity to transfer supplies across the Western border.

3.4 Analysis of the Trade between India & Ukraine: -

Ukraine is one of Europe's largest countries, with a population of over 40 million people and an area of around 600,000 square kilometres. India and Ukraine have a comprehensive bilateral partnership that spans all areas of cooperation. India was among the first to recognise Ukraine. The Indian government recognised the Republic of Ukraine as a sovereign country in December 1991, and diplomatic ties were established in January 1992. The Indian Embassy in Kyiv opened in May 1992.

3.4.1 India Top 5 Export Commodities to Ukraine

No.	Commodities	Volume (Million Tonnes)
1	Drug Formulation	104 mn
2	Iron and Steel	20 mn
3	Agrochemical	14 mn
4	Auto Tyres & Tubes	13 mn
5	Coffee	12 mn

Table.: 3.1 India Top 5 Export Commodities to Ukraine

Bilateral commerce between the two countries has increased dramatically over the last 29 years, reaching about US\$ 2.8 billion in 2021-22. India is Ukraine's greatest Asia-Pacific export destination and its sixth largest overall export destination. Ukraine's main exports to India are agricultural products, metallurgical products, plastics and polymers, and so on, whereas India's main exports to Ukraine are pharmaceuticals, machinery, chemicals, food products, and so on.

3.4.2 India Top 5 Import Commodities from Ukraine

No.	Commodities	Volume (Million Tonnes)
1	Vegetables Oils	1371 mn
2	Fertilizers	268 mn
3	Organic Chemicals	178 mn
4	Project Goods	35 mn
5	Plywood & Allied Products	28 mn

Table.: 3.2 India Top 5 Import Commodities from Ukraine

3.4.3 India and Ukraine relation after Russian Invasion: -

During the period April-December 2021-22, India-Ukraine trade reached \$2.35 billion. Exports of goods and services to Ukraine totalled \$372 million from April to December 2021-22.

India has a trade imbalance with Ukraine because the value of imports – primarily agricultural items, metallurgical products, plastics and polymers, and so on – exceeds the value of exports of pharmaceuticals, machinery, chemicals, and food products.

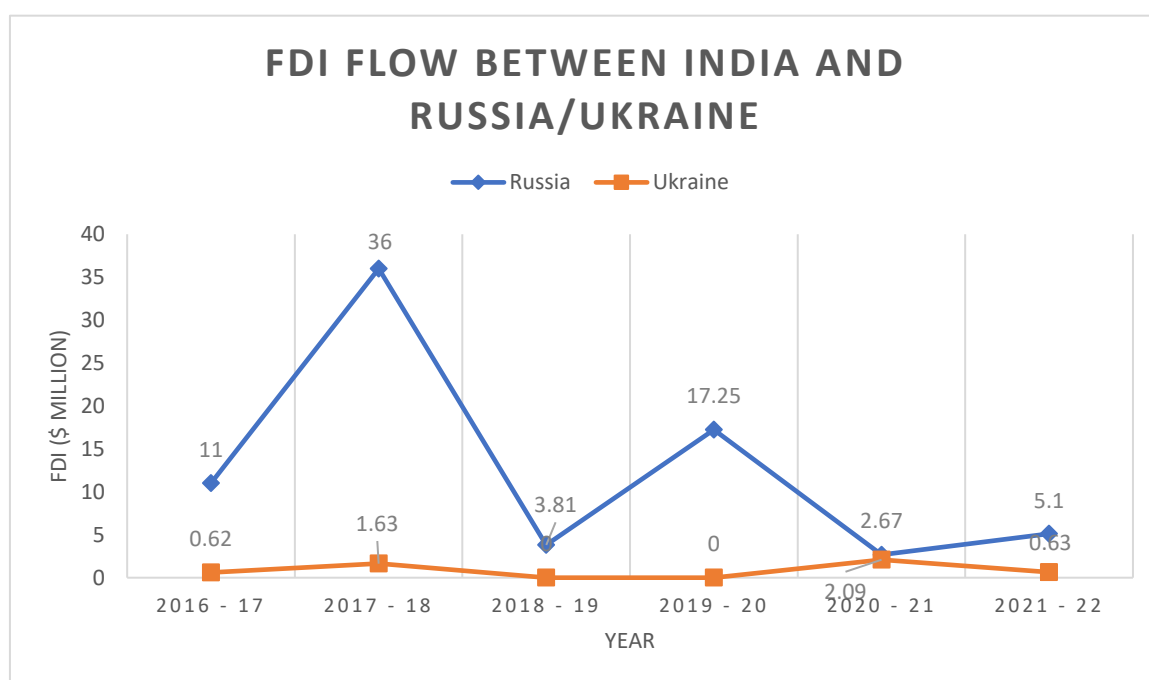
Values in US \$ Millions

Year	2017-2018	2018-2019	2019-2020	2020-2021	2021-22 (April-Dec)
EXPORT	330.1	390.8	463.81	450.97	372.23
India's Total Export	3,03,526.16	3,30,078.09	3,13,361.04	2,91,808.48	3,05,026.15
%Share	0.11	0.12	0.15	0.15	0.12
IMPORT	2,355.97	2,341.03	2,060.79	2,139.86	1,980.11
India's Total Import	4,65,580.99	5,14,078.42	4,74,709.28	3,94,435.88	4,40,923.98
%Share	0.51	0.46	0.43	0.54	0.45
TOTAL TRADE	2,686.07	2,731.82	2,524.60	2,590.83	2,352.34
India's Total Trade	7,69,107.15	8,44,156.51	7,88,070.32	6,86,244.36	7,45,950.12
%Share	0.35	0.32	0.32	0.38	0.32

SOURCE: MINISTRY OF COMMERCE

Fig.: 3.3 Trade Between India & Ukraine^v

India's exports to Ukraine totalled \$372 million from April to December 2021-22. During the same time period, imports totalled \$1.98 billion. In 2020-21, India's overall trade with Ukraine was \$2.59 billion, with imports accounting for \$2.14 billion of that total. In 2018-19, when total commerce approached \$2.8 billion, India imported \$2.34 billion in commodities from Ukraine.



Chat.: 3.4 FDI Flow Between India and Russia/Ukraine

Fig.: 3.4 shows, Foreign direct investment flows between India & Russia/Ukraine. According to data from the Department for Promotion of Industry and Internal Trade (DPIIT) published by Lekhi, the FDI flow between India and Russia amounted at \$75.83 million from 2016-17 to 2021-22 (April-December), but the FDI traffic between India and Ukraine stood at \$4.96 million.

A foreign direct investment (FDI) is the purchase of a stake in a firm by a corporation or investor based outside of the country. In general, the word refers to a corporate decision to purchase a significant stake in a foreign company or to buy it altogether in order to expand its activities to a new territory.

While India's foreign commerce with Russia was worth \$10,826.69 million from 2021-22 (until January), India's trade with Ukraine was worth \$2,871.69 million during that period.

3.5 Analysis- India's Import from Russia in Normal & War situation: -

According to the United Nations COMTRADE database on international commerce, India's imports from Russia totalled \$8.7 billion in 2021.

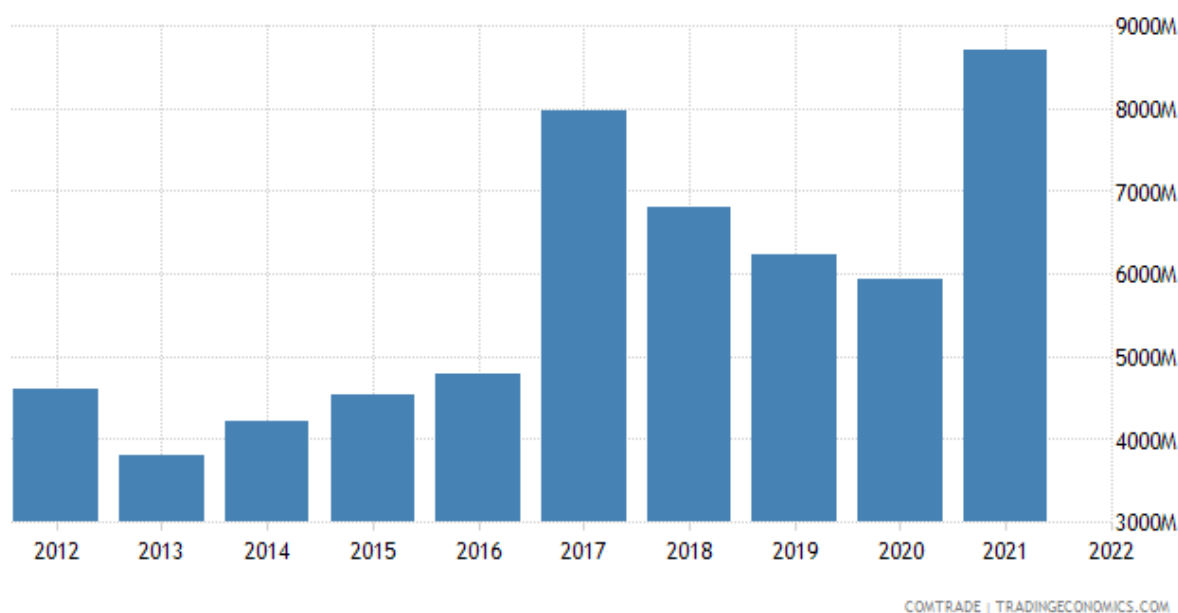


Fig.: 3.5 India Import from Russia (In million tonnes)^{vi}

In Fig.: 3.4 shows, Overall, Russian imports to India have fluctuated over the years. This graph clearly depicted how import commerce has expanded and how it is progressing. They gradually climbed from 2013 to 2017, reaching a peak value. After then, it will gradually decline over time. The epidemic has had an impact on global trade. In the midst of the Russian-Ukrainian conflict, the United States prohibited Russian commodities. However, India continues to trade with Russia in order to meet its needs.

Following the pandemic, there is a great demand in the market. So far, India has imported about 9,000 million tonnes of commodities from Russia. Following the invasion, the United States blacklisted Russian goods, and other countries followed suit. However, India boosts its imports from Russia when the commodity price falls. As a result, India imports a large amount of Russian oil as well as other commodities.

3.5.1 India Major Imports from Russia (2021): -

Top Import	Import Commodity	Value (In Million)
1	Mineral Fuels, Oils Distillation Products	\$2050M
2	Pearls, Precious Stones, Metals.	\$832.16M
3	Fertilizers	\$609.73M
4	Animal Vegetables fats and oils	\$410.64M
5	Paper, Paperboard, Articles of Pulp	\$164.73M

Table.: 3.3 Top Import from Russia to India in the year of 2021.

The Indian delegation included representatives from leading oil and gas corporations such as IOCL, OVL, GAIL, OIL, Perronet, and EIL.

Bilateral trade in services has been constant over the last five years, with the trade balance favouring Russia. While trade in services was worth USD 1095.4 million in 2017, it fell slightly to USD 999 million in 2018. For the year 2020, the figure is USD 973.645 million.

Apart from the ongoing investment process in important areas in both countries, both governments have undertaken steps to boost bilateral investments, especially through promoting high-level Government to industry and Trade to Business relations. Investment cooperation is planned in a number of important industries, including hydrocarbons, power, coal, nuclear power, fertilisers, information technology, mineral and metallurgy, steel, pharmaceuticals, and infrastructure projects.

3.5.2 After Invasion India Import Trade with Russia: -

According to Reuters calculations, India has purchased more than double quite so much crude oil from Russia in the 2 months since its war of Ukraine than it did in the entire year of 2021, as Indian refiners snatched up inexpensive oil that others had avoided. Russian oil imports were 16 million barrels in 2021. Since February 24, India has purchased at least 40 million barrels of Russian oil.

Multiple people with knowledge of the situation indicated that Indian refiners are discussing a six-month oil contract with Russia to import millions of barrels per month, as the world's third largest importer wants more Russian crude despite Western sanctions.

The contract is being negotiated by India's leading refiner, Indian Oil Corp. (IOC), Bharat Petroleum Corp (BPCL.NS), and Hindustan Petroleum Corp (HPCL.NS) with Russia's Rosneft (ROSN.MM). Since the Ukraine crisis, Indian refiners have purchased Russian oil on a delivered basis from global trading companies, with dealers arranging shipment and insurance.

India has been under fire for increasing oil imports to take advantage of a drop in prices after the United States, Europe, Australia, and Japan imposed economic sanctions on Russia in response to its war in Ukraine.

3.6 Analysis- India’s Export to Russia in Normal & War situation: -

According to the United Nations COMTRADE database on international commerce, India's exports to Russia totaled \$3.33 billion in 2021.

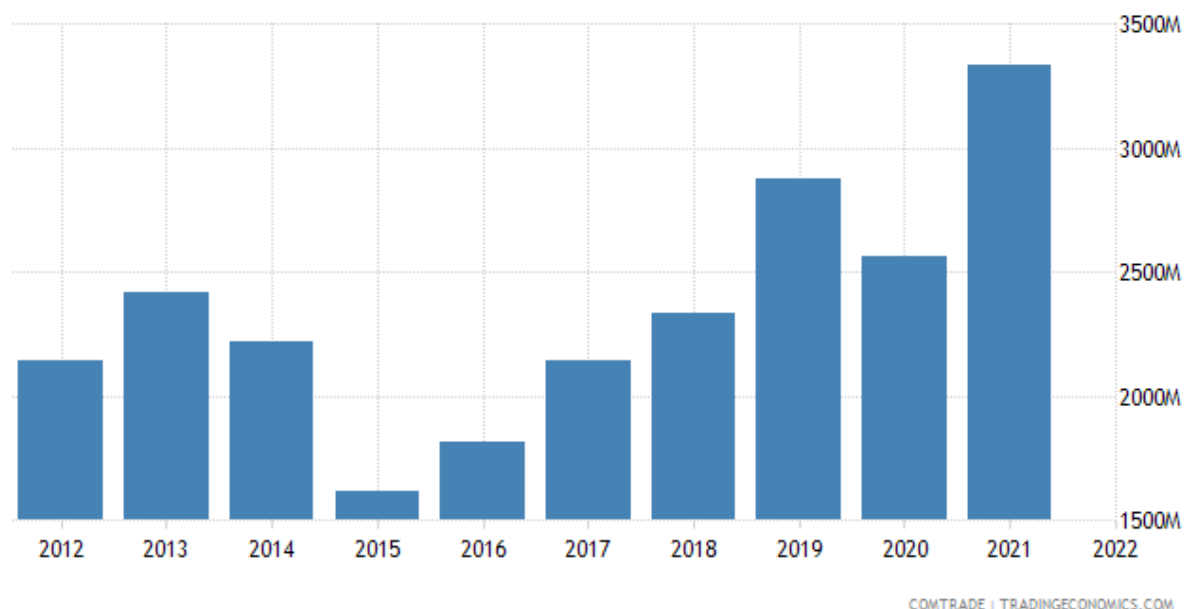


Fig.: 3.6 India Export to Russia (In million tonnes)^{vii}

In Fig.: 3.5 shows, Overall, India's export items to Russia have fluctuated over the years. This graph clearly depicted how import commerce has expanded and how it is progressing. They gradually climbed from 2015 to 2019, reaching a peak value. And the epidemic has an impact on global trade. Because of the Russian-Ukraine conflict, the United States has prohibited trade with Russia. India continues to import and export with Russia. In the year 2020, the pandemic situation is slightly improving, but it then surges to about 3500 million tonnes.

3.6.1 India’s Major Export to Russia (2021): -

Top Import	Import Commodity	Value (In Million)
1	Pharmaceutical Products	\$417.03M
2	Electrical, Electronic Equipment	\$333.07M
3	Organic Chemicals	\$233.28M
4	Machinery, Nuclear Reactors, Boilers	\$231.48M
5	Iron & Steel	\$130.78M

Table.: 3.4 Top Export to Russia from India in the year of 2021.

Improving trade and economic cooperation among India and Russia is a top objective for both countries' political authorities, as evidenced by revised targets of raising bilateral investment to \$50 billion and bilateral trade to \$30 billion by 2025.

According to Indian data, bilateral trade was USD 8.1 billion between April 2020 and March 2021. Indian exports totalled USD 2.6 billion, while Russian imports totalled USD 5.48 billion. According to Russian estimates, bilateral trade totalled USD 9.31 billion during the same time, with Indian exports being USD 3.48 billion and imports totalling USD 5.83 billion.

3.6.2 After Invasion India Export Trade with Russia: -

India plans to increase shipments to Russia by \$2 billion as the two countries work out a payment scheme in local currencies to maintain bilateral trade in the face of international sanctions imposed on Russia for invading Ukraine.

This occurs as the two governments negotiate on a proposal to settle commerce in rupees and rubbles, as well as strategies to balance trade given India's net importer of Russian commodities. India is aiming to export products produced by nations that have ceased shipments as a result of sanctions imposed by the US and its allies.

As shipping rates & energy prices rise further, the government cares about the immediate impact on Indian shipments to fighting Russia and Ukraine. Due to container shortages and pandemic disruptions, freight prices to Indian ports have skyrocketed in the last year. Within a week of the Russian invasion, they resumed their march. Cargo insurance premiums to the region are also rising. India's nearly \$10 billion bilateral commerce with Russia, and a fourth of that with Ukraine, is at urgent risk.

Currently, India's exports to Russia are \$3 billion, compared to approximately \$68 billion in sales to the United States. Total bilateral trade between the two countries reached \$11.8 billion in the first 11 months of 2021, up from \$8.1 billion in the previous full year. India has historically endeavoured to maintain a neutral stance on great power issues, even as it has entered groups such as the Quad security alliance includes Australia, Japan, and the United States.

CHAPTER-4

CHALLENGES FACED BY RUSSIAN ECONOMY DUE TO THIS WAR

4.1 World Countries Announced Trade Barriers on Russia: -

4.1.1 The Countries Hardest Hit by Russian's Trade Ban:

After the Russian Ukraine war, Russia restricted imports of US and European agricultural goods, demonstrating how drastically ties between Russia and the Western countries have deteriorated since the crisis in Ukraine began. The penalties are bad news for European farmers at a time when the EU's economy is slowing and food prices are plummeting.

Poland exports over \$1.1 billion in farm commodities to Russia each year, and its fruit sector, particularly apples, is expected to suffer.

The Norwegian seafood business, particularly the salmon industry, is likewise looking for new export markets. In 2013, Norway shipped over a billion dollars' worth of fish to Russia. The crisis is also beginning to have major ramifications in Russia. Food costs in Russia were already high prior to the ban, and they are projected to grow even further, with shortages possible - imported products account for over half of Russia's restaurant sector alone.

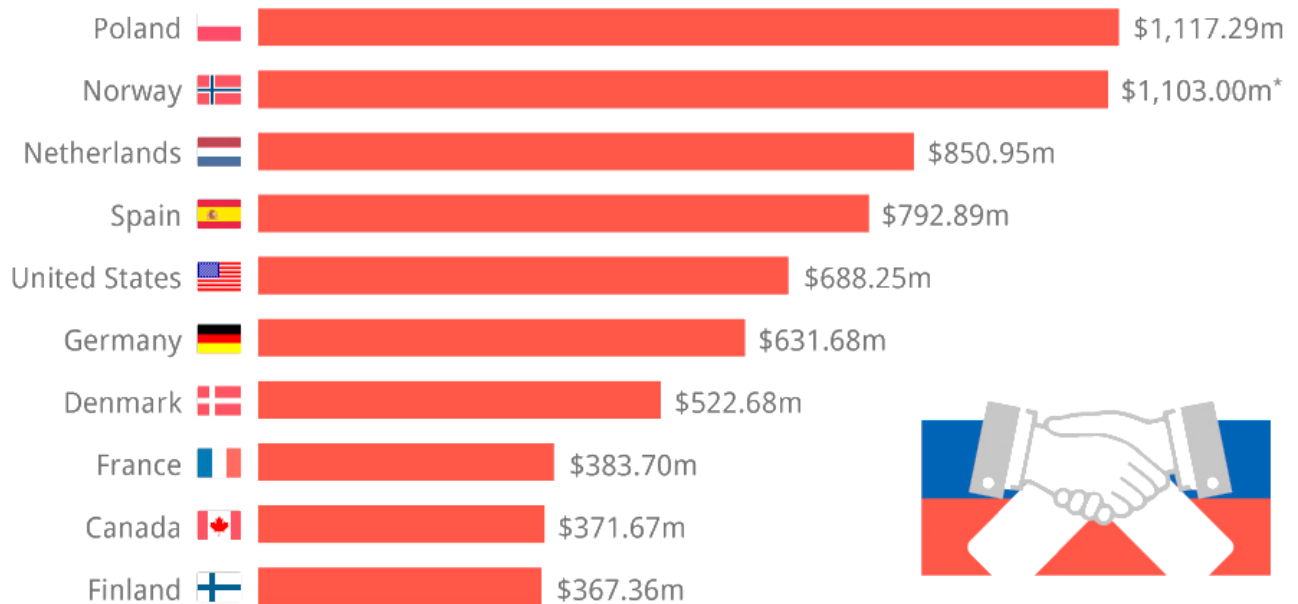


Fig.4.1 Countries hardest hit by Russians Trade Ban. (Value of sanctioned food exports to Russia by country (In million U.S. dollars)^{viii}

Trade between the US and Russia, with the exception of profitable goods such as seafood, vodka, and some diamonds, which the White House projected would cost Russia and over \$1 billion in export sales every year.

The US will also prohibit luxury goods shipments to Russia and Belarus, including high-end watches, automobiles, alcohol, jewellery, and clothes. The European Union imposed its own set of restrictions, including a ban on Russian steel and iron imports.

G7 countries pledge to stop Russian oil imports:

The statement from the group of seven countries like France, Canada, Germany, Italy, Japan, Britain, and the United States, did not specify exactly what commitments each country will make to move away from Russian energy.

The US, which was not a large user of Russian hydrocarbons, already has prohibited their import. However, Europe is significantly more dependent on Russian oil. The European Union has already stated that it intends to reduce its reliance on Russian gas by two-thirds this year, while Germany has resisted calls for a full boycott, and member states are still negotiating.

Additional Banned to Russian on United States:

In a white house statement, Washington also announced a new round of sanctions against Russia beginning in May 2022, focusing on two important areas: the media and access by Russian companies and affluent individuals to world-leading US accountancy and consulting services.

Accounting, the White House declared, is prohibited from providing accounting, trust and business formation, and management consulting services to anybody in the Russian Federation. And additional restrictions on the transfer of American goods to Russia, ranging from bulldozers to ventilation systems and boilers. In addition, the US has imposed visa restrictions on 2,600 Russian and Belarussian officials.

The limitations are the latest in a long line of economic hurdles erected by much of the developed world against Russia, whose economy is already suffering as a result. The currency has lost over half its value in the last month, food prices are skyrocketing, and Russia is facing a sovereign debt default. Its stock exchange has been closed since the start of the war.

4.1.2 The world most-sanctioned countries

According to a New York-based sanctions watchdog site, Russia has become the most sanctioned country in the world as a result of its war in Ukraine.

Hundreds of more sanctions were imposed after Russia declared its military actions against Russia on February 24. According to the website, 2,754 sanctions were already in place on Russia prior to February 22nd, and 2,827 more were applied in the days following the assault, bringing the total to 5,581.

Russia's total now outnumbers Iran's 3,616 sanctions, removing Tehran from first place, according to the BBC, citing Castellum.AI. Switzerland (568), the European Union (518), Canada (454), Australia (413), the United States (243), the United Kingdom (35) and Japan are among the countries and areas targeting Russia with sanctions, according to the website (35).

Sanctions are being imposed on Russia by countries all around the world in an effort to prevent the invasion of Ukraine.

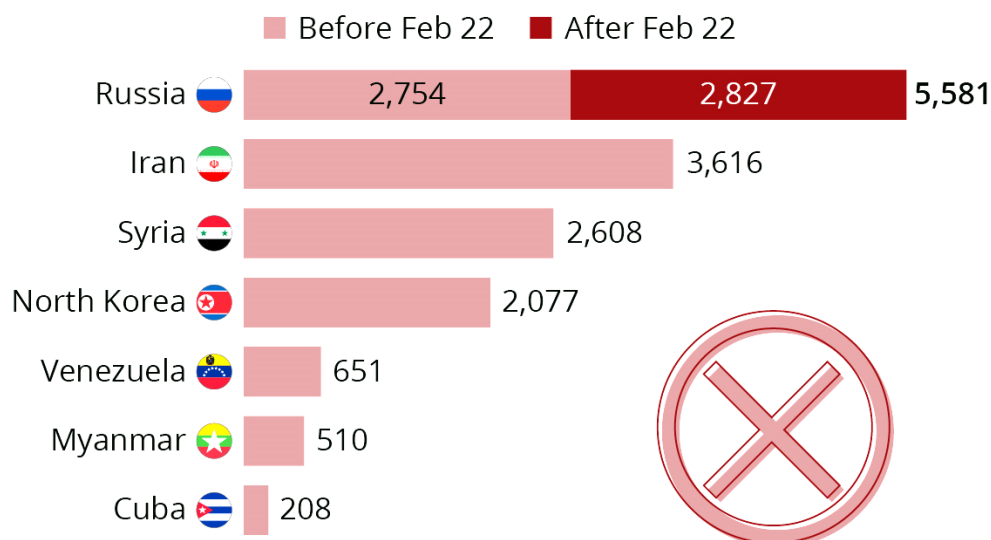


Fig.: 4.2: The World's Most-Sanctioned Counties^{ix}

When compared to the previous period, the number of international sanctions by the US, the EU, and select nations such as Switzerland, the United Kingdom, and Japan against Russian persons and businesses more than doubled.

And over 1,000 international corporations, including McDonald's, Coca-Cola, and Starbucks, have either suspended or withdrawn from Russia.

Nestle has dropped some of its brands, including KitKat & Nesquik, but has stated that it would continue to offer "critical items."

However, some brands, like Marks and Spencer, Burger King, and hotel giants Marriott and Accor, say they are unable to withdraw because their operations in Russia are governed by intricate franchise agreements.

4.2 Analysis the relationship between Russian & Ukraine.

Ukraine has prohibited all imports from Russia, one of its biggest trading partners before to the war, with yearly imports worth approximately \$6 billion, and has urged other nations to follow suit and impose stronger economic sanctions on Moscow. According to Ukraine's Vice Prime Minister "Svyrydenko," the enemy's budget will not receive these cash, reducing its ability to pay the conflict.

4.2.1 Russia Trade Balance

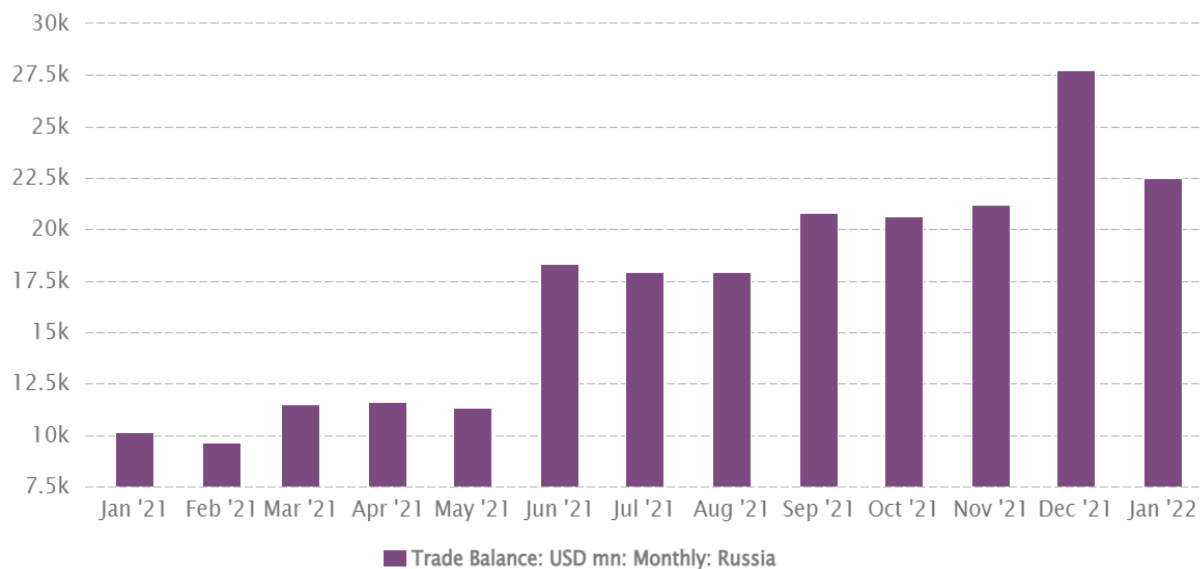


Fig.: 4.3: Russia’s Trade Balance from Jan’21 to Jan’22^x

- Russia's trade balance was 22.5 USD billion in January 2022, down from 27.7 USD billion the previous month.
- Russia's Trade Balance data is updated monthly and ranges from January 1998 to January 2022, with an average value of \$11.9 billion USD.
- The statistics peaked at 27.7 USD billion in December 2021 and peaked at 1.2 USD billion in February 1998.
- According to the most recent reports, Russia's total exports hit 29.6 USD billion in February 2021, a 38.6 percent rise year on year (year-on-year).
- Total imports totalled 25.3 USD billion in April 2021, a 38.6 percent rise year on year (year-on-year).
- In response to the "special military operation" in its neighbour on February 24th, several global brands and big enterprises from sectors ranging from technology to automotive and energy ceased their operations in Russia. In response to Western sanctions, Russia imposed an export restriction on more than 200 products, including telecommunications, medical, automobile, agricultural, and electrical equipment, until the end of 2022.
- Russia has had consistent trade surpluses since 1998, owing mostly to high commodity exports such as crude oil and natural gas. The Netherlands, Turkey, Italy, and Japan had the highest trade surpluses. China, the United States, and France have the largest trade imbalances.

4.2.2 Ukraine Trade Balance

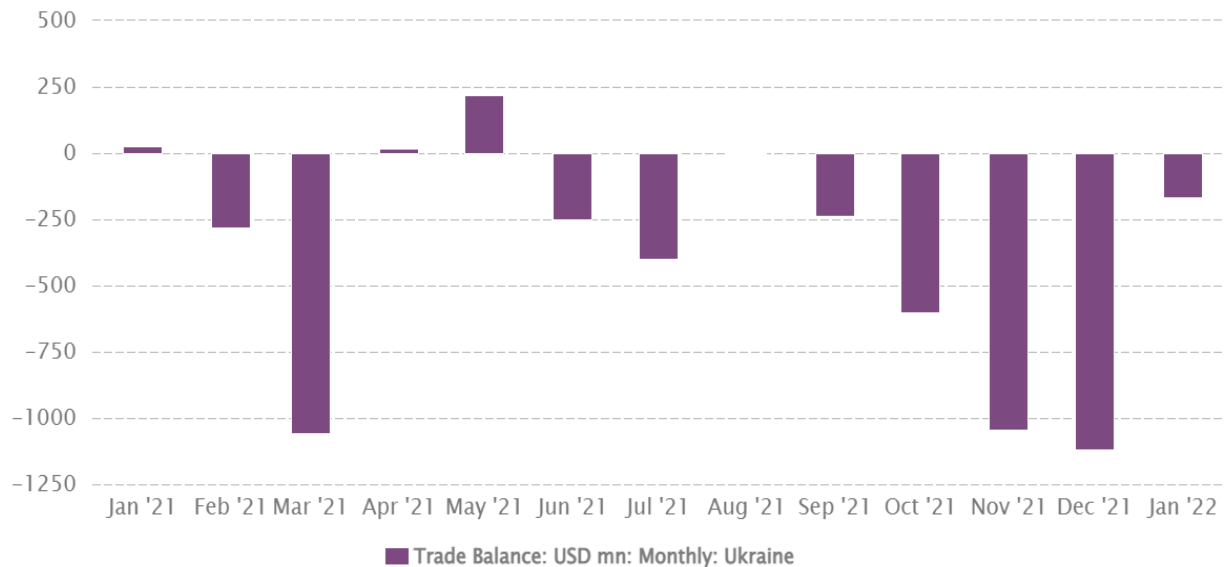


Fig.: 4.4: Ukraine's Trade Balance from Jan'21 to Jan'22 ^{xi}

- Ukraine's Trade Balance recorded a deficit of 166.0 USD mn in Jan 2022, compared with a deficit of 1.1 USD bn in the previous month.
- Ukraine's Trade Balance data is updated monthly, available from Jan 1998 to Jan 2022, with an averaged value of -317.8 USD mn.
- The data reached an all-time high of 9.6 USD bn in Sep 2002 and a record low of -9.2 USD bn in Oct 2002.
- In the latest reports, Ukraine's Total Exports reached 4.5 USD bn in Feb 2021, an increase of 58.5% YoY (year-on-year)
- Total Imports recorded 6.0 USD bn in Mar 2021, an increase of 58.5% YoY (year-on-year)
- Ukraine primarily exports steel, coal, gasoline and petroleum products, chemicals, machinery and transport equipment, as well as crops such as barley, corn, and wheat. More than 60% of exports are to other former Soviet republics, the most important of which are Russia, Kazakhstan, and Belarus. Turkey and China are two others.
- Ukraine imports primarily oil and natural gas, as well as machinery and equipment and chemicals. Its largest import partners are countries from the former Soviet Union (Russia and Belarus are the biggest). Germany, China, and Poland have also grown in prominence in recent years.

4.2.3 Trade relationship between Russian & Ukraine before and after the invasion.

Russia Exports to Ukraine

Table.: 4.1 shows, top 5 commodity Ukraine import from Russia in the year of 2021. Clearly the table mention, how the trade will be happened in before invasion happens. Ukraine import Mineral fuels, Oils, Distillation products in 3.31B USD dollar. But after the Russian invasion the Trade fully stopped. It's affected both countries' economies.

S. No	Commodities	Value (US Million Dollar)
1.	Mineral fuels, Oils, Distillation Products	\$ 3310M
2.	Machinery, Nuclear Reactor, Boiler	\$ 376.85M
3.	Plastics	\$ 338.94M
4.	Iron & Steel	\$ 287.57M
5.	Inorganic Chemicals, Precious Metal Compound	\$ 145.86M

Table.: 4.1: Top 5 commodity Ukraine import from Russia in the year of 2021

Ukraine Imports from Russia was US\$5.85 Billion during 2021, and US\$6.31 Billion during 2020 according to the United Nations COMTRADE database on international trade.

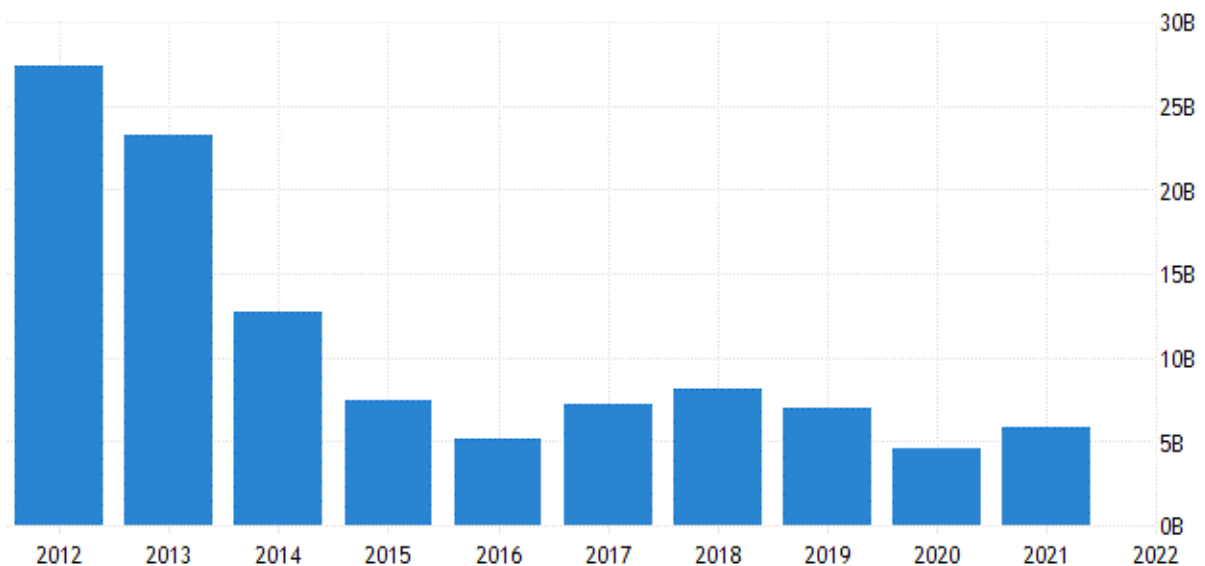


Fig.: 4.5: Russia Export to Ukraine (In US Billion \$)^{xii}

In the Fig.:4.5, ten years data for Russia export goods to Ukraine. Clearly seen, how the trade reduces in the certain period. Because there are many conflicts between Russia and Ukraine, finally 2022 February Russia invasion to Ukraine. It's become end of the relation between the two countries. The trade fully stopped, both countries are fight each other's. World countries like US, UK, EU all are they put trade barrier to Russia. It's affected their economy hardly.

Ukraine Exports to Russia

Table.: 4.2 shows, top 5 commodity Ukraine export to Russia in the year of 2021. Clearly the table mention, how the trade will be happened in before invasion happens. Ukraine export Iron & Steel in 841M USD dollar. But after the Russian invasion the Trade fully stopped. It's affected both countries' economies. Comparing the two countries trade, Russia is exporting more products than import to Russia. Evaluating two countries trade capacity Russia is more powerful than Ukraine.

S. No	Commodities	Value (US Million Dollar)
1.	Iron & Steel	\$ 841.66M
2.	Inorganic Chemicals, Precious Metal Compound, Isotope	\$ 653.90M
3.	Machinery, Nuclear Reactors, Boilers	\$ 548.30M
4.	Plastics	\$ 179.27M
5.	Articles of Iron (or) Steel	\$ 140.45M

Table.: 4.2: Top 5 commodity Ukraine export to Russia in the year of 2021

Ukraine Exports to Russia was US\$3.35 Billion during 2021, and US\$3.69 Billion during 2020 according to the United Nations COMTRADE database on international trade.

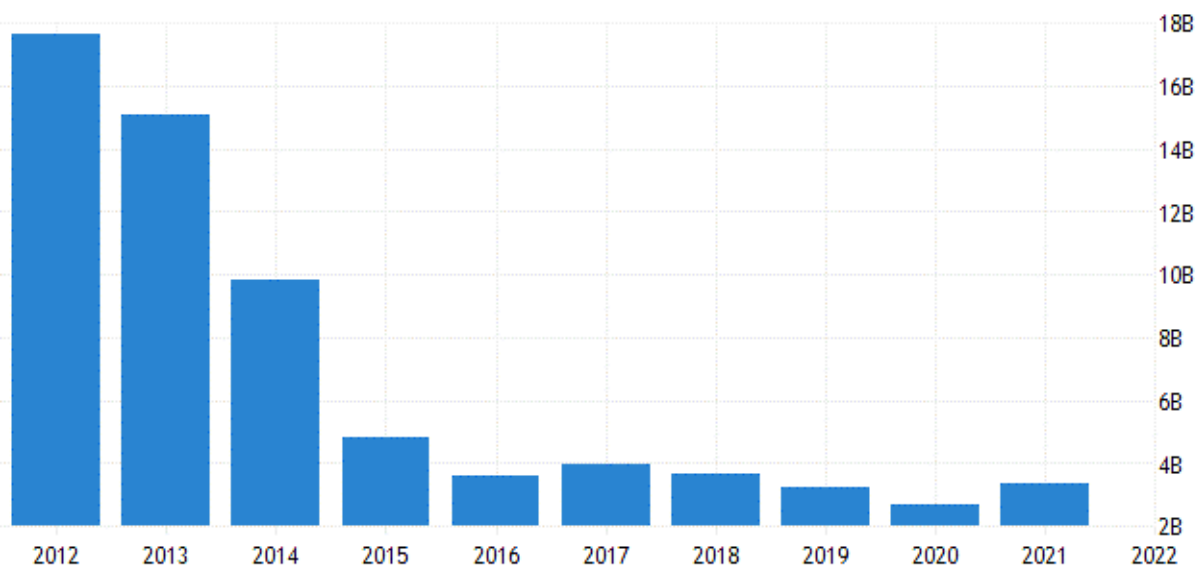


Fig.: 4.6: Russia Import from Ukraine (In US Billion \$)^{xiii}

In the Fig.:4.6, ten years data for Russia import goods from Ukraine. Clearly seen, how the trade reduces in the certain period. In the year of 2012, it will be nearly 18 billion, but it reduces year by year, and the year of 2020, it's coming under 3 billion. Because of all the world are affecting covid in that period. After that pandemic world come out and started trading. At the end of 2021, Ukraine Exports to Russia was US\$3.35 Billion.

4.3 Result on countries' sanctions against Russia.

4.3.1 How sanctions impact Russia and the global economy

Despite having 146 million inhabitants and the world's largest geographical mass, Russia's economy is relatively small, with GDP roughly similar to that of South Korea. The main reason Russia punches above its weight is that it exports some of the world's most essential commodities. As a result of Russia's invasion of Ukraine and the sanctions imposed by several Western countries, there is a possibility that commodity trade, particularly exports of oil and gas commodities to Europe, would be affected. This danger manifests itself as a significant increase in the pricing of essential commodities³, which might lead to even higher global inflation and worse global GDP.

Following Russia's invasion of Ukraine on February 24, prominent Western countries such as the United States, European Union, United Kingdom, Canada, and Japan imposed⁴ a variety of sanctions on Russia. These included a prohibition on secondary trading in Russian government bonds, a ban on dealing with key Russian banks, a ban on exporting crucial technologies to Russia, and a freeze on assets and travel for prominent Russians.

Russia's defence against sanctions was money from the sale of oil, gas, and other commodities, as well as the US\$630 billion pool of foreign reserves kept by the central bank.

Impact on Europe

Russia accounts for 4.8 percent of EU trade, down from 9.3 percent in 2012, and represents for 2.3 percent of German commerce. Ukraine accounts for only 1% of EU trade. The annexation of Crimea by Russia in 2014 hastened a long-term decline in Russia's relevance as a trading partner for Europe. However, the EU's trade with Russia is heavily centred in the energy sector. Russia is responsible for 40% of EU gas imports, 25% of oil imports, and 47% of imported solid fuels. If Russian gas were to be completely shut down, there would very certainly be bottlenecks in numerous European nations, including Germany, due to challenges in spreading alternate energy supplies.

Europe will initially be insulated from supply shortages due to its well-developed gas infrastructure. The length of time it can avoid major disruption is determined by available LNG imports, storage levels, and the development of alternate sources. Any shortage of supply would result in higher prices and, as a result, increased inflation throughout Europe. Furthermore, protracted supply disruption could have a detrimental influence on economy. Furthermore, uncertainty may have an impact on consumer and corporate sentiment throughout Europe. Meanwhile, private households have amassed large excess savings during the pandemic, acting as a cushion against diminishing economic activity.

Impact on the United States:

In comparison to the size of either economy, trade between the United States and Russia or Ukraine is negligible. The impact on the price of oil and other vital commodities is the primary channel via which this crisis may harm the United States. Furthermore, if the crisis has a large negative influence on the European economy, it may flow over into the United States due to the extensive trade between the two countries. Furthermore, Russia and Ukraine are key manufacturers of commodities used in the manufacture of semiconductors and batteries. If Russian and/or Ukrainian exports of these goods are restricted, worldwide prices would rise and shortages may occur, affecting some US businesses, contributing to inflation, and limiting potential output.

Impact on Asia/Pacific:

Asia-Russia trade is minimal, with Russia supplying some oil and natural gas to China and acquiring electronic & information technology products. This commerce is unlikely to be significantly interrupted, but it may be impacted by the necessity for trading entities to avoid sanctions. Furthermore, as a net energy importer, Asia is exposed to large increases in energy and other commodity costs.

4.3.2 Sanctions on Russia impact on Europe, United States, United Kingdom.

Military goods and mercenaries

- The UK, EU, and US have imposed a prohibition on the export of dual-use commodities, which are items that serve both civilian and military purposes, such as car parts.
- The UK is also sanctioning Russia's Wagner Group, a private military corporation that is regarded to operate as an arms-length branch of the Russian military.

Flights

- All Russian flights have been barred from flying over the United States, the United Kingdom, the European Union, and Canada.
- Private jets rented by Russians have also been prohibited in the United Kingdom.

Luxury goods

- The United Kingdom and the European Union have prohibited the export of luxury items to Russia, including automobiles, high-end fashion, and art.
- The UK has also placed a 35% tax on various Russian imports, including vodka.

Targeting individuals

- The United States, the European Union, the United Kingdom, and other nations have already sanctioned over 1,000 Russian persons and entities, including: wealthy business executives, known as oligarchs, who are deemed linked to the Kremlin, such as Chelsea FC owner Roman Abramovich.
- Russian government leaders and their families, including President Vladimir Putin's adult children and Foreign Minister Sergei Lavrov's relations
- President Putin's and Foreign Minister Sergei Lavrov's assets have been blocked in the United States, the European Union, the United Kingdom, and Canada.
- The UK has also prohibited the sale of "golden visas," which allowed wealthy Russians to get residency in the UK.

Countries banned Russian energy

- In addition to the new EU restrictions, the United States has banned all Russian oil and gas imports, and the United Kingdom has said that it will phasing out Russian oil supplies by the latter of 2022.
- Germany has halted preparations for the Nord Stream 2 gas pipeline from Russia.
- The EU has also stated that it will suspend Russian coal imports by August of this year.

Countries banned financial measures

- Russia's central bank assets have been frozen in order to prevent it from accessing its \$630 billion (£470 billion) in foreign currency reserves.
- This led the rouble's value to fall by 22%, raising the cost of imported products and causing Russia's inflation rate to jump by 14%. The rouble has since recovered, owing primarily to Moscow's intervention.
- The US has prevented Russia from making debt payments and used the \$600 million it has in US banks, making it more difficult for Russia to repay its international obligations.
- The international financial message queue Swift has been deactivated for major Russian institutions. This will cause payments to Russia for gas exports to be delayed.
- The UK has blocked key Russian institutions from accessing the UK financial system, frozen all Russian banks' assets, barred Russian enterprises from borrowing money, and imposed limits on deposits Russians can make at UK banks.

4.4 How Russian Economy was affected in recent (2022) times

4.4.1 Impact on Russian Economy:

Commodities constitute 10% of Russian GDP, roughly 70% of goods exports, and much more than 20% of government income. As a result, while Russia will benefit from increased commodity prices, the Russian economy is expected to suffer as a result of financial sanctions. Interest rates that are significantly higher will have a detrimental influence on credit market activity.

Rising shipping insurance rates have also led to greater company costs in Russia. Shipments to and from Russia have been halted by certain major shipping companies. Regardless of the sanctions, other corporations are either withdrawing their Russian operations or ceasing trading with Russia.

If many foreign corporations avoid Russian trade, there may be a shortage of consumer goods as well as crucial inputs utilised in Russian manufacturing. Most crucially, reductions in Russian commodity exports will very certainly result in even higher raw material prices, impacting the world economy.

Meanwhile, recent developments are likely to have two major consequences for Russia. The dramatic decrease in the value of the ruble (fig. 4.3), combined with a potential lack of imported commodities, will almost certainly trigger a significant increase in Russian inflation. Furthermore, a weaker currency reduces Russian consumers' real purchasing power by rising the prices of imported items. As a result, real GDP will almost certainly fall sharply.

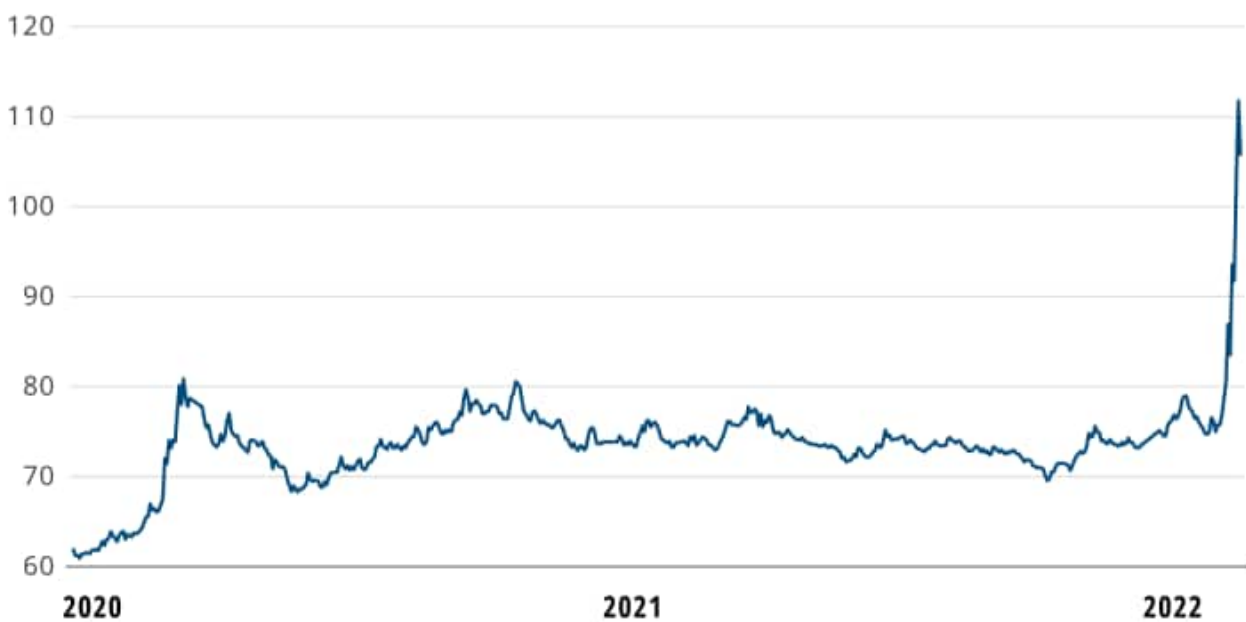


Fig.: 4.7: Decline in the value of ruble. (RUB/USD Exchange Rate)^{xiv}

In this graph, clearly given how the ruble value is going down. In the graph refer one ruble value is reduce against USD, then only they show like one USD equivalent value they spend more ruble value. Comparing the previous years, it goes huge high they clearly mention in the graph.

Furthermore, if the conflict and/or occupation of Ukraine continue for an extended period of time, the direct cost to the Russian government could be significant. Given the legalisation of the secondary market for Russian government debt, Russia's borrowing costs have skyrocketed. Although Russia begins with a healthy fiscal position and relatively low debt, future expenditures may be expensive to borrow under new financial conditions, putting the economy and financial system under strain.

4.4.2 Global Impact on Economy after the invasion:

The current crisis is anticipated to have two major effects on the global economy: fluctuations in commodity prices & disruption of commodity supply chains. Global oil and natural gas prices climbed dramatically in the week following the beginning of the war, particularly gas in Europe.

In addition, the prices of key mineral and food commodities increased, including nickel, palladium, neon, wheat, and corn (fig.:4.8 & Fig.:4.9). To some extent, these increases reflected fear and risk rather than actual sanctioning or disruption of trade. Investors likely worry that there could be new events that would disrupt trade in commodities, including European reductions in purchases of Russian oil and/or gas, or possibly a Russian decision to limit or curtail exports of key commodities.

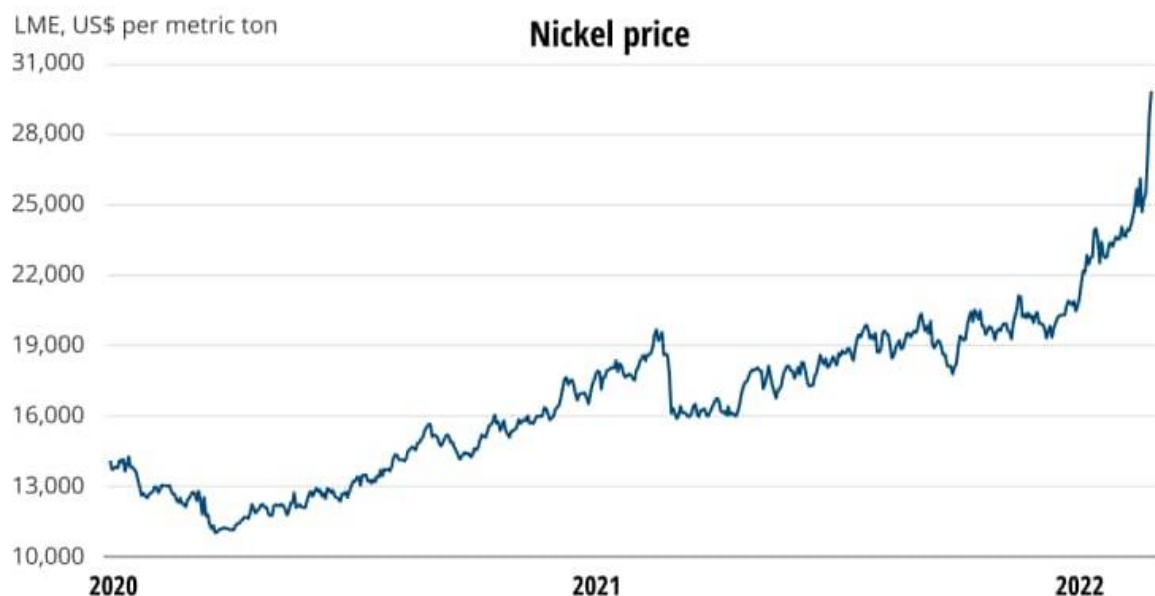


Fig.: 4.8: Global Prices of Key Minerals shot up in the invasion. (Ex.: Nickel Price)^{xv}

In addition, the prices of key mineral and food commodities increased, including nickel, palladium, neon, wheat, and corn (fig.:4.4 & Fig.:4.5). To some extent, these increases reflected fear and risk rather than actual sanctioning or disruption of trade. Investors likely worry that there could be new events that would disrupt trade in commodities, including European reductions in purchases of Russian oil and/or gas, or possibly a Russian decision to limit or curtail exports of key commodities.



Fig.: 4.9: Global Prices of Wheat & Corn prices shot up in the invasion.^{xvi}

Higher global prices of commodities, if sustained or aggravated, will almost certainly result in faster and extended high inflation in many nations, particularly in Europe. Higher commodity prices might also have a negative impact on economic growth. Prior to the invasion, some of the world's main central banks had already begun to tighten monetary policy in response to the steep rise in inflation in many nations. While the war may increase inflation, it may also reduce growth. As a result, central banks will have to pick between the two options. Many investors, according to futures markets, anticipate ongoing tightening of monetary policy, albeit at a little slower pace. Based on such interest rates, investors clearly believe that the recession will have a negative influence on Western economic growth, meaning reduced inflationary pressure. Higher energy prices and much more interruption to supply chains, on the other hand, would mean higher inflation. As a result, central banks will have a difficult balancing act.

4.4.3 Energy Impact: Crude Oil Price has reached its highest level:

The Russia-Ukraine war comes at a time when global natural gas markets are already constrained. Several supply and demand dynamics have been at work in recent months, including supply disruptions, rising demand from Asia's pro-gas policies, and a historically severe drought in Brazil.

Russia meets over 40% of Europe's gas consumption through pipelines and LNG. A temporary or partial disruption in Russian natural gas exports to Europe (approximately 10% of Europe's natural gas demand transits Ukraine) might be accommodated through increased LNG imports or increased local production. An extended disruption or complete trim, on the other hand, might have far-reaching implications. Furthermore, previous to the conflict, Europe anticipated that the Nord Stream 2 pipeline would transport larger volumes from Russia into Europe, helping to replenish reserves this summer. Germany, on the other hand, has suspended the pipeline's accreditation indefinitely.



Fig.: 4.10: Brent Crude Oil Price has reached its highest level since 2018. (US\$)^{xvii}

The escalation in the Russia-Ukraine conflict has also driven Brent and WTI crude oil prices to their highest levels since 2014 (Fig.:4.6). Russia meets over 40% of Europe's gas consumption through pipelines and LNG. A temporary or partial disruption in Russian natural gas exports to Europe (approximately 10% of Europe's natural gas demand transits Ukraine) might be accommodated through increased LNG imports or increased local production. An extended disruption or complete trim, on the other hand, might have far-reaching implications. Furthermore, previous to the conflict, Europe anticipated that the Nord Stream 2 pipeline would transport larger volumes from Russia into Europe, helping to replenish reserves this summer. Germany, on the other hand, has suspended the pipeline's accreditation indefinitely.

CHAPTER-5

RISK MITIGATION MEASURES ADOPTED BY DIFFERENT NATIONS

5.1 Countries that faced the problems based on the war situation: -

Impacts will flow through three main channels.

- 1) Higher commodity prices, such as food and energy, will drive up inflation further, diminishing the value of income and weighing on demand.
- 2) Neighbouring economies, in particular, will face disruptions in commerce, supply networks, and remittances, as well as an unprecedented rise in refugee flows.
- 3) Reduced company confidence and increased investor uncertainty will put pressure on asset values, tightening economic position and potentially driving capital outflows from emerging nations.

5.1.1 War hits across World's Regions

- Aside from the misery and humanitarian crises caused by Russia's war of Ukraine, the entire international economy will suffer from slower development and higher inflation.
- The dispute is a big setback for the global economy, slowing growth and raising costs.
- Russia and Ukraine are important commodity producers, and interruptions have caused global prices, particularly for oil and natural gas, to skyrocket. Food prices have risen, with wheat, which accounts for 30% of world exports from Ukraine and Russia, reaching a new high.
- Countries with direct trade, tourism, & financial exposure will face extra pressures in addition to global spill-overs. Oil-importing economies will suffer larger fiscal and trade deficits, as well as increased inflation pressure, however certain exporters, such as those in the Middle East and Africa, may gain from higher prices.
- Food and fuel price hikes may enhance the likelihood of unrest in several countries, ranging from Sub-Saharan Latin America and the Caribbean to the Caucasus and Central Asia, while absolute poverty is projected to worsen in parts of Africa and the Middle East.
- It is difficult to predict these reverberations, but we already expect our growth predictions to be revised downward next month, when we will provide a more complete picture in our World Economic Outlook and regional assessments.
- Longer term, the battle could radically change global economic and geopolitical order as energy commerce shifts, supply linkages rearrange, payment networks fracture, and governments reconsider reserve currency holdings. Increased geopolitical tension increases the possibility of economic fragmentation, particularly in trade and technology.

5.1.2 How invasion effects hit other Countries

Europe:

- Because Russia is a significant source of natural gas imports, energy is the main spill-over conduit for Europe. Wider supply-chain disruptions may also have an impact. These repercussions will fuel inflation and slow the pandemic's recovery. Rising finance expenses and an influx of refugees will affect Eastern Europe. According to UN estimates, it has taken in the majority of the 3 million people who have recently fled Ukraine.
- European governments may also face economic difficulties as a result of increased expenditure on energy security and defence budgets.
- While foreign exposure to falling Russian assets is small by global standards, pressures on developing economies may increase if investors seek safer havens. Similarly, the majority of European banks have limited & manageable direct exposures to Russia.

Central Asia:

- Beyond Europe, these neighbouring nations will bear the brunt of Russia's recession and sanctions. Close trade & payment-system links will stifle commerce, remittances, investment, and tourism, harming economic growth, inflation, and the external and fiscal accounts.
- While commodities exporters should gain from higher international prices, they face restricted energy exports if restrictions are extended to pipelines passing through Russia.

Middle East and North Africa:

- Higher energy and food prices, as well as tighter global financial circumstances, are likely to have significant repercussions. For example, Egypt imports over 80% of its wheat from Russia and Ukraine. And, as a favourite tourist location for both, visitor spending will fall.
- Inflation-fighting policies, such as increasing government subsidies, may put additional strain on already strained fiscal balances. Furthermore, worsening external financing conditions may encourage capital outflows and add to growth challenges for countries with high debt levels and significant financing needs.
- In some nations, such as those with poor social safety nets, few job possibilities, limited fiscal headroom, and unpopular administrations, rising prices may exacerbate social tensions.

Sub-Saharan Africa:

- Just as the continent was beginning to heal from the pandemic, this catastrophe jeopardises that progress. Many countries in the region are especially vulnerable to the consequences of the war, owing to rising energy and food prices, decreased tourism, and potential difficulties accessing global capital markets.

- The conflict occurs at a time when most governments have little policy space to counteract the effects of the shock. This is expected to exacerbate socioeconomic strains, vulnerability to public debt, and scarring from the pandemic, which was already affecting millions of homes and companies.
- Record wheat prices are especially troubling for an area that imports approximately 85 percent of its supplies, one-third of which originates from Russia or Ukraine.

Western Hemisphere:

- Energy and food prices are the primary sources of spill-overs, which will be significant in some circumstances. High commodity prices are projected to accelerate inflation in Latin America and the Caribbean, which currently has an annual rate of 8% in five of its main economies: Brazil, Mexico, Chile, Colombia, & Peru. Central banks may have to defend their credibility in fighting inflation further.
- The growth consequences of expensive goods differ. Higher oil prices damage Central American and Caribbean importers, while exporters of oil, copper, iron ore, corn, wheat, and metals can charge more and offset the impact on GDP.
- Financial circumstances remain generally favourable, but escalating conflict may trigger global financial crisis, which would weigh on growth as domestic monetary policy tightens.
- Although the US has little linkages to Ukraine and Russia, which dilutes direct effects, inflation was already at a four-decade high before the war lifted commodities prices. When a result, prices may continue to rise as the Federal Reserve raises interest rates.

Asia and the Pacific:

- Spill-overs from Russia are likely to be limited due to the lack of direct economic linkages, but slower growth in Europe and the global economy will have a significant impact on key exporters.
- The most significant implications on current accounts will be felt in ASEAN nations, India, and frontier economies, including several Pacific Islands. This might be exacerbated by a drop in tourism for countries that rely on Russian visitors.
- Because fiscal stimulus will support this year's 5.5 percent growth target and Russia buys a very modest portion of China's exports, the immediate effects should be smaller. Nonetheless, commodity prices and falling demand in major export markets complicate matters.
- Spill over effects is similar in Japan and South Korea, where additional oil subsidies may mitigate the effects. Higher energy prices would drive up India's inflation, which is already beyond the central bank's goal range.
- Local production and a greater dependence on rice rather than wheat might alleviate Asia's food-price challenges. Imports of expensive food and energy will raise consumer prices, however

subsidies and price controls for fuel, food, and fertiliser may mitigate the immediate impact—at a cost.

5.2 How the common man suffered during the war:

5.2.1 People and countries distress for the invasion

Food Security (Availability & Pricing)

- Russia's attack of Ukraine has already resulted in price increases for bread and other basic items, notably in Middle Eastern and North African nations that rely heavily on grain from Ukraine, and governments must act quickly to defend the right to food.
- The interruption in Russian and Ukrainian supply is compounding the rise in food costs, which has been on the rise since the second half of 2020, according to the FAO's Food Price Index. Food prices have risen by 54% since then, according to data from February.
- While Africa is still recovering from the socioeconomic consequences of the COVID-19 pandemic, the Russia-Ukraine crisis offers a serious threat to the world economy, with several African countries directly affected.
- Global wheat, sunflower, and oil crude prices have all reached record highs in recent weeks. Africa relies significantly on food imports from both countries, and the continent is already facing price shocks and interruptions in the commodity supply chain.
- Russia and Ukraine, both known as the world's breadbasket, are major exporters of wheat and sunflower seeds to Africa. Africa's North. Wheat consumption in Africa is expected to reach 76.5 million tonnes by 2025, with 48.3 million tonnes (63.4%) imported from outside the continent.

High Price (Grains, Energy, Metals)

Prices for energy, grains, and metals soared since the invasion of Ukraine, signalling that inflation rates are poised to accelerate.

Fig.: 5.2 shows, how the price for various commodity changes in ten years. In the war of Russian and Ukraine hardly hit all-over world. In major countries are these effects in affected very seriously. So, many commodity prices are increase in simultaneously. Comparing past ten-year, invasion of Russia is the major reason for commodity price hike. All over world comes out from pandemic situation, but the invasion is the again going down of economy of countries.

In first graph, Crude Oil price hike will be display. Because Russia is the world top most exporter of the crude oil in all over world. In many reasons Russia suddenly stops the supply of crude, so supply is less and demand automatically increase. Second graph shows for natural gas. Both cases crude oil and natural gases are in same criteria.

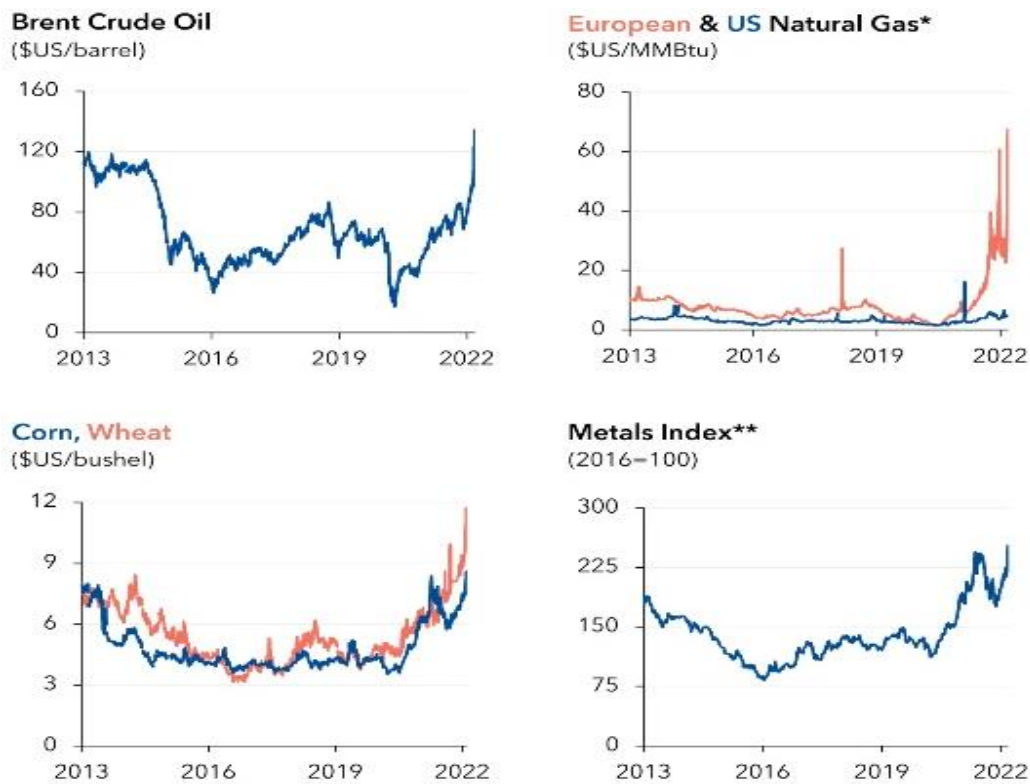


Fig.: 5.1 Basic Commodity Prices comparing for last 10 years^{xviii}

And, Food commodity also affect threw the invasion. Russia and Ukraine are major Wheat and Corn supplier in the world. For the war situation, both countries are stop export the products. So other countries like India, Australia are start the trading with countries for exporting wheat and corn. It's a huge success for other countries. They clearly understand the market they use for it.

Even though, the fourth graph shows, how the metals products prices hike. Prices have gone up from the beginning of March by 5-7 per cent whereas the cost of production on account of coking coal, gas, zinc, iron ore and other raw materials has increased by 25 percent. Russia and Ukraine combined are the world's second-largest steel exporters after China, with more than 40 million metric tons exported annually — the war between the two countries, which shows no sign of abating, is shocking the steel market and causing prices to rise.

Civilian Casualties

- The United Nations recorded 7,172 civilian casualties in Ukraine, including 3,459 killed and 3,713 injured as of May 10, 2022.
- Around 3,170 people were killed in the Donetsk and Luhansk areas of Ukraine, which are backed by Russia. There were 1,721 fatalities and 1,449 injuries.

Joblessness

- Thousands of individuals have lost their jobs as a result of the conflict between Russia and Ukraine. Not only Russia and Ukraine, but the entire world. Because the invasion has had little effect on the global supply chain.
- Because Russia blocks the black sea via trade, the maritime sector is primarily losing jobs. And sailors are afraid to sail in that area. Many shipping corporations have closed their Russian operations.
- Many global corporations are being pushed out of Russia. Under pressure from investors and consumers, many Western corporations are withdrawing from Russia, closing outlets and halting operations.
- McDonald's recently announced that it would sell its Russia operations and exit the country after 32 years.
- In addition, Renault, the French manufacturer, announced that it is selling its 68 percent ownership in AvtoVAZ, Russia's largest carmaker, to a state-backed firm as it exits the country. The agreement allows Renault to purchase back its stake if it decides to return to the country.
- Adidas, Airbus, American Express, Apple, Nike, Sony, Unilever, Cogent, Deloitte, DHL, IBM, Ikea, KPMG, FedEx, H&M, Mastercard, Microsoft, Netflix, UPS, Visa, Warner Bros., and others are downsizing, suspending, or quitting their business in Russia.

5.2.2 Untangling short- and midterm disruptions

Financial-system ripple effects will occur:

- The disruption of sanctioned cash transactions has the potential to reverberate across the banking system and financial markets, with serious consequences for bondholders, borrowers, aircraft lessors, derivatives counterparty, and investors. There is still a risk of global transmission with second- and third-order impacts.

Global technology standards are more likely to separate:

- Governments have intensified their use of geoeconomics instruments such as sanctions, direct state backing to critical companies, and export bans on sensitive equipment, software, and technology to advance security interests and foreign-policy objectives. The employment of these technologies in concert by like-minded countries in response to Russia's invasion of Ukraine is expected to accelerate the trend toward standardisation and independent technology development.

Food security is on the agenda:

- The concentration of wheat, fertiliser, and associated production in Ukraine and Russia will put pressure on world food supplies. Securing a steady food supply to the country's most vulnerable to exports from these regions is quickly becoming a serious challenge.

A new age of supply chain control efforts and localization attempts has arrived:

- The age of not scrutinising supply chains, trusting suppliers, and optimising for cost is likely over. These behaviours, already tainted by new tariff regimes as well as the COVID-19 pandemic, are now likely to get lost. Governments and businesses are working to improve supply chain resilience and are exploring new methods to fund these efforts.

Vulnerable will suffer the most:

- Vulnerable populations are more likely to become refugees, and rising food and fuel prices will hit the hardest. Global aid efforts are underway to guarantee that people's fundamental needs for food, shelter, and psychological safety are provided both inside and outside of crisis zones. Many governments are holding preliminary conversations on how to offset rising energy prices for all, and the first funds have indeed been made available.

Energy policy is rotating toward secure access and source diversification:

- The worldwide importance of Russian natural gas and oil highlights the relevance of energy access. While renewable energy can help to solve a portion of the challenge, gas will continue to be an essential source, and nuclear and coal may become greater components of the fuel mix to assure supply, particularly to offset future gas shortages. The consequences of reaching publicly committed net-zero emissions are unclear.

The invasion of Ukraine is causing a massive humanitarian crisis:

- In addition to the anguish and suffering felt by those inside Ukraine, there are currently over three million people seeking asylum in neighbouring countries, with a similar number internally displaced. As with past significant conflicts and refugee crises, such as those in Syria and Yemen, assisting, sheltering, and hosting these poor individuals will be a monumental effort for the international community.

5.3 How world country faced alternative ways to find the solution:

5.3.1 Risk Consideration for Russian Ukraine War:

The crisis is also producing political and economic upheavals around the world, with businesses in the region and beyond handling conflict-related risks to their employees, assets, operations, and supply chains. Companies are also seeking legal counsel on the potential impact of a developing sanctions system on their operations.

Political Risk:

Russia's risk of appropriation remains high, particularly in its maritime borders. Retaliation against third-country vessels and cargos, including the possibility of a full blockade, may impede trade and draw attention away from the precarious environmental situation along the route.

Businesses may be unable to recover revenue from their subsidiaries and maintain their staff if the Russian government freezes assets in the country. Meanwhile, Russia's lack of access to international trade and debt markets will jeopardise the operations of numerous supply chain members.

Trade Credit:

Traders with Russian and Ukrainian contracts are more prone to experience payment delays & defaults. However, because payment durations for insurance plans are typically 120 to 180 days, the number of non-payments will not be known for some time.

The exclusion of several Russian banks from the SWIFT global payments messaging system will undoubtedly have an impact on a wide range of trade payments. However, Russian corporations may be ready to pay for items in other ways, such as through offshore bank accounts.

Under martial law in Ukraine, providers of products and services to the government are not paid until the moratorium is removed, unless those products and services help mobilise forces to defend the country.

Even in the presence of a legal credit limit or firm orders, new shipments to buyers in impacted territories are uncertain to be covered by insurers or subject to a specific approval procedure. Customers should carefully examine available insurance messages on new supplies before shipping and contact their broker for any explanation to prevent possible claim disputes.

Energy and Power:

Countries that convert from Russian gas to, say, US gas are likely to see an increase in energy costs, if only owing to proximity. Companies in certain locations may face major shifts in values,

growing business interruption and dependent higher insurance risks, and supply chain issues as a result of these increases.

Many countries, including the United States and the United Kingdom, as well as regions such as the Middle East, Asia, and the Pacific, are not dependant on Russia for oil or natural gas. However, the effect of European countries exploring for alternative energy sources will increase demand from the existing non-Russian markets. Without a matching increase in supply, energy prices are projected to rise.

Supply Chain:

Russian ships have been barred from entering UK ports. The embargo applies to all vessels owned or controlled by anyone with ties to Russia, and police will be given unprecedented authority to detain Russian warships. In the short term, determining whether vessels are owned and operated by corporations with Russian interests will be difficult.

Shipping corporations are likewise thinking about their workers' long-term viability. Around 200,000 Russians and 75,000 Ukrainians make up the world's two million crew. Many Ukrainian crew members are going to spend time with their family and fight in Ukraine. Because many of these members of the crew hold the rank of officer and are responsible for navigation and the safe running of ships, their absence will be difficult for the industry.

In the long run, a protracted war in Ukraine could have a significant impact on commodity prices. Because Russia and Ukraine produce 29 percent of the world's wheat supply, 19 percent of corn, and 80 percent of sunflower oil exports, there is a risk of food insecurity for nations that rely on imports of these commodities, particularly those in Africa and the Middle East.

Ukraine also produces a significant amount of neon gas, which is used in the creation of semiconductors, as well as uranium, palladium, platinum, titanium, iron ore, steel, nickel, copper, and vanadium.

5.3.2 Business and Risk Management Implications:

Potential for Negative Impacts to Businesses due to:

- Political violence/nationalization
- Trade interruption, including supply chain disruption/destruction
- Increased cyberattacks
- The ability to enter or leave the region safely
- Possible expropriation of Western assets in Russia

Businesses should identify potential emergent threats and take the following overall risk management measures:

- 1) Establish a risk map or risk description of operations and locations in conflict zones — include property values & employee counts as critical data; identify the need for and technical consulting alternate solution supply chains; determine alternative geographical areas for rapid recovery; as well as log, update, and provide best practises to travelling employees.
- 2) To allow speedy access in the case of a cyberattack, review and retain hard/physical copies of all insurance policies, important contacts, claim reporting detail, and disaster recovery and business continuity plans.
- 3) Following a meeting with internal/external risk management, submit any notice of occurrence or claim to your insurance companies as soon as possible.
- 4) Implement all current cyber risk management methods and address any serious vulnerabilities that are detected. Conduct a thorough dive into cyber "hygiene" in order to reduce the possibility of being a target and boost employee threat awareness programs.
- 5) Finally, it is vital to comprehend the ongoing commercial risks in the conflict zone. Global effects may include bank transfer issues (due to SWIFT restrictions), commodities pricing implications, freight and aviation concerns due to a lack of adequate insurance, and a heightened likelihood of sanction violations.

As the situation evolves and sanctions may be imposed, continue to regularly monitor the situation in order to keep your particular policies & risk management procedures up to date.

5.3.3 Countries risk management of war:

While many of the required changes to existing global supply chain architecture and operations would most probably take years to accomplish, there are some steps that may be performed immediately.

Understand and activate alternate sources of supply:

Companies that rely on several suppliers for crucial inputs must act fast to activate supplementary supplier relationships and acquire additional vital inventory and capacity. At the same time, corporations must exercise caution when selecting different sourcing sites for important commodities, as doing so may expand industry reliance on already-concentrated supplier hubs.

Understand the impact of commodity inflation in supplier and customer contracts:

- Sharp increases in various commodities—oil and natural gas, metal commodities, and agricultural commodities—were rapidly felt as a result of the Russia-Ukraine conflict.

- Where possible, revisit consumer price. The growing cost of fuel is typically recovered through a fuel surcharge incorporated into freight conditions. The effects of growing commodity costs on product profitability and customer pricing, on the other hand, may be less clear.
- As a result, it is critical to comprehend the effects of inflation on product and consumer expenses and devise measures to retain profitability.

Monitor logistics constraints and costs:

- The Ukraine crisis is disrupting established supply lines, stressing the importance of logistical flexibility in global supply chain design. Even before the crisis, most businesses were dealing with difficult logistics issues such as port congestion, container shortages, long lead times, and record-high ocean freight charges.
- Rising oil prices are exerting extra inflationary pressure on all means of transportation. Ocean shipping in the Black Sea has become more difficult, air freight availability & lanes are changing as flights must be rerouted round the closed air space over Ukraine and Russia, and freight trains that were transporting goods from China to Europe via Russia, Ukraine, or Belarus may no longer be available.

Prepare for disruption in operations in the conflict region:

- According to the data, there aren't many international groups with direct activities in Ukraine's heavily affected regions. However, during the first few weeks of this war, we have seen a number of multinational firms in the energy, mining, agriculture, health care, and consumer products sectors make difficult decisions about whether to halt, scale back, or continue activities in Russia and Ukraine.
- Companies that continue to operate in Russia and Ukraine must prioritise worker safety while preparing for considerable interruption to logistical infrastructure and some other supply chain partners.

Conduct global scenario planning:

- The international community hopes that this crisis can be resolved shortly. However, the duration & magnitude of this crisis are unknown, as are the consequences for commodities prices and supply availability, as well as the ramifications of additional prospective sanctions and government action.

Successful executives will take significant action to address the crisis's immediate dangers and stabilise their supply chain. They will also take a long-term perspective, recognising that this crisis is likely to increase the importance of several of the fundamental & structural changes to global supply chains that are already being speeded up as we emerge from the COVID-19 pandemic, as well as Russia's invasion of Ukraine.

CHAPTER-6

SUMMARY OF FINDINGS OF THE STUDY

6.1 Summary:

The paper details the challenges that this invasion will have for Russia, Ukraine, and other countries. The project is about rising prices for fundamental commodities such as rice, wheat, crude oil, natural gas, and so on. The way shipping corporations handle the military scenario has an impact on maritime trade. Slower growth and higher inflation will affect countries like Sri Lanka and Egypt, as well as the entire global economy.

The project report discusses how and why the war affects global trade and how countries manage the issue in terms of marine trade balance. India continues to trade with Russia in both directions. Other advantages India obtains in the Russia-Ukraine conflict. And the difficulties that this war has posed to Russian economics centred on maritime trade. Many nations have banned the import of Russian products; how Russia has handled the situation; and what damages Russia has suffered.

6.2 Findings:

In this project report some findings that found relevant are listed. During the through research conducted on the information impacts on global maritime trade and countries mitigation those risks and some countries are hardly affects in maritime sector that some findings that made my project a success is a follow's:

- The Russia-Ukraine conflict is causing significant disruptions in shipping and air freight. According to supply chain firms, Russian military are blocking off shipping routes, logistics firms are suspending services, and air freight charges are soaring.
- Many logistics companies have also ceased supplies to and from Russia as well as Ukraine, while container shipping firms are avoiding Russia, accounting for 14.5 percent of the worldwide shipping workforce.
- The Russia-Ukraine conflict has had a significant impact on businesses, particularly the maritime sector, because the two nations are among the world's largest exporters of raw materials. Many sectors are facing supply chain challenges as well as macroeconomic pressures.
- Almost two weeks after the invasion of Ukraine, gasoline prices reached all-time highs, with oil reaching \$139 per barrel at one point. Meanwhile, many tankers will be inaccessible to businesses, which will have a substantial impact on oil and vessel pricing.

- The world's largest container carriers, Mediterranean Shipping Co. and A.P. Moller-Maersk A/S, have blocked bookings for Russian freight, with Maersk reporting "Ripple Effects" and "Significant Delays" across the region.
- Indonesia, Turkey, Morocco, Bangladesh, the Philippines, Tunisia, Yemen, Nigeria, and Thailand all purchase more than \$100 million in wheat from Russia and Ukraine. India is now in a position to supply wheat to those countries. According to the Ministry of Commerce and Industry, India exported approximately 2 MT of wheat in 2020-21, and the country has already exported 6 MT during the April-January period of the current fiscal year 2021-22.
- Prices for energy, grains, and metals soared since the invasion of Ukraine, signalling that inflation rates are poised to accelerate. Russia and Ukraine combined are the world's second-largest steel exporters after China, with more than 40 million metric tons exported annually — the war between the two countries, which shows no sign of abating, is shocking the steel market and causing prices to rise.
- India imports more than 80% of its crude oil needs. In the current fiscal year through February, the government purchased 193.5 million tonnes of crude oil at a cost of \$105.8 billion. During the time, the country's overall consumption of petroleum products was 183.3 million tonnes.
- India's coal imports from Russia increased to levels not seen in more than two years in March, indicating that the country's appetite for coal is increasing.

6.3 Conclusion:

The Russia's invasion of Ukraine, the entire global economy will suffer from slower development and higher inflation. Impacts will be channelled through three major areas. One, increased commodity prices, such as food and energy, will actually increase inflation more, diminishing the value of income and weighing on demand. Two, particularly neighbouring economies, will face disrupted trade, supply linkages, and remittances, as well as an unprecedented rise in refugee movements. Third, lower company confidence and more investor uncertainty will put pressure on asset prices, tightening financial conditions and perhaps spurring capital outflows from emerging nations.

From this study, clearly observed that there is the battle among both Ukraine and Russia is extreme supply side tensions, damaging consumer sentiment, and threatening global economic growth against a turbulent backdrop of global price inflation stemming from rising food and energy prices, as well as disrupted supply chains that after the coronavirus pandemic.

The study also found that the war has added to mounting concerns of a sharp global slowdown, surging inflation and debt, and a spike in poverty levels. The economic impact has reverberated through multiple channels, including commodity and financial markets, trade and migration links and adversely impacted on trade confidence.

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