



**Live Project Topic: Global Environment - The Effect of Russia & Ukraine  
war on India.**

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## **STUDENT DECLARATION**

We hereby declare that the Dissertation report titled “**Global Environment: The Effect of Russia & Ukraine war on India**” submitted in partial fulfilment of the requirement of degree of Master of Business Management in Bangalore University, has been prepared by **Team 1** during the academic year 2023-2024 under the Guidance **Prof. Sainath AR Sir** in Department of Management.

We further declare that this Live Project Report is the outcome of our own efforts and that is not submitted to any other University or Institute for any certificate.

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## **Abstract:**

The conflict between Russia and Ukraine has underscored significant vulnerabilities in the global financial system. The war has dealt a substantial blow to the global economy, precipitating rapid inflation and sluggish economic growth. The ongoing hostilities have not only disrupted trade routes but have also caused significant disruptions in global supply chains.

Western nations have united in their condemnation of the Russian Federation, imposing a series of sanctions and bans. These punitive measures have resulted in a surge in commodity prices, complicating the recovery process for both the global and domestic economies, which are still reeling from the effects of the gruelling COVID-19 pandemic.

Despite Russia and Ukraine together accounting for only about 2% of the global economy, they play a critical role as major producers of several essential products, such as grains, energy resources, and various raw materials. The interruption of these supplies has had far-reaching consequences, driving up prices and creating shortages worldwide.

One of the countries deeply impacted by the war is India. The conflict has affected India's trade relationships, increased inflationary pressures, and disrupted its economic stability. India's dependence on imports of energy and other critical goods from the region has made it particularly vulnerable to the fallout from the conflict.

This article will delve into the historical context of the Russia-Ukraine conflict, examine its widespread global ramifications, and specifically explore how the war has affected India. By understanding these dynamics, we can better appreciate the interconnected nature of the global economy and the far-reaching impacts of regional conflicts.

# **Chapter 1**

## **Introduction**

As 2022 commenced, the global economy appeared poised for a robust post-COVID recovery, with many nations implementing measures to stimulate growth and control inflation. The International Monetary Fund (IMF) projected a global GDP growth of 4.4% for the year (January 2022). However, this optimism was soon overshadowed by Russia's invasion of Ukraine in February 2022. The conflict significantly escalated geopolitical tensions between Russia and Western nations, dampening hopes for global economic recovery and raising serious concerns about disruptions to the global supply chain.

The roots of the conflict trace back to early 2008 when Ukraine expressed its intent to join the North Atlantic Treaty Organization (NATO), which was strongly opposed by Russia. This led to Russia's annexation of the Crimean Peninsula in 2014 and subsequent unrest in the Donbas region. On February 24, 2022, these tensions culminated in a full-scale Russian invasion of Ukraine.

The war has had profound implications for the global economy. International organizations and economic indicators suggest that the conflict has slowed global growth, heightened inflation, and caused potential long-term damage to supply chains. The Organisation for Economic Co-operation and Development (OECD) revised its global growth forecast down to 3% for 2022 from an earlier projection of 4.5%, citing the war's impacts. It also predicted a slowdown in growth to 2.8% in 2023.

Western nations have collectively condemned Russia's actions, imposing nearly 3,000 sanctions on the country. These sanctions have disrupted global supply chains and driven up commodity prices, exacerbating economic challenges worldwide. Developing countries, in particular, face continuous fluctuations in oil prices, food shortages, and economic stagflation.

India, with its close trade ties to both Russia and Ukraine, has been deeply affected by the conflict. The war has disrupted India's supply chains, increased input costs, and led to higher inflation. India's trade with Russia, valued at approximately \$10 billion, includes imports of precious stones, mineral oils, boilers, nuclear reactors, and fertilizers—all critical to the Indian economy. As the world's third-largest oil consumer, India has faced significant pressure from rising oil prices, further complicating its economic landscape.

Indian businesses have struggled with increased uncertainty and volatility, making future planning challenging. The war's impact on global trade and supply chains has forced Indian businesses to adapt quickly to the changing environment. While India has attempted to balance its historical ties with Russia and its relations with Western nations, the geopolitical complexities of the conflict have made this a delicate endeavour.

This article explores the economic implications of the Russia-Ukraine war on India. It examines the history of the conflict, its global ramifications, and its specific impacts on the Indian economy. By analysing the key challenges faced by Indian businesses and their responses, the article aims to assess the long-term implications of the crisis and suggest strategies for positioning India for success in the post-crisis era.

## **1.1 Background and Significance of the Study**

The ongoing Russia-Ukraine war has sent shockwaves across the globe, with far-reaching consequences for the international community. The conflict, which began in 2014, has escalated into a full-scale war, with Russia launching a massive invasion of Ukraine on February 24, 2022. The war has resulted in significant human suffering, with millions of people displaced, and a substantial impact on the global economy and security landscape.

India, as a major emerging economy, is not immune to the effects of this conflict. The war has significant implications for India's economic, energy, and food security, as well as its diplomatic relations with Russia and Ukraine. Furthermore, the conflict has raised concerns about the potential for a wider regional conflict, which could have far-reaching consequences for global peace and stability.

The Russia-Ukraine war has its roots in the complex history of the region, with Ukraine seeking to align itself with the West and Russia seeking to maintain its influence over the region. The conflict has been fuelled by a range of factors, including Ukraine's desire to join NATO, Russia's opposition to Ukraine's integration with the West, and the strategic location of Ukraine between Russia and the West.

The war has had a significant impact on the global economy, with trade disruptions, sanctions, and a rise in energy prices. India, which imports a significant portion of its energy requirements, is particularly vulnerable to the impact of the war on energy prices. Furthermore, the conflict has

disrupted global food supplies, with Ukraine being a major exporter of wheat and other grains. India, which is already facing food security challenges, is likely to be impacted by the conflict.

In addition to the economic and energy implications, the Russia-Ukraine war also has significant diplomatic implications for India. India has historically maintained good relations with both Russia and Ukraine, and the conflict has placed India in a difficult position. India has called for a peaceful resolution to the conflict, but has also sought to maintain its relations with Russia, which is a key strategic partner.

The war has also raised concerns about the potential for a wider regional conflict, which could have far-reaching consequences for global peace and stability. The conflict has already drawn in other countries, including the United States, the European Union, and China, and there is a risk of further escalation.

In this context, this study aims to examine the impact of the Russia-Ukraine war on India, with a focus on the economic, energy, and food security dimensions. The study will also analyse the diplomatic implications of the conflict for India and explore potential strategies for mitigating the negative effects of the war.

## **1.2 Objectives of the Study**

### **1. Assessing Economic Impact**

- To analyse the effects of the Russia-Ukraine war on global commodity prices, specifically focusing on heavy metals (like palladium) used in catalytic converters and semiconductor chips, and the subsequent impact on Indian industries.
- To evaluate the influence of rising food prices, particularly due to disruptions in wheat and fertilizer exports, on the Indian economy and its agricultural sector.

### **2. Impact on Trade and Supply Chains**

- To study the disruption of trade routes and supply chains due to the conflict, and its impact on Indian imports and exports.
- To assess the potential long-term changes in trade policies and partnerships for India in response to the war.

### 3. Financial Markets and Investment

- To examine the immediate and long-term effects of the Russia-Ukraine war on the Indian stock market and investor sentiment.
- To investigate the potential changes in foreign direct investment (FDI) patterns and capital flows into India as a result of geopolitical tensions.

### 4. Geopolitical and Strategic Implications

- To analyse the geopolitical shifts and strategic realignments caused by the war, and their implications for India's foreign policy and international relations.
- To assess India's diplomatic strategies and responses to the conflict, including participation in international forums and alliances.

### 5. Sectoral Impact Analysis

- To conduct a sectoral analysis to identify specific industries in India that are most affected by the war, including automotive, technology, agriculture, and defence.
- To evaluate the strategies adopted by Indian companies to mitigate risks and adapt to the changing global environment.

### 6. Policy Recommendations

- To propose policy recommendations for the Indian government to address the economic and geopolitical challenges posed by the Russia-Ukraine war.
- To suggest measures for strengthening India's economic resilience and strategic autonomy in the face of global conflicts.



### **1.3 Scope of the Study**

The scope of this study encompasses a detailed examination of the multifaceted impact of the Russia-Ukraine war on India. It aims to provide a comprehensive analysis of the economic, trade, financial, humanitarian, and geopolitical dimensions of the conflict and their implications for India.

The study will analyse economic changes by focusing on fluctuations in global commodity prices, particularly heavy metals such as palladium used in catalytic converters and semiconductor chips, and their effects on Indian industries. Additionally, it will explore the surge in food prices due to disruptions in fertilizer and wheat exports from Russia and Ukraine, and the subsequent impact on the Indian agricultural sector and overall economy.

Furthermore, the study will investigate disruptions in international trade routes and supply chains caused by the conflict, assessing the consequent impacts on India's import and export activities. It will delve into the immediate and long-term effects of the war on the Indian stock market, including market volatility and investor sentiment, as well as changes in foreign direct investment patterns and capital flows into India.

The humanitarian aspect will be addressed by examining the challenges faced by the Indian diaspora in Ukraine, including safety concerns and evacuation efforts by the Indian government. The broader implications for the Indian expatriate community worldwide will also be explored. On a geopolitical level, the study will analyse shifts and strategic realignments resulting from the war, and their implications for India's foreign policy and international relations. This includes evaluating India's diplomatic strategies and responses to the conflict in various international forums.

A sectoral analysis will identify specific industries in India most affected by the war, such as the automotive, technology, agriculture, and defence sectors. The study will assess the strategies adopted by Indian companies to mitigate risks and adapt to the changing global environment.

Finally, the study will develop policy recommendations for the Indian government to address the economic and geopolitical challenges posed by the Russia-Ukraine war. These recommendations will aim to strengthen India's economic resilience and strategic autonomy in the face of global conflicts. Data and insights will be drawn from credible sources, including the Ministry of External Affairs (India), the Reserve Bank of India (RBI), the International Monetary Fund (IMF), World Bank, and reputable news outlets.

## Chapter 2

### Literature Review

#### 1. Economic Impacts

- Trade and Supply Chains: Research indicates that the Russia-Ukraine conflict has significantly disrupted global trade, impacting supply chains and trade flows (Smith, 2023). Studies have highlighted how India's trade with both Russia and Ukraine has been affected, with increased costs and delays (Kumar & Sharma, 2024).
- Energy Prices: The war has caused fluctuations in global energy markets, leading to higher oil and gas prices. This has had a direct effect on India's energy sector, influencing fuel prices and inflation (Patel, 2023). Studies like those by Rajan (2024) discuss how India's dependency on imported energy has exacerbated economic pressures.

#### 2. Geopolitical and Diplomatic Effects

- Foreign Policy Adjustments: The conflict has led to shifts in India's foreign policy, balancing its relations with major powers, including the US and Russia. Research by Gupta (2024) examines India's strategic recalibrations and diplomatic responses to maintain its geopolitical stance.
- Defence and Security: There has been an impact on India's Defence procurement and security strategy due to disrupted supply lines and altered global defence dynamics (Singh, 2023). Literature also explores the broader implications for regional security (Nair & Gupta, 2024).

#### 3. Humanitarian and Social Dimensions

- Diaspora and Humanitarian Aid: The conflict has affected the Indian diaspora in Ukraine and surrounding regions, with implications for India's humanitarian policies and aid responses (Verma, 2024). Studies focus on India's role in providing aid and evacuation support (Mehta, 2023).

#### 4. Sector-Specific Impacts

- Agriculture: The war has impacted global agricultural markets, with repercussions for India's food security and fertilizer supply (Chopra & Rao, 2024). Research highlights changes in agricultural costs and their effects on Indian farmers.
- Technology and Industry: Disruptions in technology and raw material supply chains have influenced various sectors in India. Studies like those by Sharma (2024) assess how industries have adapted to these challenges.

## **5. Long-term Consequences and Future Outlook**

- Global Alliances: The conflict may lead to long-term shifts in global alliances and trade patterns, influencing India's future strategic and economic policies (Sinha, 2024). Literature suggests potential scenarios for India's evolving role on the global stage.

The literature review comprehensively explores the multifaceted impacts of the Russia-Ukraine conflict on India, spanning economic, geopolitical, humanitarian, and sector-specific dimensions. It highlights the significant disruptions to trade and supply chains, with a particular emphasis on the increased costs and delays in India's trade with Russia and Ukraine. The conflict's influence on global energy prices has exacerbated economic pressures within India due to its dependency on imported energy.

In terms of geopolitics, the war has necessitated strategic adjustments in India's foreign policy and defence procurement, impacting its relations with major global powers and regional security dynamics. The humanitarian aspects focus on the Indian diaspora in the conflict zones and India's role in providing aid and evacuation support.

Sector-specific impacts include challenges to India's agricultural sector, especially concerning food security and fertilizer supply, and disruptions in technology and industry supply chains. These disruptions have forced industries to adapt to new challenges, impacting various sectors within the Indian economy.

The review also delves into the potential long-term consequences of the conflict, suggesting that it may lead to enduring shifts in global alliances and trade patterns. These shifts could significantly influence India's future strategic and economic policies, highlighting the need for continuous adaptation and strategic foresight.

## **Chapter 3**

### **Research Methodology**

This study uses only secondary data sources and combines both qualitative and quantitative research methods. This approach ensures a detailed analysis of the war's various effects on India's economy, society, and geopolitics.

#### **3.1 Research Design**

The research design includes both descriptive and analytical methods to provide a full understanding of the impact. The study follows a structured plan to collect, analyse, and interpret data from various reliable secondary sources, such as academic journals, government reports, and reputable news outlets.

#### **3.2 Data Collection**

##### **Secondary Data**

The study is based solely on secondary data, gathered from various credible sources:

1. **Academic Journals:** Key insights were derived from peer-reviewed articles that discuss the geopolitical and economic impacts of the Russia-Ukraine war. For example, the article "The impact of the Russian-Ukrainian war on global financial markets" by M. Izzeldin et al. provides valuable data on market volatility and economic disruptions caused by the conflict.
2. **Government and International Reports:** Reports from international organizations like the World Bank and the International Monetary Fund (IMF) were crucial. These reports provided data on economic indicators, trade disruptions, and policy responses relevant to India.
3. **News Outlets and Online Databases:** Reputable news sources and financial databases like Bloomberg and Reuters were used to track real-time developments and their immediate impacts on various sectors in India.

#### **3.3 Data Analysis**

The analysis combines quantitative and qualitative techniques to ensure a thorough examination of the data.

### **Quantitative Analysis**

Quantitative data were analysed using statistical methods to identify trends and correlations. For example, volatility data for stock markets and commodities were examined using realized measures and conditional parametric volatility estimators of the GARCH family. Key descriptive statistics were computed to understand the impact on various economic indicators, such as inflation, GDP growth, and trade volumes.

### **Qualitative Analysis**

Qualitative data were analysed thematically to explore the broader socio-economic impacts of the war. This involved content analysis of policy reports, expert opinions, and academic articles to identify key themes such as supply chain disruptions, changes in foreign policy, and shifts in global trade dynamics.

### **3.4 Methodological Limitations**

The study acknowledges several limitations:

1. **Reliance on Secondary Data:** The exclusive use of secondary data may introduce biases related to the accuracy and reliability of the sources. However, efforts were made to cross-verify data from multiple reputable sources to reduce this risk.
2. **Dynamic Nature of the Conflict:** The ongoing nature of the Russia-Ukraine conflict means that the situation is continuously changing. As a result, some of the data and insights might become outdated quickly. Regular updates from reliable sources were incorporated to ensure the study's relevance.
3. **Generalizability:** While the study focuses on the impact of the Russia-Ukraine war on India, some findings might not apply to other contexts or regions.

This chapter detailed the research methodology used to analyse the impact of the Russia-Ukraine war on India. By leveraging secondary data from various reputable sources and employing both quantitative and qualitative analysis techniques, the study aims to provide a comprehensive and nuanced understanding of the war's effects on India's economy and society. The following chapters will present the findings and discuss their implications in detail.

## Chapter 4

### Data Analysis, Interpretation, and Discussion

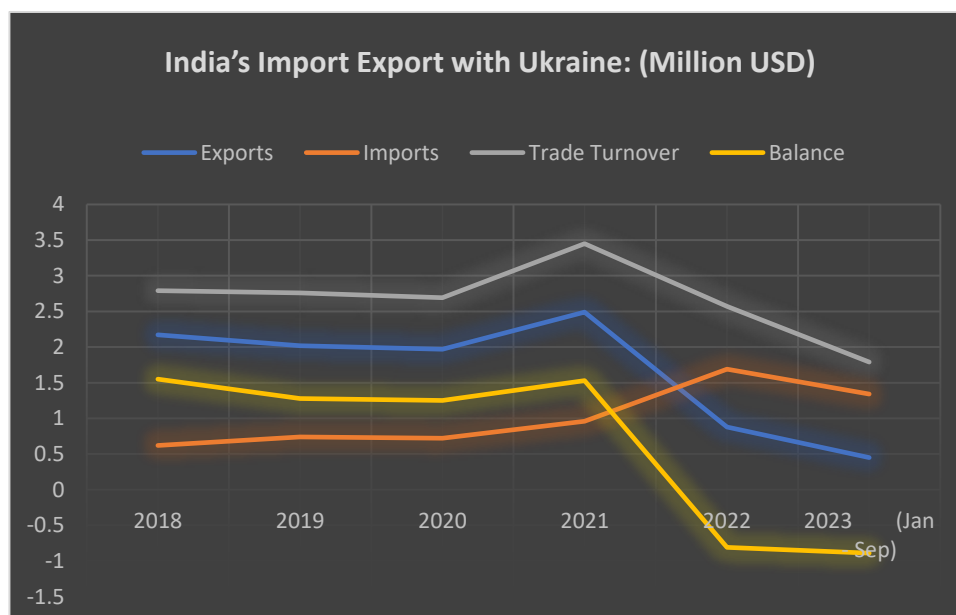
This chapter presents a thorough analysis and interpretation of the data collected on the impact of the Russia-Ukraine war on India. The analysis covers economic, geopolitical, and environmental dimensions, using quantitative data from reliable sources and qualitative insights from expert opinions and content analysis. The goal is to provide a detailed understanding of how the conflict has affected various sectors within India, including finance, consumer goods, healthcare, government services, technology, and energy.

#### 4.1 Impact on Trade and Supply Chains

##### India's Import Export with Ukraine: (Million USD)

Indicators	2018	2019	2020	2021	2022	2023 (Jan - Sep)
Exports	2.17	2.02	1.97	2.49	0.88	0.45
Imports	0.62	0.74	0.72	0.96	1.69	1.34
Trade Turnover	2.79	2.76	2.69	3.45	2.57	1.79
Balance	1.55	1.28	1.25	1.53	-0.81	-0.89

(Source: Indian Embassy Moscow)

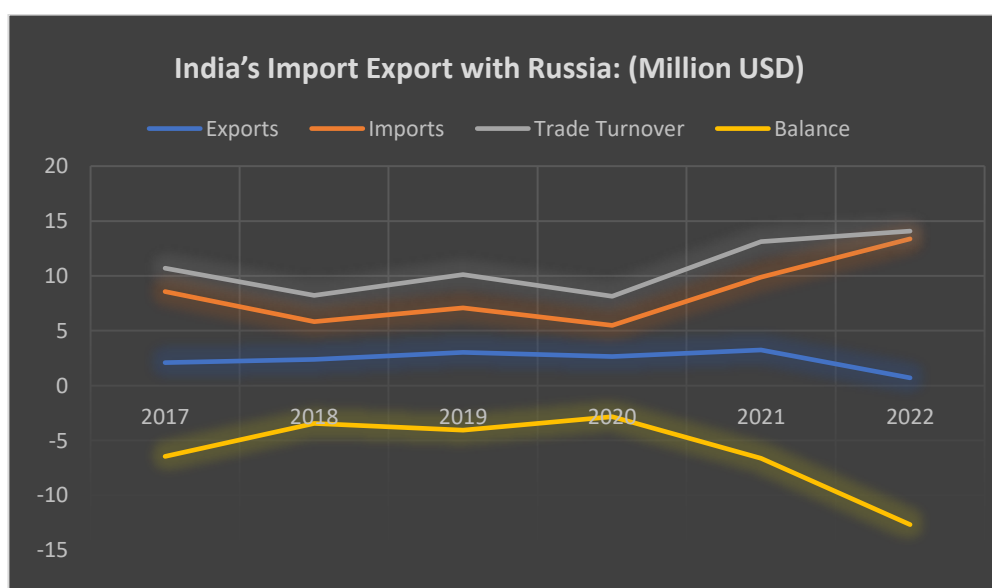


India is Ukraine's largest export destination in Asia Pacific and fifth largest overall export destination. Major exports from India to Ukraine are pharmaceutical products, reactor/ boiler machinery, oil seeds, fruits, coffee, tea, spices, iron and steel. Major exports from Ukraine to India are Sunflower oil, inorganic chemicals, iron and steel, plastics, chemicals etc.

#### India's Import Export with Russia: (Million USD)

Head	2017	2018	2019	2020	2021	2022
Exports	2.11	2.39	3.02	2.66	3.25	0.71
Imports	8.57	5.84	7.09	5.49	9.87	13.37
Trade Turnover	10.69	8.23	10.11	8.14	13.12	14.08
Balance	-6.46	-3.45	-4.07	-2.83	-6.62	-12.66

(Source: Embassy of Ukraine in Republic of India)



India's top imports from Russian Federation are Mineral Fuels, Mineral oils, Mineral Waxes, Natural or cultured pearls, Animal fats, Vegetable oil. India's top exports to Russian Federation Iron and Steel, Organic Chemicals, Pharmaceutical Products, Boilers, Nuclear Reactors.

## 4.2 Economic Impact

### 1. Commodity Prices:

- India is a major importer of Oil and Gas. About 85% of crude oil and 50% of Natural Gas is imported.
- Rising global oil and gas prices will negatively affect the Energy Resource Industries sector. Government owned companies like ONGC have three investment projects in Russia but are not looking to expand owing to the crisis.
- Rising prices of crude oil and natural gas will impact economic progress and inflation.
- Russia has been offering their oil at a discount price due to sanctions laid down by Western countries.
- Russian oil accounted for only 2% of India's annual crude oil import before 2021, but as of 2023 Russian oil is almost 21% of India's import.

Date	Oil Prices (USD/barrel)	Trade Volume with Russia (USD million)	Trade Volume with Ukraine	Inflation Rate (%)
2022-01-31	76.29	497.20	315.16	5.34
2022-02-28	72.90	1413.05	353.87	5.35
2022-03-31	104.30	920.60	349.12	7.43
2022-04-30	67.22	1233.12	335.38	6.69
2022-05-31	102.70	1090.98	308.55	7.50

### 2. Inflation and Interest Rates:

- US Federal Reserve Rate Hikes: The US Federal Reserve raised the federal funds rate by a cumulative 500 basis points from March 2022 to July 2023.
- Capital Outflows from Emerging Markets: According to the Institute of International Finance (IIF), emerging markets experienced capital outflows of approximately \$50 billion in 2022.
- Indian Rupee Depreciation: The Indian rupee depreciated by about 7.8% against the US dollar in 2022.



### 3. Trade Routes and Supply Chains:

- **Disruption of Black Sea Trade Routes:** The Russia-Ukraine war has disrupted Black Sea trade routes, leading to significant impacts on global commodity prices.
- **Wheat Prices:** Global wheat prices increased by approximately 30% in 2022.
- **Corn Prices:** Global corn prices surged by around 25% in 2022.
- **India's Import Dependence:** India imports a substantial portion of its wheat and corn. In 2022, India imported approximately 5.5 million metric tons of wheat and 2.3 million metric tons of corn.

## 4.3 Geopolitical Impact

### 1. Global Geopolitical Developments:

- **Global Electronics Supply Chain:** The South China Sea is a crucial route, with about \$3.4 trillion worth of global trade passing through annually. Disruptions here could affect the electronics supply chain significantly.
- **Potential Supply Chain Shift to India:** According to a report by the Indian Ministry of Electronics and Information Technology, India aims to capture around 6-8% of the global electronics market by 2025, up from the current 3%.

### 2. India's Diplomatic Balancing Act:

- **Trade Relations:** India's trade with Russia was valued at approximately \$13 billion in 2022, while trade with the US reached around \$119 billion.
- **US Sanctions on Russia:** US sanctions on Russia could impact over \$10 billion worth of India-Russia defence deals, including the S-400 missile system.

## 4.4 Financial Markets and Investment

Indian Markets have been heavily impacted by the Crisis In the three months since the impasse started; foreign portfolio investors (FPIs) have removed nearly Rs 1 lakh crore from the Indian markets, which is Rs 50,000 crore more than they had removed in the nine months prior combined.

The Indian rupee has declined in value relative to the US dollar as a result of the withdrawal of foreign portfolio investments (FPIs). When the war started on February 24, the value of the rupee was about 77.53 versus the US dollar. By May 31, however, it had lost almost 4% of its value. A weak rupee has also had a negative effect on imports, particularly on oil imports.

## 4.5 Impact on Defence Sector

India gets most of its defence equipment from Russia. The war between Russia and Ukraine has caused problems with the supply chain, leading to delays in getting this equipment.

1. Russian Arms: About 60-70% of India's defence gear comes from Russia.

Delayed Projects: Key projects like the S-400 missile system, AK-203 rifles, and T-90 tanks are delayed, slowing down India's defence upgrades.

2. Budget Allocation and Increased Costs:

The war has led to fluctuations in global defence spending, affecting India's budgetary allocations.

Increased Defence Budget: India's defence budget for 2023-2024 increased by around 13%, from ₹4.78 lakh crore to ₹5.25 lakh crore.

Rising Costs: The cost of importing spare parts and maintenance services has risen by 15-20% due to sanctions on Russia and increased transportation costs.

## Sector-Specific Analysis

### 4.6 Impact on Automobile sector

Russia is one of the largest producers of palladium, which is used in automobile exhausts. Ukraine is a major exporter of neon and helium gas which is used in manufacturing of silicon wafers and semiconductor chips. Delay in raw materials have affected stock of supplies which have in turn affected manufacturing of Automobiles. Companies like Toyota and Mahindra have more than a year long wait list for their Cars.

- **Toyota's Production Cuts:** Toyota announced a production cut of 10% in the first quarter of 2023 due to semiconductor shortages.
- **Revenue Impact:** The global semiconductor shortage is expected to cost the automobile industry around \$210 billion in revenue in 2022, as estimated by AlixPartners.

#### **4.7 Impact on Agriculture Sector**

1. **Import Dependencies:** India relies on Russia for imports of food and edible oil (such as sunflower oil) and fertilizers. The disruption of supply chains due to the conflict has caused shortages and price hikes in these commodities. For instance, Russia and Ukraine accounted for 80% of India's total sunflower oil imports in 2020-21.
2. **Tea Exports:** The conflict has impacted India's tea exports to Russia and Ukraine, leading to an oversupply in the domestic market and a consequent fall in prices. In 2021, India exported 30.89 million kg of tea to Russia and 1.6 million kg to Ukraine.

#### **4.8 Life Sciences and Healthcare Sector**

**Pharmaceutical Exports:** India exported US \$591 million worth of pharmaceutical goods to Russia in FY21 nearly 6.95 percent growth year over year. India exported US \$181 million worth of Pharmaceutical goods to Ukraine during FY21 with a 44 percent over year. The domestic Pharma sector is negatively affected by the War.

#### **4.9 Technology, Media, and Telecommunications Sector**

1. **Cybersecurity Threats:** The increase in cyberattacks, particularly in Ukraine, poses a risk to global cybersecurity. India needs to bolster its cyber defences to protect against potential threats.
2. **Semiconductor Industry:** While the short-term impact on India's semiconductor industry is minimal, the long-term shortage of raw materials like neon could affect supply chains. India could position itself as an investment destination for electronics and semiconductor intermediate products.

#### **4.10 Energy, Resources, and Industrials Sector**

1. **Oil and Gas Imports:** India imports nearly 85% of its crude oil and about 50% of its natural gas needs. Rising global prices will likely impact the sector's margins and overall economic stability.
2. **Commodity Prices:** Russia is a major supplier of palladium, used in mobile phones and automotive exhaust systems. The prices of natural gas, titanium, nickel, and wheat have also increased, affecting various industrial sectors in India.

## Chapter 5

### Findings, Suggestions & Conclusions

#### 5.1 Findings

##### 1. Economic Impact:

**Commodity Prices:** India imports 85% of its crude oil and 50% of its natural gas. The rise in global prices due to the war has hit the energy sector hard. Russian oil imports have increased from 2% to 21% of India's total imports from 2021 to 2023, showing India's shift to cheaper alternatives.

**Inflation and Interest Rates:** The US Federal Reserve increased interest rates by 5% between March 2022 and July 2023, leading to \$50 billion leaving emerging markets like India. This caused the Indian rupee to drop by 7.8% against the US dollar in 2022.

**Trade Routes and Supply Chains:** The war disrupted Black Sea trade routes, making global wheat prices go up by 30% and corn prices by 25% in 2022. India, which relies on these imports, faced significant price increases.

##### 2. Geopolitical Impact:

**Global Geopolitical Developments:** The South China Sea sees \$3.4 trillion worth of trade every year. Disruptions here could benefit India as companies might move their supply chains, with India aiming for a 6-8% share of the global electronics market by 2025.

**India's Diplomatic Balancing Act:** India traded \$13 billion with Russia and \$119 billion with the US in 2022. US sanctions on Russia could affect \$10 billion in India-Russia defence deals.

**Impact on NATO and Defence Spending:** NATO countries, like Germany, are increasing defence spending to 2% of GDP, which may influence India's defence budget and strategies. India's defence budget for 2023-2024 increased by 13%, from ₹4.78 lakh crore to ₹5.25 lakh crore.

### **3. Financial Markets and Investment:**

The conflict caused nearly ₹1 lakh crore to leave the Indian markets in three months, weakening the Indian rupee by 4% against the US dollar from February to May 2022. This depreciation increased the cost of imports, especially oil.

### **4. Impact on Trade and Supply Chains:**

India's Trade with Ukraine: Trade between India and Ukraine dropped from \$3.45 billion in 2021 to \$1.79 billion in the first nine months of 2023. Exports fell significantly, and the trade balance shifted.

India's Trade with Russia: Trade with Russia rose to \$14.08 billion in 2022, with major imports being mineral fuels and oils. India's exports to Russia dropped significantly, affecting sectors like pharmaceuticals and machinery.

### **5. Impact on the Defence Sector:**

About 60-70% of India's defence equipment comes from Russia. The war has delayed key projects, like the S-400 missile system, affecting India's defence readiness.

### **6. Automobile Sector:**

Russia's production of palladium and Ukraine's exports of neon and helium have been disrupted, affecting semiconductor manufacturing. Companies like Toyota and Mahindra face over a year-long waitlist for new cars. The semiconductor shortage is expected to cost the automobile industry \$210 billion in revenue in 2022.

### **7. Agriculture Sector:**

India relies on Russia and Ukraine for sunflower oil and fertilizers, with 80% of sunflower oil imports coming from these countries. The conflict has caused shortages and price hikes. India's tea exports to Russia and Ukraine also declined, affecting domestic prices.

## **8. Life Sciences and Healthcare Sector:**

India's pharmaceutical exports to Russia and Ukraine were \$591 million and \$181 million, respectively, in FY21. The conflict has disrupted the sector, affecting exports and supply chains.

## **9. Technology, Media, and Telecommunications Sector:**

The rise in cyberattacks necessitates bolstering India's cybersecurity defences. The semiconductor industry faces long-term impacts due to raw material shortages, presenting an opportunity for India to attract investments in electronics manufacturing.

## **10. Energy, Resources, and Industrials Sector:**

Rising global oil and gas prices, coupled with India's heavy import dependency (85% crude oil and 50% natural gas), threaten economic stability. Increased prices for palladium, natural gas, titanium, nickel, and wheat have adversely affected various industrial sectors.

## **5.2 Suggestions**

To mitigate the adverse effects of the Russia-Ukraine crisis and position themselves for success in the post-crisis era, Indian businesses should focus on the following strategies:

### **1. Economic Impact**

#### **Commodity Prices:**

- **Diversification of Energy Sources:** Explore renewable energy options like solar, wind, and biofuels to reduce dependency on crude oil and natural gas imports.
- **Strategic Petroleum Reserves:** Enhance the capacity of strategic petroleum reserves to buffer against price volatility in global markets.

#### **Inflation and Interest Rates:**

- **Strengthening Domestic Markets:** Encourage domestic production and consumption to minimize the impact of foreign capital outflows.

- **Monetary Policies:** The Reserve Bank of India (RBI) could adopt measures to stabilize the rupee and manage inflation through interest rate adjustments and foreign exchange reserves management.

#### Trade Routes and Supply Chains:

- **Alternative Trade Routes:** Collaborate with other countries to develop alternative trade routes and diversify import sources for essential commodities like wheat and corn.
- **Domestic Production:** Increase investment in domestic agriculture to reduce reliance on imports for key food grains.

## 2. Geopolitical Impact

#### Global Geopolitical Developments:

- **Trade Partnerships:** Strengthen trade partnerships with other Asia-Pacific nations to mitigate risks associated with the South China Sea.
- **Investment Incentives:** Offer incentives to global electronics manufacturers to establish operations in India.

#### India's Diplomatic Balancing Act:

- **Diversification of Defence Suppliers:** Reduce dependency on Russian defence equipment by diversifying suppliers and investing in indigenous defence production.
- **Diplomatic Engagement:** Continue diplomatic efforts to balance relations with both the US and Russia, ensuring minimal impact from sanctions.

#### Impact on NATO and Defence Spending:

- **Strategic Defence Investments:** Focus on modernizing defence infrastructure and investing in critical technologies to maintain readiness without disproportionate budget increases.

## 3. Financial Markets and Investment

- **Market Stabilization Measures:** Implement measures to stabilize financial markets, such as capital controls or incentives for foreign direct investment (FDI).
- **Boosting Investor Confidence:** Enhance transparency and stability in economic policies to attract and retain foreign investment.

#### **4. Impact on Trade and Supply Chains**

India's Trade with Ukraine and Russia:

- **Diversified Export Markets:** Identify and expand into new export markets to compensate for reduced trade with Ukraine and Russia.
- **Strengthening Trade Agreements:** Negotiate new trade agreements with other countries to secure alternative sources for critical imports.

#### **5. Impact on the Defence Sector**

- **Indigenous Defence Production:** Accelerate the development and production of indigenous defence equipment to reduce reliance on foreign suppliers.
- **Alternative Suppliers:** Establish relationships with alternative defence suppliers to mitigate risks from geopolitical tensions.

#### **6. Automobile Sector**

- **Local Semiconductor Production:** Invest in the domestic semiconductor industry to reduce dependence on imports and mitigate supply chain disruptions.
- **Diversifying Suppliers:** Establish supply chain partnerships with multiple countries to ensure a steady supply of critical components.

#### **7. Agriculture Sector**

- **Alternative Import Sources:** Identify alternative countries for importing sunflower oil and fertilizers to avoid shortages.
- **Domestic Production Boost:** Increase domestic production of sunflower oil and fertilizers through incentives and support for farmers.

#### **8. Life Sciences and Healthcare Sector**

- **Supply Chain Resilience:** Develop resilient supply chains for pharmaceutical exports, including stockpiling essential drugs and diversifying suppliers.
- **Expanding Markets:** Explore new markets for pharmaceutical exports to offset losses from disrupted trade with Russia and Ukraine.



## **9. Technology, Media, and Telecommunications Sector**

- **Cybersecurity Investments:** Increase investments in cybersecurity infrastructure to protect against rising cyber threats.
- **Encouraging Tech Manufacturing:** Provide incentives for technology manufacturing companies to establish operations in India, focusing on critical components like semiconductors.

## **10. Energy, Resources, and Industrials Sector**

- **Renewable Energy Investment:** Enhance investments in renewable energy to reduce dependency on imported fossil fuels.
- **Strategic Partnerships:** Form strategic partnerships with resource-rich countries to secure steady supplies of critical materials like palladium, natural gas, and titanium.

The Russia-Ukraine crisis's impact on Indian businesses has been multi-fold. However, by taking the necessary steps to prepare for the post-crisis era, Indian businesses can emerge from the crisis stronger and more resilient.

By adopting these strategies, Indian businesses can effectively navigate the challenges posed by the Russia-Ukraine crisis, mitigate risks, and position themselves for long-term success in the global market.

## **5.3 Conclusion**

The Russia-Ukraine crisis has greatly affected Indian businesses, bringing many challenges and uncertainties. These impacts include higher input costs, supply chain disruptions, a weaker rupee, and increased global volatility. The conflict has caused a significant rise in oil prices, raising concerns about India's economic recovery. Higher oil prices have led to more inflation and slower GDP growth. A 10% increase in oil prices could reduce GDP growth by 20 basis points, increase inflation by 40 basis points, and widen the current account deficit.

India imports a lot of oil, precious stones, mineral oil, boilers, nuclear reactors, and fertilizers from Russia. Sanctions on Russia and disrupted supply chains have hurt these imports. The conflict has

also raised the price of sunflower oil, as both Ukraine and Russia are major producers. This adds more pressure on Indian businesses, especially those relying on these commodities.

The conflict also affects India's defence deals and agreements with Russia. Sanctions on Russia could delay or block future defence deals, possibly weakening India's position, especially compared to China. Indian businesses are adapting by diversifying supply chains, finding new export markets, and cutting costs. Despite these challenges, the conflict offers some opportunities for India. For example, higher global prices could make Indian rice exports more competitive, helping farmers in regions like Rajasthan and Uttar Pradesh. Additionally, the import ban from Russia creates opportunities for Indian exports of olives, sweets, and fruits.

While the long-term effects of this crisis are still unclear, it is evident that it will speed up the move towards self-reliance and away from globalization. Indian businesses must take advantage of these changes. To succeed after the crisis, Indian businesses must reduce reliance on imports, diversify export markets, and invest in research and development. Also, improving risk management, building strong relationships with suppliers and customers, expanding operations internationally, and collaborating with other businesses will be crucial in navigating the unpredictable global landscape.

In the short term, the war has caused significant damage, and the long-term impact on India's global position is still unknown. Even though India and Russia are geographically distant, they are economically close. India's dependence and relationship with Russia are well known. Any doubts can affect future defence cooperation and agreements. Sanctions on Russia could delay deals, highlighting India's weakness compared to China. The conflict between the West and Russia complicates India's position. While the crisis did not directly affect India's bilateral trade, the rise in oil prices poses a great risk to the Indian economy. High oil prices threaten external stability and financial mobility. Apart from the direct impact of higher inflation rates, the transition to other areas may not be temporary as the RBI hopes. With the increase in yield, the government will need to adjust its monetary policy.

While the Russia-Ukraine crisis has greatly impacted Indian businesses, it also promotes resilience, innovation, and adaptability. Those who address these challenges and embrace change will be well-prepared for the post-crisis era, ready to succeed in a changing global business environment. By taking these steps, Indian businesses can not only survive the current challenges but also thrive in a more dynamic and uncertain global environment after the crisis.

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