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# Global Supply Chain Crisis: Causes, Effects and Solutions

## Outline

### 1. Introduction

**Thesis Statement:** Rising geopolitical unrest, extreme weather events and others are the main causes of current global supply chain crisis. Some measures are necessary to address its impacts like economic instability, rising food crises and so on.

### 2. A brief overview of global supply chain and its crisis

— Ship cargo, Air cargo and Land transport of goods

### 3. What are the causes of ongoing supply chain crisis across the globe?

I. Rising geopolitical unrest is the main cause of global supply chain disruption

Case in point: Freightos and Drewry shipping cost report (2024)

II. Rivalry between United States and China is key factor behind global supply chain crisis

Reference: World Bank Report (2023)

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III - Extreme weather events impede flow of goods and services across the world

Case study: Four time decrease in freight through Rhine river in 2023 due to drought

IV - Increasing cyber attacks on critical infrastructure leads to global supply chain crisis

Case in point: Report published by Freight Council of America

V - Exacerbating global inflation and material scarcity resist production of goods for supply across countries

Reference: World Economic Forum Report (2024)

VI - Integration of eco-friendly practices in industries also causes

delay in global supply chain

Sub-ordinate point: Regulation of carbon foot prints by companies for environmental sustainability and delay in goods transportation

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#### 4. What are the impacts of global supply chain crisis?

I - Economic instability is the off-shoot of global supply chain crisis

Reference: 16% rise in inflation in Germany amid Ukraine war

II - Rising food crisis is a negative result of disruption in global supply chain

Case in point: Recently published report of Food and Agricultural Organization (FAO)

III - Spike in energy prices is a consequence of disorder in global supply chain

Case in point: Publication of Germany's Chambers of Industry and Commerce (2023)

IV - Increasing poverty and unemployment is due to current global supply chain crisis

Sub-ordinate point: World Bank report on poverty (2023)

5. What are the measures to address the global supply chain crisis?

I - Mitigating geopolitical tensions is essential for smooth supply chain across the globe

Case in point: Remarks of Antonio Guterres on Ukraine war

II - Addressing climate issue is necessary for removing global supply chain disparities

Case study: 75% decrease in shipments in Canada due to wildfire smoke.

III - Boosting regional supply chains is indispensable to absorb the shocks of global supply chain crisis

Sub-ordinate point: US - Mexico - Canada free trade agreement

IV - Ensuring diversification of supply chain resources is indispensable to mitigate the issue of transportation of goods and materials across the global arena

Case study: China's diversified supply chain policy

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V. Using technology to predict risks in supply chains and demand patterns is essential for addressing the global supply chain disparities.

Reference: Toyota's digital model of risk management to endure losses.

VI. Increasing investment in logistic infrastructure is necessary for addressing the disparities in global supply chain.

Sub-ordinate point: US investment in upgradation of transport and port facilities.

## 6. Conclusion

World is witnessing the crisis in global supply chain, resulting from geopolitical conflicts, scarcity of raw materials and so on. Some concrete measures are necessary to address the impacts of the global supply chain disparities.

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The global supply chain is the key driver of global economy and global politics. However, the disruptions in movements of goods, labour and materials can deeply affect the global economies. Goldman Sachs has recently forecast that "the current inflation, high energy prices, unbridled poverty and economic meltdown across the countries are the negative results of ongoing disruption in global supply chains, resulting from Gaza war and Ukraine war." It vividly indicates that the global supply chain crisis do not bode well for economic prosperity and its growth. There are multiple causes of current crisis of supply chain across the world including: geopolitical tensions, rivalry between America and China, and so on. Extreme weather conditions are also negatively affecting the flow of goods and services across the global markets. Increasing cyber attacks on critical infrastructure is equally important in this context.

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Similarly, integration of eco-friendly practices in industries is a key hurdle for supply of products across the world economies. There are various impacts of current global supply chain crisis. Rising inflation, spike in energy crisis and exacerbating economic chaos are the main off-shoots of the disorder in supply chain across international arena. Some concrete measures, such as mitigating geopolitical conflicts, increasing regional supply chain and others can address the disruptions in supply chain across the globe. Ensuring diversification in supply chain resources, coupled with investing in logistic infrastructure can also play a key role in this regard. Hence, rising geopolitical unrest, extreme weather events, and so on are the major factors behind the global supply chain crisis. Some viable measures can address its impacts like economic instability, rising food crisis and others.

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The supply of goods, materials and labour across the global markets by either state or non-state entities is called global supply chain. However, the delay in transport of raw materials and end products is termed as the global supply chain crisis. Ship cargo, air cargo or transport of goods by land routes are the main sources of transportation of goods and services across the globe. Nevertheless, wars, conflicts and economic sanctions resist the movements of supply chains. Resultantly, people have to face food crisis, inflation, poverty and so on. Hence, global supply chain crisis do not bode well for economic growth and human prosperity.

There are multiple causes of global supply chain crisis and rising geopolitical unrest is one of them. Peace between regional states is pre-requisite of smooth supply chains. However,



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war between states impede the both import and export of goods and services due to blockade of ports, air cargo and closure of land transports. As a result, there emerges the shortage of oil, food items, raw materials and labour across the global markets. According to recently published report of Freightos and Drewry Shipping Cost, "the global shipping cost indices have risen by 150% since inception of Gaza war."

Additionally, an ongoing rivalry between China and United States of America is one of the main factors behind current global supply chain crisis. Both countries are super-powers in terms of economy. Nonetheless, the ongoing tensions between two rivals impedes the flows of goods and services across the international markets as both states are imposing trade sanctions on each other. Resultantly, rest of the world is bearing the

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burst of these economic restrictions. According to World Bank report (2023), more than 15 percent increase in prices of goods has been recorded after trade war between Beijing and Washington D.C. Thus, economic competition between an established power and an emerging power causes crisis in supply chain across the globe.

In the same vein, extreme weather events also impede the flow of goods and transports across the world economies. Changing climate patterns like droughts decrease the sea level which, in turn, causes lease of shipping cargos. Similarly, the freezing of lakes also restricts the transport of goods and materials through water routes. As a result, people face decrease in costs goods and products. For instance, the Rhine river has currently so little water that some ships can only carry quarter of their usual freight. The drought

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has also hit at a time when the river is needed to move high volumes of coal and gas to prevent shortages. Ergo, extreme weather conditions cause global supply chain crisis.

In the same way, increasing cyber attacks on critical infrastructure is a key factor causing disruption in the global supply chain. Cyber attacks, such as data hacking, adding virus into programmes of software records and others create the gap between demand and supply of products across the global markets. Recently, United States of America claimed that China is disrupting its technology supply. For instance, recently Freight Council of USA reported that "45 percent of organization worldwide have experienced attacks on their software supply chains". Hence, it is an established fact that burgeoning cyber attacks derail the smooth transport of products across the globe.

On the same pattern, exacerbating global inflation and material scarcity is another key cause of the global supply chain crisis. Slowdown of production by industries due to high energy prices has resulted in decrease of supply of goods across the global markets. Similarly, lack of resources like raw materials and labour have also caused the low level manufacturing of end products. According to recent report of International Monetary Fund (2024), "ballooning economic inflation has disrupted the normal working of production and manufacturing industries". Similarly, most of the companies ceased their production in last year including Suzuki in Pakistan. Hence, global inflation, along with resource scarcity causes the global supply chain crisis.

Similarly, a integration of eco-friendly practices in industries is one of the key drivers

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of ongoing global supply chain disruptions. Changing climate patterns can be controlled through regulating industries' carbon emissions. Therefore, industries are working on synergy of sustainable environmental methods in their production. Resultantly, there has occurred the slowdown of production which in turn has caused supply chain crisis across the markets. For instance, China accounts for 30% of global supply chain. However, the regulation of carbon foot prints by companies for sustainability has resulted in 25% of supply chains by China. To be all and end-all, introduction of eco-friendly methods in industries has also caused delay in the global supply chain.

There are innumerable impacts of the global supply chain crisis and one of the first most impacts is economic instability across the globe.

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Economic recession is ~~the~~ an inevitable consequence of delay or extinction in supply of raw materials and finished products in global markets. Moreover, export based economies are severely affected by the supply chain crisis. For example, Germany is facing 16% inflation amid Russia-Ukraine war. It is because Germany imports energy and food products from the Russia and Ukraine. Unsurprisingly, Moscow-Kiev war impeded the supply of energy and other goods across Eastern Europe. Hence, economic meltdown is one of the unavoidable impacts of supply chain disruption across the globe.

Secondly, rising food crisis is also one of the negative consequences of the global supply chain crisis. Almost all the countries export and import food items to and from global markets. However, disorder in supply of goods and services causes brings

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issue of shortage of food items like wheat, corn, rice, olive oil and so on. As a result, countries have to bear the burnt of hunger and starvation. Recently published report of Food and Agricultural Organization shows that 80 percent people in Gaza face malnutrition since Oct 7 event. It is because of blockade of supply chain across the territory. Hence, food crisis is one of the negative impacts of current supply chain crisis across globe.

Thirdly, increase in energy prices is the main consequence of the global supply chain crisis. International sanctions on energy rich countries like Russia, Venezuela and Iran have not only caused spike in energy prices but also have decreased per day production of crude oil. Resultantly, states' economies are facing both inflation and deflation as industries are either decreasing

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or blocking their production of goods and materials. According to recent publication of Germany's Chambers of Industry and Commerce, "16 percent companies expect to either scale back production or partially discontinue business operations due to energy crisis resulting from Russia-Ukraine war."

Thus, exacerbating energy prices is the inevitable offshoot of ongoing global supply chain disruption.

Last but not least, increasing poverty and unemployment is also a negative impact of the global supply chain crisis.

Poverty is eroding in societies due to shortage of supply of goods given their high demand across the markets.

Furthermore, most of the government own entities and private entities have either cut shorted their production or blocked it due to lack of labour, raw material shortage and inflation. As a result, millions of the



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people have lost their jobs. According to World Bank Report, "there is 3% increase in poverty per year across the globe". Similarly, IMF has forecast the 3.5 percent unemployment rate till 2025 due to slowdown of industrial production. Verily, disruption in movement of goods and services results in unbridled poverty and joblessness across the international arena.

There are host of the measures to address the global supply chain crisis and mitigating geopolitical tensions is one of them. It is an undeniable fact that disorder in supply of raw material and finished products can be managed through resolving conflicts between the states. Peace between states is pre-requisite for the conducive economic relations between them. Similarly, consensus between states on trade and commerce, despite their rivalry or competition, is also feasible for

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supply chain. Antonio Guterres has rightly remarked that, "Inflation can be decreased to 1 percent by resolving Russia-Ukraine war." Similarly, resolving geopolitical tensions can guarantee the smooth flow of supply chain across the global markets.

Similarly, addressing extreme weather events is indispensable for eliminating disruption from global supply chain. Delay in ship cargo or air cargo can be addressed through guaranteeing average sea level and clean atmospheric environment <sup>respectively</sup>. Similarly, controlling changing climate patterns can lead to smooth movements of the materials and products across the global <sup>markets</sup> especially through sea routes. For instance, there was 75% decrease in air cargo due to wildfire smoke. It is because, air freight was blocked due to dust and smoke in the sky.

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Thus, it can safely be said that addressing climate change can resolve the issue of the supply chains across the global markets.

In addition to above, boosting regional supply chains is also one of the key measures to evade the menace of global supply chain crisis. No doubt, regional states can decrease the severe impacts of global supply chain disruption through increasing import and export of goods in between them. For instance, the regional trade of Iran amid western sanctions is a model in this regard. Similarly, US-Mexico-Canada free trade agreement to augment the supply chain is one of the key example of regional supply chains. Hence, negative impacts of the global supply chain crisis can be diluted through boosting regional supply chain.

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In the same vein, ensuring diversification of supply chain resources is an other feasible solution for mitigating global supply chain crisis. Port congestion problem can be addressed via making new ports. Similarly, new sea routes can be found for shipping freights. Massive use of air cargo is also one of the conducive options for transportation of materials and products across the globe. The case study of China's diversified supply chain policy is in focus. The country has got access of multiple sea routes for supplying finishing products and importing raw materials. Thus, diversification of supply chain resources is essential for addressing the disorder in global supply chain.

Furthermore, using technology to predict risks in supply chain and demand patterns of products

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is also one of the pivotal steps for addressing the global supply chain crisis. Risk analysis and management can create a balance between demand and supply. Similarly, overproduction and underproduction of goods can also be avoided in this way. For instance, Toyota, the world's biggest automobile industry, has adopted digital models for risk management to endure the losses. Hence, use of technology can address the global supply chain crisis.

On the same pattern, increasing investment in logistic infrastructure is also necessary to address the disparities in global supply chain. Blockage of sea ports can be avoided by either making new ports or increasing capacity of existing ports. For instance, many countries have faced hike in food prices and oil prices due to

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Congestion of ships in Suez Canal in 2022. Improvement of logistic infrastructure is necessary to ameliorate the situation. For example, United States of America has invested 45 billion dollars for upgradation of its transport and port facilities. Hence, investing in logistic infrastructure can help avoid the global supply chain crisis.

To conclude, there are various factors behind the global supply chain crisis. Ongoing geopolitical tensions, US-China trade war and others are key causes of disruption in transport of goods and services across global markets. As a result, states are facing economic instability, food crisis, poverty, unemployment and unbridled inflation. Some concrete measures like resolving geopolitical conflicts, boosting regional trade and mitigating climate change

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can address the global supply chain crisis. Diversification of supply chain resources, coupled with improving logistic infrastructure is equally important in this context. Thus, resolution of supply chain crisis is essential for economic prosperity otherwise people have to bear the burnt of starvation, hunger, insecurity and joblessness.

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