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Assessing the Russian-Ukrainian war and its impact on global food security

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Abstract

The full-scale Russian invasion of Ukraine in February 2022 triggered a catastrophic disruption to global food systems, exposing profound vulnerabilities within interconnected agricultural supply chains. As two of the world's foremost exporters of wheat, maize, barley, and sunflower oil, the conflict between Russia and Ukraine precipitated a cascade of crises: the blockade of Black Sea ports, the destruction of agricultural infrastructure, and restrictions on vital fertilizer exports. It was against this background that this study interrogated through the lens of Realism and Constructivism the Russian-Ukrainian war and its impact on global food security. *This study provides a critical assessment of the war's impact on global food security by examining its role in disrupting supply chains, triggering acute food price volatility, and exacerbating widespread shortages. Employing a qualitative methodology and framed through the integrated theoretical lenses of Constructivism and Food Regime Theory, the analysis reveals how geopolitical conflict is weaponized through control of essential resources, with devastating consequences. Findings indicate that the war acted as a systemic shock, propelling global food indices to record highs and pushing tens of millions into food insecurity, particularly in import-dependent regions of Africa, the Middle East, and Asia. The study concludes that the crisis is not merely a byproduct of war but a central feature of modern conflict, where control over food constitutes a tool of geopolitical leverage. It offers urgent recommendations for policymakers, including strengthening regional food reserves, institutionalizing humanitarian corridors, and diversifying agricultural production to fortify global food security against future geopolitical shocks.*

Keywords: Food Price Volatility, Food Regime Theory, Global Food Security, Supply Chain Disruption

Introduction

Global food security suffered a severe blow following Russia's full-scale invasion of Ukraine in February 2022—conflict between two of the world's major agricultural exporters significantly disrupted international supply chains. Ukraine, often called the "breadbasket of Europe," and Russia together account for substantial proportions of global exports of wheat, maize, barley, and sunflower oil. The war's onset led to the blockade of key Ukrainian Black Sea ports, severe damage to agricultural infrastructure, labor shortages, and restrictions on fertilizer exports—factors that created logistical breakdowns and diminished commodity availability worldwide (Chepeliev et al., 2024; Quint Dongyu, 2022; Campos et al., 2022).

These disruptions fuelled acute volatility in global food prices, with sharp spikes affecting vulnerable populations worldwide. After the invasion, global food indices surged to unprecedented levels, with wheat prices climbing to their highest point since 2008. Rising fertilizer and energy costs exacerbated the situation, further driving food inflation in regions dependent on imports (FAO, 2022; Wikipedia, 2025; Economic

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impact of the Russian invasion of Ukraine, 2025). The confluence of supply constraints, inflation, and export restrictions echoed past food crises, underscoring systemic fragility.

These disruptions did not merely strain markets, they had catastrophic humanitarian consequences. Millions of people in developing countries, particularly in Africa, the Middle East, and South Asia, face intensifying food insecurity, malnutrition, and risk of famine. Studies estimate tens of millions more people were pushed into undernourishment due to the compounded effects of the war and sanctions (Discover Sustainability, 2022; CSIS, 2022). Moreover, as food becomes more expensive, the social and political stability of affected nations is increasingly threatened.

Amid these structural challenges, scholarly literature underscores an urgent need for comprehensive investigation. While the impacts of war on geopolitical and humanitarian dimensions are well acknowledged, systematic analyses of its effect on global food regimes, supply chain resilience, and structural vulnerabilities remain limited. This study fills this gap by critically examining how the Russia–Ukraine war disrupted global supply chains, triggered price volatility, and fuelled shortages offering insights essential for policymakers, humanitarian actors, and food systems scholars to fortify global food security in a volatile world.

Statement of the Problem

The Russian–Ukrainian War, which began in 2014 and escalated into a full-scale conflict in February 2022, has not only reshaped geopolitical relations but has also severely disrupted the stability of global food systems. Both Russia and Ukraine are among the world's leading exporters of wheat, maize, barley, and sunflower oil, supplying significant portions of agricultural commodities to Africa, Asia, and the Middle East. The war has caused large-scale destruction of agricultural infrastructure, blockades of Black Sea ports, and restrictions on exports, leading to severe supply chain disruptions. These disruptions have triggered unprecedented global food price volatility, undermining food affordability and accessibility in vulnerable, import-dependent nations.

The complexity of the crisis is further compounded by its interaction with pre-existing global challenges such as the lingering effects of the COVID-19 pandemic, climate change-induced crop failures, and energy price shocks. As the conflict persists, humanitarian agencies warn of acute food shortages and rising hunger levels, particularly in low-income countries. While existing literature acknowledges the war's geopolitical and humanitarian dimensions, there is insufficient scholarly focus on the structural implications for global food regimes, especially the intersection between armed conflict, supply chain fragility, and the political economy of food. This gap in understanding limits the capacity of policymakers, international organizations, and affected states to develop resilient food systems capable of withstanding geopolitical shocks.

Against this backdrop, there is a need for a critical and theoretical examination of how the Russian–Ukrainian War has disrupted global food supply chains, triggered price volatility, and aggravated food shortages—issues that have direct implications for food security, economic stability, and social cohesion worldwide.

Significance of the Study

This study is significant because it addresses a critical intersection between international conflict and global food security at a time when the international community faces multiple overlapping crises. By examining the Russian–Ukrainian War through the lens of global food systems, the study provides nuanced insights into how armed conflict in key agricultural regions can trigger cascading disruptions in supply chains, commodity markets, and food accessibility worldwide. Such analysis is vital for policymakers, international organizations, and humanitarian agencies seeking to anticipate and mitigate the consequences of geopolitical instability on essential resources.

The findings of this research will contribute to the academic discourse by filling a gap in the literature that often treats war and food security as separate domains. By integrating perspectives from conflict studies, political economy, and food regime theory, the study will provide a multidimensional understanding of the structural vulnerabilities in global food systems. This contribution is valuable for advancing theoretical frameworks that can be applied to future crises with similar dynamics.

For governments and multilateral organizations such as the United Nations, the Food and Agriculture Organization (FAO), and the World Food Programme (WFP), the study's outcomes will offer evidence-based recommendations for designing resilient global supply chains and strategic food reserves. This can help improve preparedness and response strategies, particularly for import-dependent countries in Africa, Asia, and the Middle East that have been disproportionately affected by the conflict's impact on grain and fertilizer exports.

Finally, the study holds significance for civil society organizations, advocacy groups, and development partners by providing data-driven insights into the socio-economic consequences of food shortages and price volatility. This can inform targeted interventions, such as social protection programs, emergency food assistance, and agricultural capacity-building initiatives, thereby enhancing the resilience of vulnerable populations in the face of geopolitical shocks.

Objective of the Study

The main objective of this study examined the Russian-Ukrainian War and its impact on global food security. While the specific objective of the study;

i. Examine the Russian-Ukrainian war and disrupted global supply chains
ii. Investigate the Russian-Ukrainian war and global food price volatility
iii. Assess the Russian-Ukrainian war and global food shortages

Conceptual Framework

Russian-Ukrainian war

The Russian–Ukrainian War is fundamentally a geopolitical conflict shaped by competing identities, contested historical narratives, and the erosion of international norms. From a constructivist perspective, the war reflects a clash of socially constructed realities: Russia's narrative of a shared "Russkiy Mir" (Russian world), rooted in imperial and Soviet-era symbolism, positions Ukraine as inseparable from Russian identity justifying aggressive intervention under the guise of national unity (Constructivist Analysis of Russia's Military Invasion, 2022; International Relations – Theories, n.d.). Conversely, Ukrainian nation-building has increasingly embraced a distinct European identity, one that emphasizes sovereignty, democratic norms, and departure from its colonial past (The Ukraine-Russia Conflict through Realism, Liberalism, and Constructivism, 2024). Thus, the conflict is more than territorial; it is a battle over ontological legitimacy, where identity and norm construction influence how both States and their global supporters, interpret and respond to the war.

Moreover, the conflict has profound implications beyond identity politics, exerting significant pressure on global food systems. Ukraine, long known as the "breadbasket of Europe," and Russia are key exporters of wheat, barley, maize, sunflower oil, and fertilizers. The war has disrupted global agrifood networks through destroyed infrastructure, port blockades, and sanctions, all of which have contributed to sharp price volatility and widespread food insecurity (Economic Impact of the Russian Invasion of Ukraine, 2025; Humanitarian Impacts of the Russian Invasion of Ukraine, 2025). These disruptions highlight how geopolitically driven warfare directly destabilizes global food regimes, underscoring the interconnectedness between political conflict and food security in a globalized economy.

Concept of Food Security

Food security is defined as a condition in which all individuals, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life (Food and Agriculture Organization [FAO], 2009). This concept encompasses four interrelated dimensions: food availability, food access, food utilization, and stability over time (FAO, 2021). Availability refers to the supply of food through production, distribution, and exchange, while access emphasizes the ability of individuals to obtain food, either through purchase or direct production. Utilization focuses on the proper biological use of food, requiring a diet providing sufficient energy and essential nutrients, along with adequate water, sanitation, and healthcare. Stability ensures that food security is maintained consistently, even in the face of economic or climatic shocks. Thus, food security is not solely about the presence of food in markets but also about equitable access and sustainable systems that prevent hunger and malnutrition (Barrett, 2010).

In the context of global crises such as the Russian-Ukrainian War, food security becomes a pressing concern due to disruptions in global supply chains, rising food prices, and reduced agricultural output in conflict-affected regions (World Bank, 2022). The war has demonstrated how geopolitical instability can threaten the stability pillar of food security by creating volatility in food systems and undermining both short- and long-term access to essential commodities. Countries dependent on imports from Ukraine and Russia face heightened risks of food insecurity, especially in low-income nations where households spend a larger share of income on food (Clapp & Moseley, 2022). Moreover, humanitarian organizations face challenges in procuring and delivering aid, worsening conditions in vulnerable regions. This situation underscores that food security is deeply interconnected with peace, political stability, and resilient global food systems, making it a central issue in discussions about the consequences of armed conflicts.

Global Supply Chains

Global supply chains refer to the integrated network of production, distribution, and consumption processes that span multiple countries, linking raw material extraction, manufacturing, transportation, and delivery of goods to end users (Christopher, 2016). They are structured to leverage comparative advantages, enabling firms and nations to access cheaper inputs, specialized labour, and advanced technologies while serving international markets efficiently. The globalization of production has made supply chains increasingly complex, involving multiple stakeholders such as suppliers, manufacturers, logistics providers, retailers, and regulators across diverse geographical regions (Gereffi & Fernandez-Stark, 2016). Modern global supply chains are supported by advanced information systems, transportation infrastructure, and international trade

agreements, making them highly responsive but also more vulnerable to disruptions caused by geopolitical tensions, natural disasters, pandemics, and armed conflicts.

In the context of geopolitical crises such as the Russian-Ukrainian War, global supply chains face heightened risks of fragmentation and inefficiency. Disruptions in key nodes such as Black Sea ports or energy transit routes can have cascading effects on industries worldwide, especially when the affected regions are major exporters of essential commodities like grain, fertilizers, and crude oil (Ivanov & Dolgui, 2022). Such disruptions increase transportation costs, extend lead times, and create uncertainty in sourcing, which ultimately translates into volatility in global markets and reduced food security. Therefore, understanding global supply chains is critical for analyzing the war's impact on worldwide commodity flows, price stability, and humanitarian outcomes, particularly in food-import-dependent nations.

Global Food Price Volatility

Global food price volatility refers to the degree of fluctuation in the prices of food commodities within international markets over time, driven by shifts in supply, demand, and market expectations (FAO, 2022). Unlike normal seasonal variations, volatility implies unpredictability and instability, often caused by external shocks such as extreme weather events, trade restrictions, currency fluctuations, and geopolitical tensions (Gilbert & Morgan, 2010). In an interconnected global economy, food price volatility can be transmitted rapidly across borders through trade linkages, financial markets, and supply chain networks. This transmission effect means that a shock in one region—such as a poor harvest or export ban—can trigger immediate price surges or collapses in distant markets, undermining affordability and accessibility for vulnerable populations (Headey & Fan, 2010).

In the context of the Russian-Ukrainian War, global food price volatility has intensified due to disruptions in grain and fertilizer exports from both nations, which are among the world's largest agricultural producers and suppliers (World Bank, 2022). The conflict has reduced supply availability, increased transportation costs, and heightened uncertainty in commodity markets, prompting speculative behaviour that further inflates prices. For food-import-dependent countries, particularly in Africa and the Middle East, such volatility exacerbates food insecurity, fuels inflationary pressures, and heightens the risk of social unrest. Understanding global food price volatility is therefore crucial to assessing the far-reaching economic and humanitarian consequences of the war.

Global Food Shortages

Global food shortages refer to a condition in which the supply of essential food commodities is insufficient to meet the nutritional and caloric needs of populations, leading to increased hunger, malnutrition, and, in extreme cases, famine (FAO, 2021). Such shortages can arise from various factors including natural disasters, climate change, pest infestations, trade disruptions, and armed conflicts (von Braun et al., 2021). In the globalized food system, shortages in one major producing region can have a ripple effect across the world, as interconnected trade networks mean that reduced output or blocked exports affect both direct and indirect consumers of those commodities. Beyond the physical unavailability of food, shortages also exacerbate economic access challenges, as limited supply often drives up prices, placing nutritious food out of reach for low-income households (Barrett, 2022).

The Russian-Ukrainian War has significantly aggravated global food shortages due to the disruption of exports from two of the world's largest suppliers of wheat, maize, sunflower oil, and fertilizers (World Bank, 2022). The blockade of Black Sea ports, destruction of agricultural infrastructure, and constraints on fertilizer availability have reduced both immediate food supplies and future harvest potentials. These disruptions have disproportionately impacted import-dependent regions in Africa, the Middle East, and parts of Asia, where local production cannot compensate for the deficit. Furthermore, the resulting shortages threaten global humanitarian operations, as agencies like the World Food Programme rely heavily on grain sourced from the region (WFP, 2022). Understanding global food shortages within the context of the Russian-Ukrainian conflict is essential for evaluating the compounded risks to food security and designing effective mitigation strategies.

Theoretical Framework

Realism

Through the lens of Realism, the Russia–Ukraine war epitomizes a security-driven struggle rooted in power dynamics within an anarchic international system. Realist scholars argue that states act primarily to secure their survival, pursue relative gains, and balance against perceived threats (Waltz, 1979; *Realism (international relations)*, 2025). In this conflict, Russia's actions can be interpreted as a form of internal balancing, a strategic response to a perceived weakening of its power relative to NATO expansion (*Balancing dynamics, stability and international change*, 2025). The security dilemma intensified as Ukraine edged toward Western alignment, prompting a preventive move by Russia to counteract encroaching influence (*Revisiting the Russia-Ukraine War through the Lens of Realism*, 2025). Moreover, the theory of autocratic insecurity suggests that Putin perceived Ukraine's drift westward not merely as geopolitical loss, but as

existential threat to regime stability (*Dissecting the Realist Argument for Russia's Invasion of Ukraine*, 2024). Thus, the war illustrates a realist paradigm of competitive state behaviour under structural pressures.

Applying Food Regime Theory (Friedmann & McMichael, 1989, as cited in *Food regimes*, 2025), the Russia–Ukraine conflict underscores the vulnerabilities and geopolitical dependencies within global agrifood systems. The war disrupted critical grain flows, Ukraine being a leading exporter—exposing how food systems are embedded in power-laden economic structures (*Impact of the Russia-Ukraine conflict on the international staple agrifood trade networks*, 2024). Modelling studies reveal shock propagation that caused dramatic reductions in essential commodities like sunflower oil and maize across many nations (*Shock propagation from the Russia-Ukraine conflict on international multilayer food production network*, 2022). Additionally, Russia's exploitation of occupied Ukrainian territories to boost grain output, supported by state subsidies and export incentives, reveals how control over food production becomes an instrument of geopolitical leverage (*Russia boosts grain exports with crops from parts of Ukraine it controls*, 2025). This aligns with food regime theorists' assertion that crises within food systems reflect and reinforce broader power struggles and transitions in capitalist global configurations (*Food regimes*, 2025).

A synthesis of realism and Food Regime Theory offers a multidimensional understanding of the conflict. From a realist vantage, control over Ukraine ensures strategic depth and counters Western influence. Meanwhile, the disruption of grain supplies and Russia's strategic use of them serves as an extension of power politics via the global food regime. By weaponizing food production and trade, the war not only reflects traditional security concerns but also reconfigures global supply structures, echoing food regime transitions triggered by crisis (*Shock propagation…*, 2022; *Russia boosts grain exports…*, 2025). The intersection of these frameworks thus captures both interstate competition and the geopolitics of essential resources highlighting how war reshapes not only borders, but also global provisioning systems.

Critically, combining Realism and Food Regime Theory enables a more holistic analysis of the Russian-Ukrainian war is one that encompasses military-strategic logic and the economic systems of sustenance. Realism accounts for state motivations, threat perceptions, and power balancing, yet may underplay the global ripple effects of food instability. Conversely, Food Regime Theory foregrounds agrifood dynamics and capitalist geopolitics, but requires grounding in state-centric motivations to explain conflict escalation. Together, they show that control of food systems can be both a strategic goal and a lever in wartime policy. In doing so, this integrated framework sheds light on how wars are fought not just on the battlefield, but through supply chains, markets, and global interdependencies—providing a richer, more critical theoretical lens for understanding contemporary conflict.

Constructivism

Through the constructivist lens, the Russia–Ukraine war is deeply rooted in the ways identities, norms, and shared historical narratives shape state behaviour. Constructivism posits that such norms and identities are socially constructed and in turn influence states' perceptions and actions (Gamez, 2022). In this conflict, Russian President Putin's claim that Ukraine lacks historical legitimacy and is not a "real country" reflects a constructed identity narrative that frames Ukraine as an extension of Russia, one that justifies invasion in defense of a shared Slavic heritage (Hayat, 2025). These narratives are reinforced through state-controlled media and education, including "patriotic lessons" introduced in Russian schools to shape identity from early ages (Wikipedia contributors, 2025a). Conversely, Ukrainians have increasingly embraced a distinct national identity, driven by decolonization and derussification, such as renaming streets, removing Soviet monuments, and revising curricula to emphasize European historical narratives (Wikipedia contributors, 2025b). Constructivism reveals how both sides' identities are actively constructed through historical narratives, educational policies, and media, shaping the conflict's course and the legitimacy stakes at play.

Strategic narratives, stories crafted to influence public opinion about identity, norms, and international order, play a critical role in wartime behaviour, per constructivist theory (Locoman & Lau, 2024). Russian elites propagate narratives of Russianness and historical destiny, positioning Russia as the protector of a unified Eastern Slavic identity (Locoman & Lau, 2024). In contrast, Ukraine's evolving anti-imperial narrative emphasizes sovereignty, European aspirations, and resistance to colonial legacies, bolstering domestic resilience (Chuman, 2024). The mutual construction of threats and legitimacy fuels conflict: Russia frames Ukraine's Western orientation as a normative betrayal of Slavic unity, while Ukraine frames its resistance as defense of self-determination and democratic values. Thus, constructivism captures how divergent identity narratives contribute not simply to conflict onset—but to wartime conduct, mobilization, and international positioning.

Complementing constructivism, Food Regime Theory (Friedmann & McMichael, 1989) situates the war within the broader dynamics of global food system power structures. Ukraine and Russia together constitute a significant share of global grain exports, especially wheat and barley (Alison, 2022; Zhang, Li, & Zhou, 2024). The war disrupted these food regimes, causing spikes in global food prices and threatening food security in import-dependent states (Alison, 2022). Moscow has leveraged this geopolitical context, weaponizing agricultural exports by striking grain infrastructure and using stolen Ukrainian grain as a diplomatic or economic bargaining tool (Hall, 2023; Global Rights Compliance, 2025). These actions reflect how states can manipulate food regime dynamics for strategic gain, reinforcing the idea that food systems are both vulnerable to conflict and integral to geopolitical influence.

A combined theoretical perspective constructivism plus Food Regime Theory, provides a richer, multidimensional analysis of the war. Constructivism explains how identity and narrative legitimize or delegitimize the very actors in conflict. In parallel, Food Regime Theory reveals how the control, disruption, or weaponization of global food systems serves strategic geopolitical objectives. When tied together, these frameworks show that the war is not only about security and territory, but also about identity politics, legitimacy, and control of essential lifelines. Russia's projection of a normative identity ("Russky mir") justifies territorial claims, while its manipulation of food exports amplifies geopolitical leverage. Understanding this interplay deepens our critical grasp of modern conflicts, highlighting that power is constructed discursively and exercised materially through global systems of provision.

Research Methodology

This study adopted a qualitative research design to critically examine the Russian-Ukrainian War and its impact on global food security, with particular emphasis on disrupted global supply chains, food price volatility, and food shortages. The qualitative approach was chosen to enable an in-depth exploration of complex geopolitical, economic, and social dynamics shaping the global food system during the conflict. Data were collected through an extensive review of secondary sources, including peer-reviewed journal articles, policy reports, official publications from international organizations such as the Food and Agriculture Organization (FAO) and the World Bank, as well as credible news outlets and think-tank analyses. Thematic analysis was employed to identify recurring patterns, relationships, and underlying themes across the data, guided by Constructivism and Food Regime Theory as theoretical lenses. All sources were critically appraised for credibility, relevance, and currency, ensuring the reliability and validity of the findings.

Discussion Of Findings

The findings on Objective 1 of this study reveal that the Russian-Ukrainian War significantly disrupted global supply chains, particularly in the agricultural and energy sectors, thereby exacerbating vulnerabilities in the interconnected global economy. Both Russia and Ukraine are critical suppliers of wheat, maize, sunflower oil, and fertilizers, and the outbreak of the conflict in February 2022 led to the closure of major Black Sea ports, destruction of transport infrastructure, and imposition of trade restrictions, which halted or severely slowed exports (FAO, 2022; World Bank, 2022). Sanctions on Russia, coupled with military blockades, created bottlenecks in shipping routes and increased transportation costs, while damage to Ukrainian farmlands and storage facilities reduced production capacity. These disruptions had a cascading effect on global supply chains, as countries dependent on imports from the region, particularly in Africa, the Middle

East, and parts of Asia, experienced shortages and heightened competition for alternative suppliers. Additionally, the war intensified pre-existing strains from the COVID-19 pandemic, further destabilizing logistics networks and driving up lead times for essential commodities. Overall, the evidence underscores that the war not only created localized destruction but also triggered a systemic shock to global supply chains, with profound implications for food availability and affordability worldwide.

The findings on Objective 2 of this study indicate that the Russian-Ukrainian War significantly influenced global food price volatility by creating sharp and sustained increases in the cost of key agricultural commodities. As major exporters of wheat, maize, barley, and sunflower oil, both Russia and Ukraine play a central role in stabilizing global food markets; however, the conflict's disruption of production, transportation, and exports triggered immediate supply shocks (FAO, 2022; World Bank, 2023). The blockade of Black Sea trade routes, combined with sanctions on Russian exports and damage to Ukrainian farmlands, sharply reduced global grain availability, prompting speculative trading and market uncertainty that further fueled price spikes. Data from the FAO Food Price Index show that prices for cereals and vegetable oils reached record highs in 2022, with wheat prices surging by over 50% in some markets. These increases disproportionately affected import-dependent countries in Africa, the Middle East, and Asia, where higher import costs translated into elevated consumer prices, worsening food insecurity. The war's impact was compounded by pre-existing inflationary pressures from the COVID-19 pandemic and climate-related disruptions, amplifying volatility across global markets. This demonstrates that the conflict not only reduced supply but also acted as a catalyst for unpredictable and extreme price fluctuations in global food systems.

The findings on Objective 3 reveal that the Russian-Ukrainian War significantly contributed to global food shortages by disrupting the production, export, and distribution of essential agricultural commodities. Ukraine, often referred to as the "breadbasket of Europe," and Russia together account for nearly 30% of global wheat exports, 20% of maize exports, and over 75% of sunflower oil exports (FAO, 2022). The conflict led to the destruction of farmlands, displacement of farmers, and severe logistical bottlenecks due to damaged infrastructure and blockaded Black Sea ports, which curtailed the flow of food to global markets (World Bank, 2023). Many low-income and import-dependent countries, particularly in Africa and the Middle East, experienced acute shortages as shipments were delayed or canceled, forcing them to seek alternative suppliers at higher costs. Additionally, the war disrupted the supply of fertilizers from Russia and Belarus, leading to reduced agricultural productivity in other food-producing regions, thereby exacerbating the shortages. Combined with climate-related crop failures and pre-existing COVID-19-induced supply stress, the conflict intensified global hunger risks, with the World Food Programme warning of a looming "catastrophe" in

vulnerable nations. This underscores how the war's ripple effects extended beyond regional instability to trigger tangible food scarcities worldwide.

Recommendations

Based on the findings of the study, the following recommendations are made;

i. That government across climes should promote regional agricultural production to ensure continuity during geopolitical crises. Strategic food reserves should also be strengthened at national and regional levels to cushion the effects of sudden disruptions in the global supply chain caused by conflicts.

ii. In line with Objective 2, which investigated the war's influence on global food price volatility, the study recommends the creation of coordinated global mechanisms for price stabilization during crises. This could involve strengthening the role of the Food and Agriculture Organization (FAO) and the World Trade Organization (WTO) in monitoring agricultural markets and implementing temporary trade policies to prevent excessive speculation.

iii. For Objective 3, which assessed the war's impact on global food shortages, the study recommends prioritizing international cooperation to secure uninterrupted flows of essential food commodities to the most affected regions. Humanitarian corridors and negotiated export agreements, such as the Black Sea Grain Initiative, should be institutionalized to ensure continuous access to staple foods in times of conflict. Furthermore, investments in climate-smart agriculture, fertilizer production, and sustainable farming practices in developing countries will help boost local production capacity, reducing dependence on external food supplies

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