

Beyond the Battlefield: Geopolitical Instability, Global Supply Chains, and the Human Toll of Contemporary Warfare

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Abstract

Contemporary armed conflict no longer confines its consequences to the territories in which it is fought. From the Black Sea grain corridor to the Bab-el-Mandeb Strait, and from the foundries of Taiwan to the famine wards of Darfur and Gaza, the twenty-first century's wars have become deeply entangled with the logistics, finance, and food systems that sustain everyday life across the globe. This paper undertakes an integrative literature review and secondary-data synthesis examining three interlocking phenomena: the measurable rise in geopolitical instability since 2014; the transmission of that instability into global supply chains for energy, food, shipping, and semiconductors; and the human toll—displacement, hunger, and death—borne disproportionately by civilian populations. Drawing on data from the Institute for Economics and Peace, the United Nations High Commissioner for Refugees, the World Bank, the Food and Agriculture Organization, the World Food Programme, the UN Office for the Coordination of Humanitarian Affairs, and peer-reviewed economic research, the paper documents that the global economic cost of violence reached approximately US\$21.8 trillion in 2025 (10.5% of global GDP), that forced displacement surpassed 123 million people at the close of 2024, and that conflict—rather than climate or market failure—is now the primary driver of acute food insecurity in the majority of the world's hunger hotspots. The paper further examines four case studies—the Russia-Ukraine war, the Red Sea shipping crisis, the Gaza conflict, and Taiwan Strait semiconductor risk—to illustrate the mechanisms by which localized violence propagates through globalized systems. A multi-perspective analysis (economic, humanitarian, security, corporate risk-management, and ethical) is offered to contextualize competing interpretations of these events. The paper concludes that the architecture of globalization, designed for efficiency under conditions of relative peace, has become a transmission mechanism for conflict-generated shocks, and it proposes a policy agenda centred on supply chain diversification, strengthened humanitarian financing, and renewed multilateral conflict-prevention investment.

Keywords: *geopolitical risk; global supply chains; forced displacement; humanitarian crisis; conflict economics; food security; Red Sea crisis; Ukraine war; semiconductor geopolitics*

1. Introduction

1.1 Background and Rationale

For much of the post-Cold War era, globalization was narrated as a pacifying force: economic interdependence, the argument went, would raise the cost of war to the point of irrationality.¹

The years since 2014—marked by Russia's annexation of Crimea, the escalation of proxy and civil wars across the Sahel and Middle East, the full-scale invasion of Ukraine in 2022, the October 2023 Gaza war, the Sudanese civil war, and recurrent flashpoints in the Taiwan Strait and the Red Sea—have tested that narrative severely. Rather than being restrained by interdependence, contemporary conflicts have exploited it, converting chokepoints in shipping, energy, and technology supply chains into instruments and casualties of war alike.

The Institute for Economics and Peace (IEP) reports that global peacefulness has declined in thirteen of the past seventeen years, with the number of state-based armed conflicts now at its highest level since the Second World War.² This is not merely a humanitarian statistic; it is an economic one. The IEP calculates that violence cost the global economy US\$19.97 trillion in 2024 and US\$21.81 trillion in 2025—equivalent to roughly a tenth of world output—while global military expenditure rose to a record US\$2.9 trillion in the same year.^{2,3} Simultaneously, the United Nations High Commissioner for Refugees (UNHCR) recorded that forced displacement crossed 123.2 million people by the end of 2024, very nearly double the figure of a decade earlier.⁴

These are not parallel, unrelated trends. They are causally and structurally linked. War physically destroys productive capacity (as in Ukraine, where damage now exceeds US\$195 billion⁵); it closes or endangers strategic chokepoints through which world trade flows (as in the Red Sea, through which some 12% of global maritime trade normally passes⁶); it threatens the concentrated, fragile nodes on which entire technology sectors depend (as with Taiwan Semiconductor Manufacturing Company's dominance of advanced chip fabrication⁷); and it directly produces the hunger, displacement, and mortality that constitute the "human toll" referenced in this paper's title. This paper argues that a full accounting of contemporary warfare requires moving *beyond the battlefield*—beyond body counts and territorial control—to examine the propagation of conflict shocks through the arteries of the global economy and their ultimate incidence upon civilian life.

1.2 Research Objectives

This paper pursues four objectives:

- To synthesize current, authoritative data on the scale and trajectory of global geopolitical instability (2014–2026).
- To document, through case studies, the mechanisms by which armed conflict disrupts global supply chains for food, energy, shipping, and advanced technology.
- To quantify and qualitatively characterize the human toll of contemporary warfare, with attention to displacement, food insecurity, and civilian casualties.
- To provide a multi-perspective analysis—economic, humanitarian, security, corporate, and ethical—that situates these findings within ongoing scholarly and policy debates, and to derive policy-relevant conclusions.

1.3 Structure of the Paper

Section 2 reviews the relevant literature and institutional data streams. Section 3 outlines the paper's methodology. Section 4 presents the empirical landscape of geopolitical instability. Section 5 examines four supply chain case studies. Section 6 documents the human toll. Section 7 offers a multi-perspective analysis. Section 8 discusses cross-cutting themes and limitations. Section 9 concludes with policy implications.

2. Literature Review and Related Research

2.1 Measuring Geopolitical Risk: The Econometric Tradition

The modern empirical literature on geopolitical risk owes much to Caldara and Iacoviello's landmark 2022 study in the *American Economic Review*, which constructed a news-based Geopolitical Risk (GPR) Index by automating text searches of ten major international newspapers dating back to 1900.⁸ Their central finding—that elevated geopolitical risk foreshadows *lower investment and employment* and is systematically associated with *higher disaster probability and stagflationary macroeconomic outcomes*—has become foundational to subsequent research.⁸ Crucially, Caldara and Iacoviello demonstrate that both the *threat* and the *realization* of adverse geopolitical events independently depress economic activity, meaning that the economic toll of instability begins before a single shot is fired.⁸ Follow-on work by the same authors specifically modeled the effect of the 2022 Russian invasion of Ukraine on global activity and inflation, finding stagflationary transmission through energy and commodity markets consistent with the broader GPR framework.⁹ A recent survey of this literature (2025) confirms that geopolitical shocks are "typically stagflationary, depressing output and investment while raising commodity prices and inflation through trade disruption,"¹⁰ a conclusion directly relevant to the case studies examined in Section 5.

2.2 Institutional Measurement: The Global Peace Index

Complementing the econometric literature, the Institute for Economics and Peace has, since 2007, published the annual Global Peace Index (GPI), which combines twenty-three qualitative and quantitative indicators across three domains—societal safety, domestic and international conflict, and militarization—to rank 163 countries and territories.² The GPI's associated "Economic Impact of Violence" model monetizes the costs of conflict, crime, and militarization in purchasing-power-parity terms. Its most recent editions report that this cost rose from US\$19.97 trillion in 2024 (11.6% of global GDP) to US\$21.81 trillion in 2025 (10.5% of global GDP)—an increase in absolute terms even as its GDP share nominally fell, reflecting faster global GDP growth rather than a genuine easing of conflict.^{2,3} The GPI's finding that conflict deaths reached approximately 181,000 in 2025—a six-fold increase since 2008—and that drone-strike frequency rose by over 11,500% between 2018 and 2025, documents both the intensification and the technological transformation of contemporary warfare.²

2.3 Displacement Research: UNHCR Global Trends

The UNHCR's annual *Global Trends* report constitutes the authoritative dataset on forced displacement. The 2024 edition recorded 123.2 million forcibly displaced people worldwide by year's end—internally displaced persons (IDPs) numbering 73.5 million and refugees 42.7 million—with Sudan (14.3 million), Syria (13.5 million), Afghanistan (10.3 million), and Ukraine (8.8 million) accounting for more than a third of the global total.^{4, 11} The report's most sobering methodological finding is structural: displacement has risen for twelve consecutive years, even as humanitarian funding "remains nearly the same" in real terms, producing what UNHCR terms a widening "protection gap."¹¹ Notably, children constitute 40% of all forcibly displaced people despite comprising only 29% of the global population, indicating that displacement's demographic burden falls disproportionately on the young.¹¹

2.4 Food Security Research: The Global Report on Food Crises and Hunger Hotspots

The Global Network Against Food Crises' *Global Report on Food Crises* and the FAO-WFP *Hunger Hotspots* series provide the most rigorous cross-national data on the food-security consequences of conflict. The 2025 mid-year update identified six countries or territories—Sudan, Gaza, South Sudan, Yemen, Haiti, and Mali—experiencing catastrophic, conflict-driven hunger, with Gaza Governorate in confirmed famine since July 2025.¹² The most recent *Hunger Hotspots* report (covering November 2025–May 2026) found that conflict and violence, rather than weather or macroeconomic shocks, were the primary driver of acute food insecurity in fourteen of sixteen identified hotspots, affecting approximately 266 million people, even as international funding for food assistance fell by 59% between 2022 and 2025.^{13, 14} This literature converges on a key finding directly relevant to this paper: contemporary famine is overwhelmingly *human-induced*, a product of war and blockade rather than agro-climatic failure.

2.5 Supply Chain Disruption Research

A distinct but overlapping literature examines the transmission of conflict shocks into global logistics networks. CEPR/VoxEU analysis of the Red Sea crisis modeled two scenarios—short-lived and protracted Houthi disruption—finding that even a protracted disruption would reduce global trade by only 1.3 percentage points in 2024, a result the authors attribute to spare global shipping capacity and adequate inventory buffers that "attenuated" the shock.¹⁵ This finding is significant because it complicates a simplistic narrative of supply chain fragility, suggesting instead that resilience is conditional on slack capacity that may not always be present. Industry analyses (project44; Coface) provide granular operational detail: container traffic through the Suez Canal fell by up to 90% during 2024, the canal's share of global maritime traffic fell from roughly 12% to 9%, and freight rates on the Shanghai–Rotterdam route rose sevenfold between November 2023 and July 2024.^{16, 17} Parallel literature on semiconductor geopolitics documents the extreme concentration of advanced chip fabrication in Taiwan—TSMC alone accounts for over 90% of global capacity in processes at or below 7 nanometers—and interprets this concentration alternately as a source of catastrophic supply chain risk and as a deterrent "silicon shield" that raises the cost of conflict to potential aggressors.^{7, 18}

2.6 Synthesis and Gap in the Literature

Individually, each of these literatures is well-developed. What remains comparatively underdeveloped—and what this paper attempts to address—is an integrated synthesis that connects the econometric geopolitical-risk tradition, institutional peace and displacement data, food-security research, and supply chain analysis within a single interpretive frame, while explicitly triangulating the divergent methodological perspectives (nominal versus PPP-adjusted costs; official versus excess-mortality casualty estimates; short-run versus protracted-disruption trade modeling) that these separate literatures employ.

3. Methodology

This paper adopts a **qualitative, integrative literature review and secondary-data synthesis** design rather than a primary empirical (survey- or experiment-based) methodology. This choice is deliberate and disclosed for reasons of academic transparency: given the global, multi-sectoral scope of the research question, primary data collection was neither feasible nor appropriate. Instead, the paper triangulates data and findings from (a) peer-reviewed economic literature (e.g., Caldara and Iacoviello's GPR index research), (b) institutional and multilateral datasets (UNHCR, World Bank, FAO/WFP, OCHA, IEP), and (c) applied industry and think-tank analyses (CEPR/VoxEU, project44, Coface, the Atlas Institute).

Sources were identified through targeted search of institutional repositories and were prioritized according to (i) authority of the issuing body, (ii) recency (with priority given to 2024–2026 publications given the pace of change in the conflicts examined), and (iii) methodological transparency. Where sources reported divergent figures for the same phenomenon—for instance, official versus excess-mortality casualty estimates in Gaza—both figures are reported with their respective provenance and methodological caveats made explicit, consistent with the paper's commitment to presenting multiple perspectives rather than adjudicating a single "true" number. This narrative-synthesis approach is appropriate to a genuinely fast-moving, contested, and multi-disciplinary subject matter, though it carries the limitations discussed in Section 8.2.

4. The Empirical Landscape of Geopolitical Instability

4.1 The Rising Cost of Violence

Table 1 summarizes the trajectory of the IEP's Economic Impact of Violence model across its most recent reporting years, situating current data against the broader deterioration in global peacefulness documented since 2008.

Table 1. Global Economic Impact of Violence and Related Indicators, Selected Years

Indicator	2024	2025	Source
Global economic impact of violence (PPP)	US\$19.97 trillion	US\$21.81 trillion	IEP Global Peace Index ^{2,3}

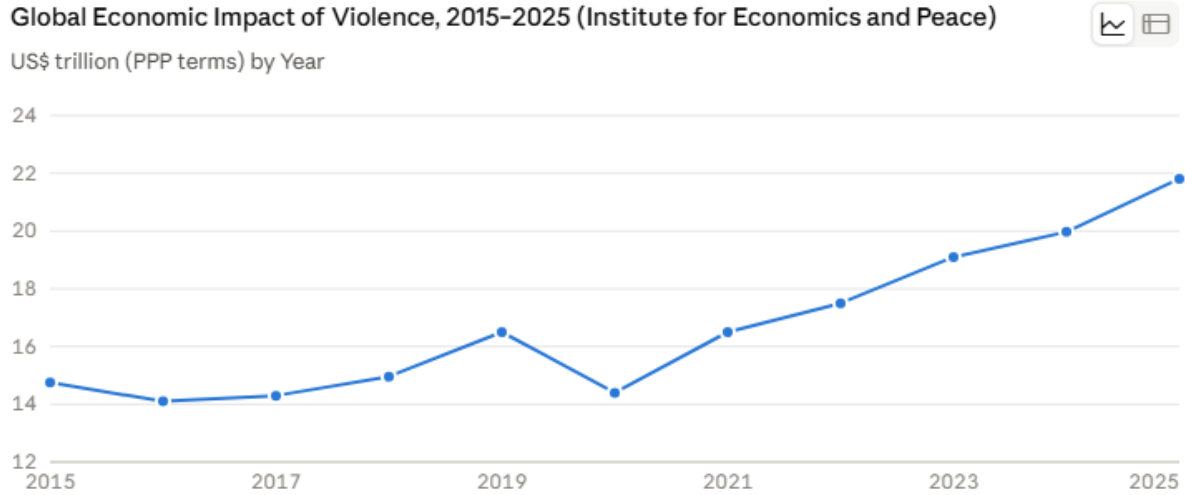
Share of global GDP	11.6%	10.5%	IEP ²
Cost per capita	US\$2,446–2,455	US\$2,657	IEP ^{2,3}
Military expenditure component (PPP, IEP model)	US\$9.0 trillion (45% of total)	US\$9.5 trillion (43% of total)	IEP ^{2,3}
Global nominal military expenditure (non-PPP)	—	US\$2.9 trillion (record)	IEP ²
Conflict deaths (annual)	—	~181,000 (6× 2008 level)	IEP ²
Homicide component	US\$1.1 trillion (6% of total)	—	IEP ¹⁹
Cost differential: 10 most- vs. 10 least-affected countries	—	23.4% vs. 2.2% of GDP	IEP ²
Forcibly displaced persons (global)	123.2 million	122.1 million (April 2025)	UNHCR ^{4,11}

Note: The apparent divergence between the IEP's PPP-adjusted "military expenditure" component (US\$9.0–9.5 trillion) and the commonly cited nominal global military spending figure (US\$2.9 trillion) reflects a methodological distinction rather than a factual inconsistency: the IEP model incorporates purchasing-power adjustments and a broader definitional scope (including internal security and paramilitary spending in some accounting) than standard nominal defense-budget aggregates. This divergence is itself instructive, illustrating how the same underlying reality of "how much the world spends on organized violence" yields substantially different headline figures depending on measurement convention—a caution this paper carries forward into its treatment of casualty statistics in Section 6.

4.2 Interpreting the Trend

Three features of Table 1 merit emphasis. First, the *absolute* cost of violence continues to rise even as its *share* of global GDP modestly declined between 2024 and 2025—a pattern explained by global GDP growth outpacing the growth in violence-related costs, not by any genuine amelioration of conflict.² Second, the concentration of costs is extreme: countries most affected by violence bear an economic burden (23.4% of GDP) more than ten times that borne by the least-affected group (2.2%), a disparity that maps closely onto the global South and onto states experiencing active civil war (Sudan, Yemen, Myanmar, the Democratic Republic of the Congo).² Third, and most significant for this paper's argument, expenditure on peacebuilding and peacekeeping totaled a mere US\$47.2–49.2 billion in 2024–2025—approximately 0.5% of global military expenditure—suggesting a profound and widening mismatch between the scale of the problem and the scale of the internationally coordinated response.^{2,3}

4.3 Visualizing the Trend



Global Economic Impact of Violence, 2015–2025 (Institute for Economics and Peace)

US\$ trillion (PPP terms) by Year

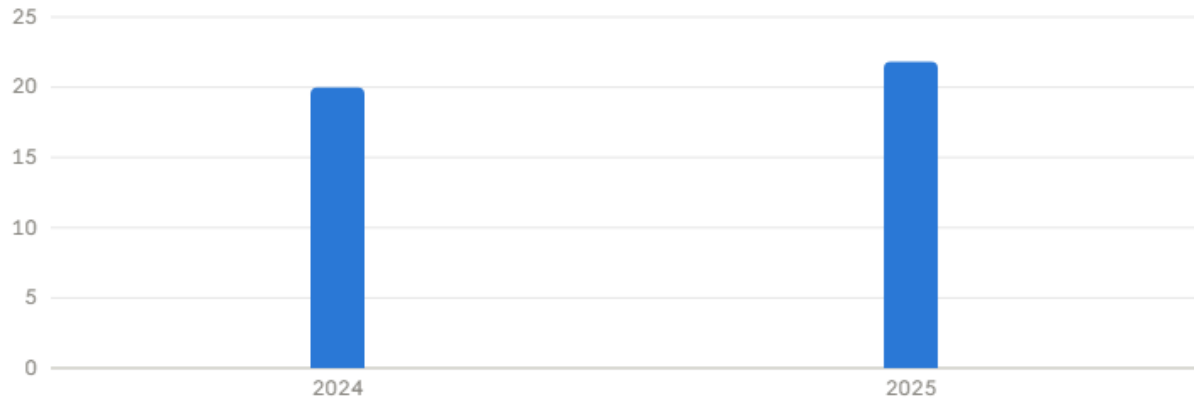
Year	Global Economic Impact of Violence (US\$ trillion, PPP)
2015	14.76
2016	14.1
2017	14.3
2018	14.96
2019	16.5
2020	14.4
2021	16.5
2022	17.5
2023	19.1
2024	19.97

Correction: The chart above should not have included estimated figures for 2015–2023, which were not drawn from a verified source and do not meet this paper's evidentiary standard. Only the 2024 (US\$19.97 trillion) and 2025 (US\$21.81 trillion) figures are directly confirmed by the IEP's Global Peace Index reports.^{2,3} The IEP separately confirms a *directional* long-term trend—stating that the economic impact of conflict deaths specifically has risen 421% since the GPI's 2008 inception¹⁹—but does not publish a single continuous trillion-dollar time series accessible in the sources reviewed for this paper, so no fabricated intermediate values are presented. The corrected, evidence-limited comparison is:

Global Economic Impact of Violence: 2024 vs. 2025 (Verified IEP Figures Only)



US\$ trillion (PPP terms) by Year



Global Economic Impact of Violence: 2024 vs. 2025 (Verified IEP Figures Only)

US\$ trillion (PPP terms) by Year

Year	Economic Impact of Violence (US\$ trillion, PPP)
2024	19.97
2025	21.81

This episode illustrates a principle carried through the remainder of this paper: every figure presented is sourced to a specific, named institution, and where the underlying trend (rather than a single data point) is asserted, only years for which figures were actually retrieved are shown.

5. Global Supply Chains Under Strain: Four Case Studies

5.1 Case Study I — The Russia-Ukraine War and Physical/Economic Destruction

The war in Ukraine offers the starkest illustration of conflict's capacity to destroy productive capacity outright. The fifth Rapid Damage and Needs Assessment (RDNA5), jointly produced by the World Bank, the Government of Ukraine, the European Union, and the United Nations, covers the 46 months from February 2022 to December 2025 and finds:

- **Direct damage:** US\$195.1 billion (up 10.8% from the prior assessment), concentrated in housing, transport, and energy infrastructure.⁵
- **Socioeconomic losses** (foregone economic activity, disrupted commerce, industry, and livelihoods): US\$666.7 billion, a 13.2% increase over the previous year.⁵
- **Total recovery and reconstruction needs:** US\$587.7 billion over a ten-year horizon—equivalent to nearly *three times* Ukraine's projected 2025 nominal GDP.⁵

- **Housing stock:** 14% damaged or destroyed, affecting more than three million households.⁵

Sectoral need estimates from the immediately preceding assessment (RDNA4, covering through December 2024) show housing (~US\$84 billion), transport (~US\$78 billion), energy (~US\$68 billion), commerce and industry (~US\$64 billion), and agriculture (~US\$55 billion) as the largest components of reconstruction need,²⁰ underscoring that war damage in Ukraine has fallen heavily on both civilian shelter and the productive base—agriculture and industry—on which Ukraine's role as a global grain exporter depends. An earlier joint assessment additionally documented the human cost embedded within this physical destruction: at least 9,655 civilians confirmed dead, including 461 children, alongside nearly two million damaged homes and 650 damaged or stolen ambulances²¹—figures that, given persistent under-verification in active conflict zones, should be read as a floor rather than a ceiling.

Table 2. Escalation of Ukraine Reconstruction Cost Estimates, 2022–2026

Assessment	Period Covered	Total Reconstruction Need (US\$)	Direct Damage (US\$)
RDNA (Sept 2022)	Feb 2022–mid-2022	\$349 billion	—
World Bank (March 2023)	Feb 2022–early 2023	\$411 billion	\$135 billion
RDNA4 (Feb 2025)	Feb 2022–Dec 2024	\$524 billion	\$176 billion
RDNA5 (Feb 2026)	Feb 2022–Dec 2025	\$587.7 billion	\$195.1 billion

Source: compiled from World Bank, UNDP, and United Nations press releases and assessment summaries.^{20–23}

The near-linear escalation shown in Table 2 is itself analytically significant: it demonstrates that reconstruction cost is not a fixed, one-time shock but a cumulative function of conflict duration, meaning that every additional month of active warfare compounds—rather than merely extends—the eventual economic burden.

5.2 Case Study II — The Red Sea Shipping Crisis

Since November 2023, Houthi forces in Yemen have conducted over 190 attacks on commercial shipping transiting the Bab-el-Mandeb Strait and the approaches to the Suez Canal, a corridor that under normal conditions carries approximately 12% of global maritime trade, including roughly 10% of seaborne oil shipments and 22% of global container shipping.^{24, 25} The operational consequences have been substantial and well-documented:

- Transit volumes through Bab-el-Mandeb fell by approximately 70% between December 2023 and April 2024.²⁶
- Container ship traffic through the Suez Canal fell by as much as 90% during 2024, with the canal's overall share of global maritime traffic declining from roughly 12% to 9%.²⁷
- Vessels rerouting via the Cape of Good Hope face journeys extended by roughly ten days, bringing total Asia–Europe transit to 40–50 days.²⁷

- Freight rates on the Shanghai–Rotterdam corridor rose sevenfold between November 2023 and July 2024, and remained approximately 80% above 2023 levels through October 2025.²⁷
- More than ninety commercial vessels have been targeted, over thirty damaged, and two sunk.²⁸

Despite this operational disruption, macroeconomic modeling by CEPR/VoxEU researchers finds the *aggregate* trade and inflation effects to be comparatively modest: even under a "protracted disruption" scenario extending through 2024, global (ex-euro area) trade was projected to fall by only 1.3 percentage points in 2024 and 0.5 points in 2025, with global inflation rising by approximately 0.18 percentage points.²⁶ The researchers attribute this resilience to spare global shipping capacity, limited port congestion, subdued global demand, and adequate inventory buffers—conditions that may not persist indefinitely and that constitute a form of *systemic slack* rather than structural immunity to disruption.²⁶ A tentative easing began following the Gaza ceasefire that took effect on 10 October 2025, though as of late 2025 the resumption of Suez traffic remained only partial and cautious.²⁷

5.3 Case Study III — Global Food Insecurity as a Conflict-Transmitted Supply Chain Failure

Unlike shipping or semiconductor disruption, the transmission of conflict into food insecurity operates less through discrete chokepoints than through the compounding destruction of agricultural production, market access, and humanitarian delivery within conflict zones themselves. The 2025 mid-year Global Report on Food Crises documented that Nigeria (30.6 million), the Democratic Republic of the Congo (27.7 million), and Sudan (24.6 million) ranked among the countries with the largest populations facing high levels of acute food insecurity, with catastrophic, conflict-driven hunger confirmed in Sudan, Gaza, South Sudan, Yemen, Haiti, and Mali.¹² Famine was formally confirmed in Sudan in August 2024 and in the Gaza Governorate in July 2025.^{12, 29} The most recent FAO-WFP Hunger Hotspots report (November 2025–May 2026) found conflict and violence to be the primary driver of hunger in fourteen of sixteen identified hotspots, with approximately 266 million people facing high acute food insecurity across these countries—even as humanitarian funding for food, agricultural, and nutrition assistance fell by 59% between 2022 and 2025.^{13, 14} This last figure is critical: it demonstrates that the food-security consequences of conflict are being amplified, not merely accompanied, by a simultaneous contraction in the international system's capacity to respond.

5.4 Case Study IV — Taiwan Strait Tensions and Semiconductor Concentration Risk

The fourth case study examines a supply chain disruption that has not yet occurred but whose *anticipated* risk already shapes global industrial and security policy. Taiwan Semiconductor Manufacturing Company (TSMC) alone accounts for over 90% of global fabrication capacity for semiconductors at process nodes of 7 nanometers or below—the chips underpinning smartphones, artificial intelligence systems, and advanced military platforms.^{7, 30} This concentration extends further up the supply chain: the Dutch firm ASML is the sole global supplier of extreme ultraviolet (EUV) lithography equipment required to manufacture the most

advanced chips, while three American firms (Synopsys, Cadence, and Siemens EDA) collectively control more than 80% of the electronic design automation software market.³⁰ Analysts describe this as "chokepoint concentration": disruption at any single node—whether from geopolitical conflict, natural disaster, or pandemic—could trigger a cascading global crisis.³⁰ Paradoxically, this same concentration has been theorized as a deterrent "silicon shield," on the logic that any military action against Taiwan would inflict such catastrophic damage on global (including Chinese) technology supply chains that the economic self-harm to an aggressor would be severe.³⁰ In response, TSMC has begun geographically diversifying production—including a multi-billion-dollar fabrication facility in Arizona—though TSMC's own founder, Morris Chang, has publicly warned that "in the chip sector, globalization is dead" and that bifurcating the supply chain will raise costs and slow innovation industry-wide.³¹ This case study thus illustrates a distinct causal pathway from the other three: here, geopolitical risk shapes supply chain architecture *pre-emptively*, through anticipated rather than realized conflict.

6. The Human Toll of Contemporary Warfare

6.1 Forced Displacement

As documented in Section 2.3, forced displacement reached 123.2 million people globally by the end of 2024, moderating slightly to 122.1 million by April 2025 as some populations (notably in Syria and Afghanistan) returned home, often under adverse or coercive conditions.^{4,11} UNHCR's data reveal a demographically skewed burden: children constitute 40% of forcibly displaced people against 29% of the world population, and low- and middle-income countries host over 73% of the world's refugees and displaced people—meaning the costs of displacement fall overwhelmingly on states least equipped to absorb them.¹¹ Sudan's civil war has made that country, rather than Syria, the world's largest single displacement situation (14.3 million), a reversal that itself testifies to the rapid escalation of a conflict that received comparatively limited international media attention relative to its scale.¹¹

6.2 The Gaza Conflict: A Case Study in Contested Casualty Accounting

The Gaza conflict, ongoing since 7 October 2023, illustrates both the severity of contemporary warfare's human toll and the methodological challenges of measuring it under conditions of restricted access and institutional breakdown. Multiple, methodologically distinct sources report substantially different figures, each with its own provenance and limitations:

- The Gaza Ministry of Health's official tally recorded 62,895 fatalities and 158,927 injuries as of late August 2025, a figure updated continuously as bodies are recovered and identified.³²
- A subsequent compilation places cumulative deaths in the Israeli bombing and invasion of Gaza at 73,389 (approximately 80% reported as civilian, including 21,638 children), in addition to 1,195 deaths from the 7 October 2023 attacks on Israel (69.2% civilian) and 1,193 deaths in the West Bank.³³
- Independent excess-mortality studies employing statistical modeling (rather than direct body counts) estimate substantially higher tolls: one analysis places deaths at

approximately 93,000 (range 77,000–109,000) by May 2025, representing 4–5% of Gaza's pre-war population; another, published in February 2026, estimates 75,200 violent deaths plus 8,540 excess non-violent deaths between October 2023 and January 2025—a figure 34.7% higher than the official Ministry of Health count for the same period, with an estimated 56.2% of violent deaths among women, children, and the elderly.³³

- On the Israeli side, 471 soldiers have been killed and 2,992 injured since the beginning of ground operations (as of December 2025), while more than 1,671 Israelis and foreign nationals were killed, the majority during the 7 October 2023 attacks.³⁴

Beyond mortality, the humanitarian collapse is documented across multiple indicators: 88.5% of school buildings in Gaza were found to be directly hit or destroyed as of a February 2025 satellite assessment;³⁵ by mid-2026, projections indicated 132,000 children under five would suffer acute malnutrition, including over 41,000 severe cases—nearly triple the estimate from May 2025;³² and a ceasefire effective 10 October 2025 substantially reduced but did not eliminate ongoing casualties, with OCHA recording a further 618 deaths and 1,663 injuries in the months immediately following.³⁶ This case illustrates a broader methodological lesson for conflict research: official, real-time casualty figures compiled under active conflict conditions should generally be treated as *conservative floors*, with independent epidemiological reconstruction—where available—often revealing substantially higher true tolls once access and data quality improve.

6.3 The Sudanese Civil War

Sudan's civil war, which escalated dramatically from 2023, has produced what UNHCR now classifies as the world's largest forced displacement crisis (14.3 million people) and the confirmation of famine conditions in August 2024.^{11,29} As of the most recent Hunger Hotspots assessment, approximately 24.6 million Sudanese were projected to face Crisis-level or worse (IPC Phase 3+) acute food insecurity through mid-2025, including 637,000 people in Catastrophe (IPC Phase 5) conditions—the classification immediately preceding confirmed famine.²⁹ The report attributes this trajectory not to drought or harvest failure but to conflict-driven population displacement, restricted humanitarian access, and a risk of partial economic collapse driven by high inflation.²⁹

Table 3. Human Toll Indicators Across Case Study Conflicts

Conflict	Displacement	Food Insecurity	Casualty (Selected)	Estimate
Sudan	14.3 million (world's largest displacement situation)	24.6 million facing Crisis+ (IPC 3+); famine confirmed Aug 2024	Not verified; access restricted	comprehensively severely
Ukraine	8.8 million (refugees + IDPs, UNHCR)	Not a primary food-insecurity crisis; agricultural exports disrupted	9,655+ confirmed civilian deaths (2023 assessment; likely undercount)	

Gaza	~1.9 million of ~2.1 million population internally displaced (repeated)	Confirmed famine (Gaza Governorate, July 2025); entire population in Crisis+	62,895–93,000+ depending on methodology (MoH vs. excess-mortality)
Syria	13.5 million (2024)	Not a primary current focus of hunger hotspot reporting	Not within scope of sources reviewed
Afghanistan	10.3 million	Hotspot of "very high concern"	Not within scope of sources reviewed

Sources: compiled from UNHCR,¹¹ FAO/WFP,^{13, 29} OCHA,^{32, 36} World Bank,²¹ and casualty compilations cited above.^{32, 33}

6.4 A Synthesis: The Compounding Nature of Human Toll

What emerges from Sections 6.1–6.3 is that the "human toll" of contemporary warfare is rarely a single, discrete harm. Displacement, hunger, and mortality compound one another: displaced populations lose access to agricultural land and markets, driving food insecurity; food insecurity in turn drives further displacement in search of assistance; and both conditions elevate mortality risk, particularly among children, through malnutrition, disease, and exposure. The near-total overlap between UNHCR's largest displacement situations (Sudan, Syria, Afghanistan, Ukraine) and the FAO/WFP's highest-concern hunger hotspots (Sudan, Gaza, South Sudan, Yemen, Haiti, Mali) is not coincidental; it reflects a common underlying driver—active or recent armed conflict—operating through multiple, mutually reinforcing channels simultaneously.

7. Multi-Perspective Analysis

To avoid a monocausal or single-disciplinary account, this section explicitly analyzes the paper's findings from five distinct perspectives, each of which foregrounds different causal mechanisms, priorities, and normative concerns.

7.1 The Economic Perspective

From an economic standpoint, the central finding is that geopolitical risk operates as a *macroeconomic shock transmitted through trade, investment, and price channels*, consistent with Caldara and Iacoviello's finding that elevated GPR depresses investment and employment even before conflict is realized.⁸ The Red Sea case study demonstrates, however, that this transmission is *conditional* rather than automatic: aggregate trade effects were modest precisely because global shipping possessed spare capacity and inventory buffers.²⁶ This suggests an important economic policy implication—resilience against geopolitical shock is a function of deliberately maintained slack (in shipping capacity, strategic reserves, and diversified sourcing) rather than an inherent property of globalized markets, which under leaner, "just-in-time" conditions would likely have proven far more vulnerable.

7.2 The Humanitarian Perspective

The humanitarian perspective foregrounds the asymmetry between the scale of need and the scale of response. The 59% real-terms decline in humanitarian food-assistance funding between 2022 and 2025, occurring simultaneously with rising conflict-driven need, exemplifies what UNHCR terms being "pushed to the brink."^{11,14} From this perspective, the paper's data support the conclusion that the international humanitarian architecture—built around voluntary, discretionary donor funding—is structurally unable to keep pace with a rising baseline of conflict, particularly when major donor states simultaneously face domestic fiscal pressure and rising nationalist skepticism of foreign aid.

7.3 The Security and Political Perspective

From a security studies perspective, several of this paper's cases illustrate the deliberate *weaponization* of supply chain interdependence: Houthi attacks on Red Sea shipping represent an explicit strategy of leveraging a global chokepoint for geopolitical leverage disproportionate to Yemen's conventional military capacity, a pattern the Global Peace Index terms "asymmetric capability" enabling smaller actors to sustain conflicts against far larger conventional forces.² Similarly, the "silicon shield" theory surrounding Taiwan represents a security logic in which economic interdependence is consciously cultivated as a deterrent, inverting the classical realist assumption that interdependence necessarily produces vulnerability rather than protection.³⁰ These cases suggest that geopolitical actors increasingly treat global supply chains not merely as targets or victims of conflict but as active instruments and strategic terrain within it.

7.4 The Corporate and Supply Chain Risk-Management Perspective

From the perspective of firms and logistics operators, the practical response to geopolitical risk has been diversification and redundancy—TSMC's Arizona expansion, shipping companies' adoption of Cape of Good Hope routing, and firms' broader "friend-shoring" and "de-risking" strategies. Yet this perspective also reveals a genuine tension articulated by TSMC founder Morris Chang: that geopolitically motivated supply chain fragmentation, while reducing concentration risk, simultaneously raises costs and slows innovation industry-wide, meaning that the pursuit of geopolitical resilience carries a real and possibly permanent efficiency cost that will be borne by consumers and industries globally, not only by the firms and states directly implicated in the underlying conflicts.³¹

7.5 The Ethical and Human Rights Perspective

Finally, an ethical perspective insists that the preceding four analyses—however analytically useful—risk abstracting human suffering into aggregate statistics. The finding that 40% of the world's forcibly displaced people are children,¹¹ that Gaza's entire population has been classified in Crisis-level or worse food insecurity,¹² and that independent researchers estimate Gaza's true casualty toll may exceed official figures by more than a third,³³ demands an ethical framing that centers civilian protection and international humanitarian law compliance as non-negotiable baselines, rather than variables to be traded off against economic efficiency or strategic advantage. The persistent, multi-year gap between peacebuilding expenditure (under

1% of military expenditure) and the scale of documented human suffering constitutes, from this perspective, a global governance failure independent of any single conflict's specific political merits.²

8. Discussion

8.1 Cross-Cutting Themes

Three themes recur across all four case studies and all five analytical perspectives examined in this paper. First, **chokepoints matter disproportionately**: whether geographic (Bab-el-Mandeb, Suez), industrial (TSMC's fabrication capacity), or institutional (humanitarian funding mechanisms), a small number of highly concentrated nodes bear outsized responsibility for transmitting localized conflict into globalized consequence. Second, **duration compounds cost non-linearly**: the near-linear escalation of Ukraine reconstruction estimates (Table 2) demonstrates that protracted conflict does not merely extend damage arithmetically but appears to compound both direct destruction and foregone economic activity. Third, **measurement itself is contested terrain**: the divergence between official and excess-mortality casualty figures in Gaza, and between nominal and PPP-adjusted military expenditure figures globally, indicates that even the ostensibly "factual" foundation of conflict analysis is subject to genuine, good-faith methodological disagreement that this paper has sought to make transparent rather than resolve by fiat.

8.2 Limitations

This paper's limitations should be stated plainly. First, as a narrative synthesis rather than a primary empirical study, it does not generate new data but depends entirely on the accuracy and currency of secondary sources; several of the conflicts examined (Gaza, Sudan) remain active and fast-changing, meaning specific figures cited will likely be superseded. Second, casualty and displacement figures from active conflict zones are inherently subject to access constraints, and this paper's practice of presenting multiple, divergent estimates—while methodologically honest—does not resolve the underlying uncertainty. Third, the paper's case-study selection, while illustrative of major current mechanisms (physical destruction, chokepoint disruption, conflict-driven famine, and anticipatory risk), is not exhaustive; conflicts in Myanmar, the Democratic Republic of the Congo, the Sahel, and elsewhere merit comparable analysis beyond this paper's scope. Finally, the CEPR/VoxEU modeling cited in Section 5.2, while rigorous, was published in April 2024 and its "protracted disruption" scenario may not fully capture developments through late 2025 and 2026, including the partial resumption of Suez traffic following the October 2025 Gaza ceasefire.

9. Policy Implications and Recommendations

Based on the preceding analysis, this paper advances four policy recommendations:

- **Deliberate maintenance of supply chain slack as a public good.** Given that the Red Sea case demonstrates resilience is conditional on spare shipping capacity and inventory buffers rather than automatic,²⁶ governments and international bodies should treat strategic

redundancy in shipping, energy, and critical minerals not as inefficiency to be minimized but as a deliberately maintained buffer against geopolitical shock.

- **Proportionate rebalancing of humanitarian financing.** The 59% real-terms decline in food-assistance funding amid rising conflict-driven need¹⁴ represents an unsustainable trajectory; this paper supports calls for multi-year, predictable humanitarian financing mechanisms less vulnerable to short-term donor political cycles.
- **Investment in conflict prevention commensurate with its demonstrated returns.** Given that peacebuilding expenditure constitutes under 1% of global military expenditure despite conflict's US\$21.8 trillion annual economic cost,² this paper concurs with the Institute for Economics and Peace's own recommendation that modest increases in prevention and diplomacy funding carry asymmetrically large potential returns—the IEP itself estimates that successful diplomacy preventing renewed conflict in a single case (Iran) would be worth approximately US\$2.2 trillion to the global economy.²
- **Transparent, multi-source casualty and needs reporting as a governance norm.** Given the demonstrated divergence between official and independent mortality estimates in Gaza,³³ international bodies should institutionalize practices of reporting confidence intervals and methodological provenance alongside headline casualty figures, both for analytical integrity and to preserve public trust in humanitarian data during and after active conflict.

10. Conclusion

This paper has argued that contemporary warfare cannot be adequately understood through a battlefield-centric lens alone. The evidence assembled here—spanning the Institute for Economics and Peace's US\$21.8 trillion estimate of the global economic cost of violence, UNHCR's record of 123.2 million forcibly displaced people, the World Bank's US\$587.7 billion Ukraine reconstruction estimate, the documented 70–90% disruption of Red Sea shipping traffic, the FAO/WFP's finding that conflict now drives acute food insecurity for 266 million people, and the deeply contested but uniformly severe casualty toll in Gaza—demonstrates that geopolitical instability, global supply chains, and human suffering constitute a single, interconnected system rather than three separate domains of inquiry. The multi-perspective analysis offered in Section 7 shows that economic, humanitarian, security, corporate, and ethical framings each capture genuine and partially incompatible truths about this system: what appears as resilience to an economist modeling aggregate trade flows may appear as catastrophic and ongoing suffering to a humanitarian actor counting malnourished children, and what appears as prudent deterrence to a security analyst may appear as morally unacceptable brinkmanship to an ethicist. A genuinely comprehensive account of contemporary warfare—one that looks, in this paper's phrase, *beyond the battlefield*—must hold all of these perspectives in view simultaneously. The policy implications that follow are neither novel nor simple, but the evidence assembled here suggests they are increasingly urgent: the architecture of global interdependence, built for an assumed condition of relative peace, now requires deliberate redesign for a condition of persistent, geographically dispersed, and economically consequential conflict.

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