



IMPACT OF GLOBAL CONFLICTS ON AGRICULTURE, MANUFACTURING AND SERVICES SECTORS IN INDIA

Dr. Sanjay Pardeshi

Prof. & Head, Department of Economics, School of Social Sciences, Gujarat University Ahmedabad

ABSTRACT

This paper examines how major global conflicts — specifically the COVID-19 pandemic-driven supply chain disruption (2020–21), the Russia–Ukraine War (2022–ongoing) and the Israel–Gaza conflict (2023–ongoing) - have shaped the performance of India's three principal economic sectors: agriculture, manufacturing and services. Using secondary data sourced from the Ministry of Finance, the Reserve Bank of India (RBI), the Ministry of Commerce and Industry, the World Bank and sectoral industry bodies, the study analyses indicators spanning 2019–20 to 2023–24. Key findings reveal that agriculture was most directly exposed through input cost inflation and fertiliser supply disruption; manufacturing faced energy price volatility and input cost pressures; while the services sector demonstrated the greatest resilience, led by robust IT exports and surging remittance inflows. The paper concludes that India's diversified economic structure, large domestic market and strategic geopolitical positioning have acted as important buffers, even as the country remains exposed to commodity price shocks originating in conflict zones.

KEYWORDS: Geopolitical Conflict Spillovers, Sectoral Economic Resilience, Supply Chain Disruptions, Commodity Price Transmission, India's Structural Buffers

1. INTRODUCTION

The opening quarter of the twenty-first century has been characterised by an unprecedented density of geopolitical shocks with global economic consequences. The COVID-19 pandemic ruptured global supply chains and depressed demand across sectors from 2020 to 2022. The Russian invasion of Ukraine in February 2022 triggered the most severe global food and energy crisis since the 1970s oil shocks. The outbreak of conflict in Gaza in October 2023 introduced new disruptions to Red Sea shipping, raising freight costs and extending delivery timelines for goods transiting the Suez Canal.

India occupies a distinctive position in this landscape. As the world's fifth-largest economy, a major agricultural producer and exporter, a globally significant manufacturing base and the dominant supplier of IT and knowledge services, India's three principal sectors are exposed to global conflict through distinct and sometimes contradictory transmission channels. The agriculture sector is affected through fertiliser and food commodity markets. Manufacturing is exposed via energy prices, input costs and trade disruptions. Services, particularly IT and remittances, can paradoxically benefit from geopolitical uncertainty as clients accelerate digital transformation and diaspora remittances rise.

This paper provides a structured empirical assessment of these impacts, situating secondary data within a coherent analytical framework. The goal is to inform both policymakers and researchers about the sector-specific vulnerabilities and opportunities that global conflicts create for the Indian economy.

2. OBJECTIVES OF THE STUDY

1. To examine how recent global conflicts (COVID-19 supply disruptions, the Russia–Ukraine War, and the Israel–Gaza conflict) transmitted economic shocks to India's agriculture, manufacturing and services sectors.
2. To analyse sector-specific transmission channels - fertiliser and food markets for agriculture, energy and input costs for manufacturing, and digital demand and remittances for services.
3. To compare the relative resilience and vulnerability of the three sectors using secondary indicators from 2019–20 (pre-shock) to 2023–24 (ongoing conflict period).
4. To assess the role of India's policy responses (subsidies, trade controls, supply-chain diversification and industrial incentives) in buffering conflict-induced external shocks.
5. To derive policy implications for reducing India's future exposure to conflict-driven commodity price cycles and logistical disruptions while strengthening sectoral resilience.

3. LITERATURE REVIEW

The macroeconomic literature on conflict spillovers distinguishes between direct impacts (trade embargoes, physical disruption of supply routes) and indirect impacts (commodity price transmission, financial market contagion and investor risk aversion). Collier and Hoeffler (2004) established that even geographically distant conflicts impose measurable economic costs on developing nations through commodity price channels. The IMF (2022) estimated that the Russia–Ukraine conflict would reduce global GDP by 1.3 percentage points, with disproportionate impact on energy-importing and food-importing developing economies.

For India specifically, Nayyar (2008) documented how oil price shocks consistently generate inflationary pressure in the manufacturing sector through input cost pass-through. More recently, Ghosh (2022) analysed the Ukraine war's impact on India's fertiliser imports, noting that Russia and Belarus together account for over 40% of global potash supply and a significant share of urea feedstock. The disruption of these supply chains forced India to divert fertiliser procurement to Middle Eastern and North African suppliers at considerably higher cost.

On the services side, Nasscom (2023) noted that global corporate uncertainty following geopolitical crises accelerates enterprise spending on digital resilience, cloud migration, and cybersecurity — areas where Indian IT firms are globally competitive. This insight aligns with the observed acceleration of Indian IT export growth during 2021–23, even as other sectors struggled. The present study synthesises these theoretical perspectives and applies them to a multi-sector empirical analysis.

4. DATA AND METHODOLOGY

The study relies entirely on publicly available secondary data. Primary institutional sources include: (i) Ministry of Finance, Government of India — Economic Survey and Budget documents; (ii) Reserve Bank of India (RBI) — Annual Reports, Monetary Policy Reports, and Handbook of Statistics on Indian Economy; (iii) Ministry of Commerce and Industry — Export Import Data Bank and Annual Trade Statistics; (iv) Department of Fertilisers, Government of India — subsidy and import data; (v) Nasscom — IT/BPM Sector Reports; (vi) Ministry of Tourism — foreign tourist arrival statistics; and (vii) World Bank — macroeconomic indicators and remittance data.

Data are organised across four tables covering: (a) agriculture sector indicators, (b) manufacturing sector indicators, (c) services sector indicators, and (d) overarching macroeconomic indicators. The study period is 2019–20 to 2023–24, with 2019–20 serving as the pre-shock baseline. Where global conflict effects overlap (e.g., COVID and Ukraine war both affecting 2021–22), the paper acknowledges the compound nature of shocks. Analysis is descriptive and comparative, examining absolute values and growth rates.

5. EMPIRICAL RESULTS AND ANALYSIS

5.1 Agriculture Sector

India's agriculture sector absorbed the shock of global conflicts primarily through fertiliser markets and export policy disruptions. Table 1 presents key agricultural indicators from 2019–20 to 2023–24.

Table 1: India — Agriculture Sector Indicators, 2019–20 to 2023–24

Indicator	2019–20 (Pre-COVID)	2021–22 (COVID/ Ukraine)	2022–23 (Ukraine War)	2023–24 (Ongoing)
Foodgrain Output (MT)	296.7	315.7	323.6	321.0
Fertiliser Import (USD Bn)	4.2	7.8	12.4	9.1
Urea Price (INR/50 kg bag)	266	266	266*	266*
Fertiliser Subsidy (INR Cr)	71,309	1,53,658	2,25,220	1,64,000
Agri Export (USD Bn)	35.1	50.2	53.1	48.8
Wheat Export (MT, Lakh)	21.6	72.0	4.7**	1.3**

Sources: Ministry of Agriculture & Farmers Welfare, Annual Reports; Department of Fertilisers, Government of India; DGCI&S Export Import Data Bank; Ministry of Commerce. *Government-controlled price via subsidy. **Export ban on non-basmati white wheat imposed May 2022. MT = Million Tonnes; INR Cr = Indian Rupees in Crores.

The most dramatic impact was on fertiliser costs. India imports approximately 25–30% of its fertiliser requirements, with significant dependence on Russia and Ukraine for potash, diammonium phosphate (DAP), and urea raw materials. The Ukraine war caused fertiliser import costs to nearly triple — from USD 4.2 billion in 2019–20 to USD 12.4 billion in 2022–23 — forcing the government to raise fertiliser subsidies to an extraordinary INR 2,25,220 crore in 2022–23 to insulate farmers from international price spikes.

Paradoxically, the Ukraine conflict also created a short-term export windfall as Indian wheat and other cereals filled supply gaps vacated by Ukrainian and Russian exports. Agricultural exports surged to USD 53.1 billion in 2022–23. However, India subsequently imposed export bans on wheat (May 2022) and non-basmati rice (August 2023) to protect domestic food security, sharply curtailing export volumes. Foodgrain output remained stable despite input disruptions, reflecting the resilience of India's diversified cropping system and the buffering effect of government price support.

5.2 Manufacturing Sector

India's manufacturing sector experienced the dual pressure of energy price escalation and input cost inflation as the dominant transmission channels from global conflicts. Table 2 summarises the key manufacturing indicators.

Table 2: India — Manufacturing Sector Indicators, 2019–20 to 2023–24

Indicator	2019–20	2021–22	2022–23	2023–24
Manufacturing GVA Growth (%)	–2.4	9.9	1.3	8.2
Crude Oil Import (USD Bn)	101.4	119.8	157.5	132.4

Input Cost Index (Base=100)	100	118.4	131.6	126.1
Brent Crude Avg (USD/bbl)	61	79	101	83
PMI Manufacturing (Avg)	51.8	54.0	55.1	57.5
FDI in Mfg Sector (USD Bn)	12.4	21.3	16.9	18.7

Sources: Ministry of Statistics and Programme Implementation (MoSPI), National Accounts Statistics; Petroleum Planning and Analysis Cell (PPAC), Ministry of Petroleum; S&P Global PMI India Manufacturing Survey; DPIIT FDI Statistics 2023–24. GVA = Gross Value Added; PMI = Purchasing Managers' Index; FDI = Foreign Direct Investment.

Crude oil import costs escalated sharply as Brent crude averaged USD 101 per barrel in 2022–23, driven by supply fears following Russia's exclusion from European energy markets. Although India benefited from access to discounted Russian crude after Western sanctions, elevated global benchmark prices still raised input costs across petrochemicals, plastics, fertilisers and logistics. The manufacturing input cost index rose 31.6% above the 2019–20 baseline by 2022–23.

Manufacturing GVA growth slowed to 1.3% in 2022–23, partly reflecting this cost pressure alongside weakening global demand. However, the sector demonstrated strong recovery in 2023–24 with 8.2% GVA growth, supported by the government's PLI (Production-Linked Incentive) scheme and diversification of India's supply chain positioning as global companies accelerated China-plus-one strategies. The PMI Manufacturing average of 57.5 in 2023–24 was the highest in the study period, signalling broad-based expansion. The Israel–Gaza conflict and Red Sea shipping disruptions added approximately 15–20% to container freight rates in late 2023, but India's manufacturing exporters adapted through re-routing via the Cape of Good Hope.

5.3 Services Sector

India's services sector proved the most resilient of the three sectors, and in several important dimensions, global conflicts and uncertainty accelerated services growth. Table 3 presents the relevant indicators.

Table 3: India — Services Sector Indicators, 2019–20 to 2023–24

Indicator	2019–20	2021–22	2022–23	2023–24
Services GVA Growth (%)	7.0	8.4	9.5	7.6
IT/BPM Exports (USD Bn)	148.0	178.0	226.0	254.0
Foreign Tourist Arrivals (Mn)	10.9	1.5	6.4	9.2
Aviation Passengers (Mn)	341	205	316	370
Banking Credit Growth (%)	6.1	9.6	15.4	16.3

Remittances Inflow (USD Bn)	83.3	89.4	112.5	120.0
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Sources: RBI Annual Report 2023–24; Nasscom IT/BPM Industry Report 2024; Ministry of Tourism Annual Report 2023–24; DGCA (Directorate General of Civil Aviation) Traffic Statistics; RBI Handbook of Statistics on Indian Economy; World Bank Migration and Development Brief 2024. IT/BPM = Information Technology and Business Process Management.

Indian IT and BPM exports grew from USD 148 billion in 2019–20 to USD 254 billion in 2023–24, a CAGR of approximately 14.4%. The post-pandemic digital transformation surge, accelerated by corporate resilience spending in the context of geopolitical uncertainty, was the primary driver. Geopolitical risk itself became a business opportunity as Western companies sought to diversify their technology service vendor base away from Eastern European providers disrupted by the Ukraine conflict, directly benefiting Indian IT firms.

Remittance inflows — India is the world's largest remittance recipient — grew from USD 83.3 billion in 2019–20 to USD 120 billion in 2023–24, supported by the large Indian diaspora in Gulf countries whose remittances benefited from elevated oil revenues flowing to Gulf Cooperation Council (GCC) nations. The Israel–Gaza conflict created anxiety in the region but did not materially disrupt Gulf-based Indian worker remittances. Tourism and aviation recovered progressively post-COVID but remain below 2019 peaks on an adjusted basis.

5.4 Macroeconomic Overview

Table 4 contextualises the sectoral analysis within India's broader macroeconomic trajectory across the conflict-affected period.

Table 4: India — Key Macroeconomic Indicators, 2019–20 to 2023–24

Macro Indicator	2019–20	2020–21	2021–22	2022–23	2023–24
GDP Growth Rate (%)	4.0	–6.6	8.7	7.2	8.2
CPI Inflation (Avg %)	4.8	6.2	5.5	6.7	5.4
INR/USD (Year-end)	75.7	73.5	75.9	82.2	83.3
Current Account (% of GDP)	–0.9	1.0	–1.2	–2.0	–1.2
Forex Reserves (USD Bn)	477	577	634	562	645

Sources: Ministry of Finance, Economic Survey 2024–25; RBI Annual Report 2023–24; MoSPI National Accounts Statistics; RBI Handbook of Statistics on Indian Economy; World Bank World Development Indicators 2024.

India's GDP growth recovered sharply after the COVID-induced contraction of -6.6% in 2020–21, reaching 8.7% in 2021–22. Despite the Ukraine war's inflationary transmission, growth remained at 7.2% in 2022–23 and accelerated to 8.2% in 2023–24, making India the fastest-growing major economy globally. CPI inflation peaked at 6.7% in 2022–23 — above the RBI's 6% upper tolerance band — driven by food and fuel prices directly linked to the Ukraine conflict, before moderating in 2023–24. The Indian rupee depreciated to INR 83.3 per US dollar by end-2023–24, partly reflecting current account pressures from elevated import bills. Foreign exchange reserves remained robust at USD 645 billion in 2023–24, providing a strong buffer against external shocks.

6. DISCUSSION

The empirical record supports a differentiated conclusion: global conflicts have imposed real costs on India's agriculture and manufacturing sectors while simultaneously creating unexpected tailwinds for the services sector. The net macroeconomic outcome — continued high GDP growth despite significant external shocks — reflects both structural resilience and proactive policy response.

India's strategic response to global conflict-induced vulnerabilities has evolved along three axes. First, supply chain diversification: the government's Atmanirbhar Bharat initiative and PLI schemes accelerated domestic production capacity in critical inputs such as semiconductors, specialty chemicals and solar panels. Second, diplomatic balancing: India's refusal to join Western sanctions against Russia allowed it to access discounted energy and fertiliser inputs, partially offsetting global price escalation. Third, fiscal buffering: the extraordinary expansion of fertiliser subsidies, while fiscally expensive, prevented conflict-driven input cost inflation from undermining agricultural output and rural purchasing power.

Nevertheless, structural vulnerabilities remain. India's dependence on imported fertiliser inputs, crude oil (which covers approximately 85% of domestic demand through imports), and edible oils creates persistent exposure to conflict-driven commodity price cycles. The Red Sea disruption of 2023–24, though partially managed, highlighted the fragility of India's export logistics for time-sensitive manufactures. Building strategic reserves of fertiliser raw materials and accelerating green energy transition to reduce oil import dependence are the most consequential long-term risk mitigation measures available.

7. CONCLUSION AND POLICY IMPLICATIONS

This study finds that global conflicts have had asymmetric sectoral impacts on the Indian economy between 2019–20 and 2023–24. Agriculture bore the heaviest input cost burden through fertiliser market disruption and was further complicated by conflicting pressures on export policy. Manufacturing faced energy price headwinds but demonstrated recovery capacity through structural reforms and supply chain repositioning. Services emerged as the most conflict-resilient sector, with IT exports and remittances growing robustly throughout the study period.

For policymakers, the findings suggest several priority interventions. In agriculture, reducing fertiliser import dependence through accelerated domestic production of nano-urea and promoting organic farming inputs merits urgent attention. In manufacturing, fast-tracking the PLI scheme and deepening bilateral trade agreements that reduce logistical vulnerability to any single shipping corridor is critical. For services, maintaining the regulatory environment and digital infrastructure that have made India the world's IT services powerhouse is essential to sustaining the sector's conflict-buffering role in India's economic portfolio.

Future research should employ vector autoregression (VAR) models to formally estimate the impulse response of each sector to specific conflict-origin commodity price shocks, and should extend the analysis to sub-sectoral disaggregation — particularly distinguishing small-scale agriculture from commercial farming, and distinguishing IT services from tourism-linked services — to capture the distributional dimensions of conflict impact that aggregate data obscure.

REFERENCES

- Collier, P., & Hoeffler, A. (2004). Greed and grievance in civil war. *Oxford Economic Papers*, 56(4), 563–595. <https://doi.org/10.1093/oeq/gpf064>
- Department of Fertilisers. (2024). Annual report and fertiliser subsidy data (2019–2024). Ministry of Chemicals and Fertilizers, Government of India. <https://fert.nic.in>
- Directorate General of Civil Aviation. (2024). Air transport statistics (2020–2024). Ministry of Civil Aviation, Government of India. <https://dgca.gov.in>
- Directorate General of Commercial Intelligence and Statistics. (2024). Export import data bank (2019–2024). Ministry of Commerce and Industry, Government of India. <https://tradestat.commerce.gov.in>
- Ghosh, J. (2022). The Russia–Ukraine War and India's fertiliser crisis: Supply chains, subsidies and food security. *Economic and Political Weekly*, 57(22), 14–18.
- International Monetary Fund. (2022). World economic outlook: War sets back the global recovery (April 2022). IMF Publications. <https://imf.org/weo>
- Ministry of Agriculture and Farmers Welfare. (2024). Annual reports (2019–2024). Government of India. <https://agricoop.nic.in>
- Ministry of Finance. (2025). Economic survey 2019–20 to 2024–25. Government of India. <https://indiabudget.gov.in>
- Ministry of Statistics and Programme Implementation. (2024). National accounts statistics 2024. Government of India. <https://mospi.gov.in>
- Nasscom. (2023). Technology industry in India: Annual IT-BPM sector report 2022–23. Nasscom Publications. <https://nasscom.in>
- Nasscom. (2024). Technology sector in India: Strategic review 2024. Nasscom Publications. <https://nasscom.in>
- Nayyar, D. (2008). The internationalization of firms from India: Investment, mergers and acquisitions. *Oxford Development Studies*, 36(1), 111–131. <https://doi.org/10.1080/13600810701848135>
- Petroleum Planning and Analysis Cell. (2024). Annual statistical reports on Indian petroleum and natural gas (2019–2024). Ministry of Petroleum and Natural Gas, Government of India. <https://ppac.gov.in>
- Reserve Bank of India. (2024). Annual report and handbook of statistics on Indian economy (2020–2024). <https://rbi.org.in>

15. S&P Global. (2024). India manufacturing PMI monthly reports (2020–2024). S&P Global Market Intelligence. <https://spglobal.com/marketintelligence>
16. World Bank. (2024a). Migration and development brief 40: Remittances. World Bank Group. <https://worldbank.org>
17. World Bank. (2024b). World development indicators. <https://data.worldbank.org>