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India's Trade-Offs Between Accessing US Markets and Strategic Autonomy in Sourcing Oil

A CGE Analysis

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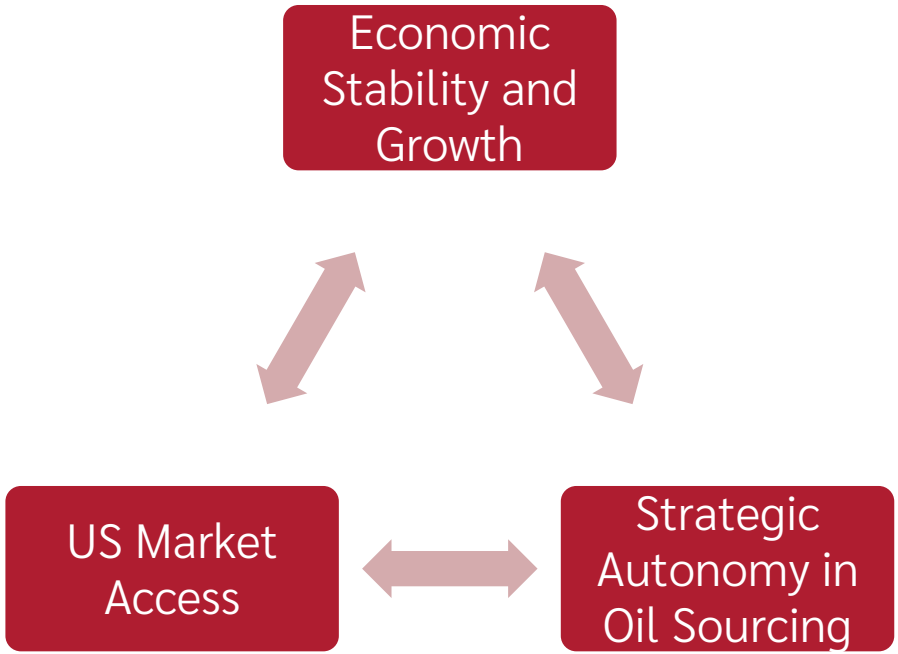
India’s Geoeconomic Trilemma



- The US is weaponising its market power, using access to its large consumer base to coerce geopolitical alignment
- They have imposed a 10% universal baseline tariff and threatened an additional 25% punitive tariff on India for importing Russian crude
- This paper seeks to quantify India’s geoeconomic trilemma between US market access, strategic autonomy to source Russian Urals, and ensuring economic stability and growth

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Theoretical and Historical Context

Weaponised Interdependence

- Asymmetric network control (Farrell & Newman, 2019)
- The US is leveraging its large consumer market to coerce India's foreign policy regarding Russia

Decay of Multilateralism

- Paralysis of the WTO Appellate Body by the US
- Global trade has shifted from rules-based order to power-based transactional bargaining

Parallels to the 1930s

- The US Smoot-Hawley Tariff Act (1930) led to retaliatory tariffs worldwide, exacerbating the Great Depression
- Echoes today with the US weaponising market access, China weaponising critical supply chains

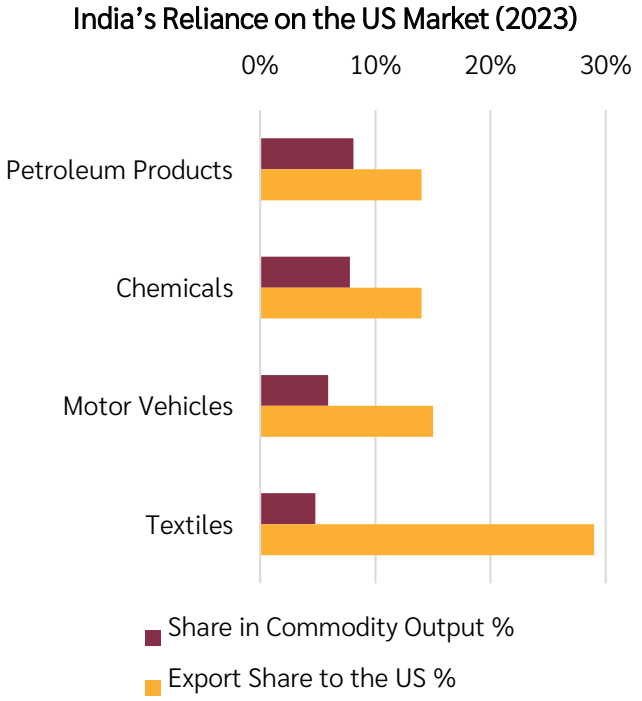
US Coercion & Sectoral Vulnerabilities

US coercion has been multilayered, undermining multilateral values:

- Apr-25: Liberation Day tariffs
- Aug-25: 25% punitive tariff – watchdog mechanism
- Feb-26: US SC strikes down IEEPA tariffs -> universal 10% baseline tariff & proposed Sanctioning Russia Act
- Section 301(b) investigations into “excess capacity” (126% on India’s solar PVs)

Asymmetrical application of punitive tariffs on Russian energy imports:

- China: large tariffs already imposed, limited leverage
- EU/Türkiye: NATO allies (?)
- India needs the US market for export-led growth (20% of commodity exports) – vulnerable to coercion



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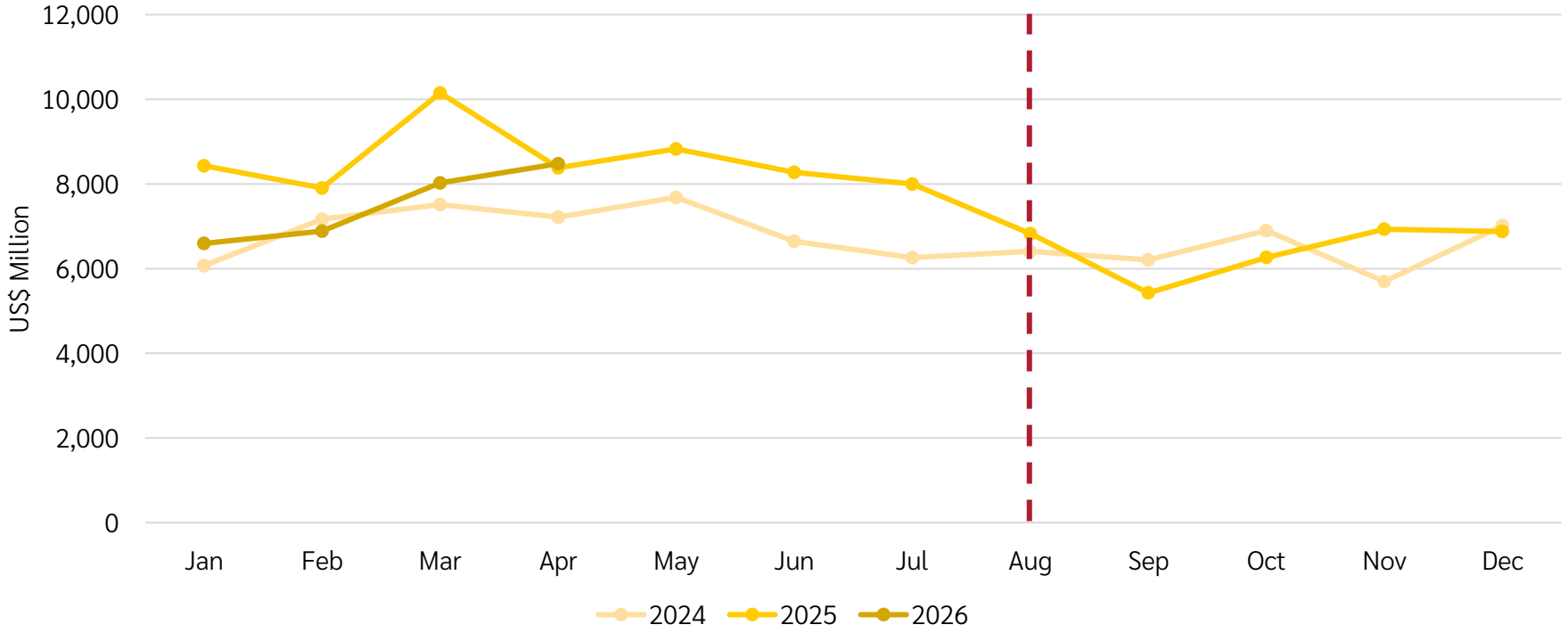
India’s Monthly Exports to the US: 2024-2026



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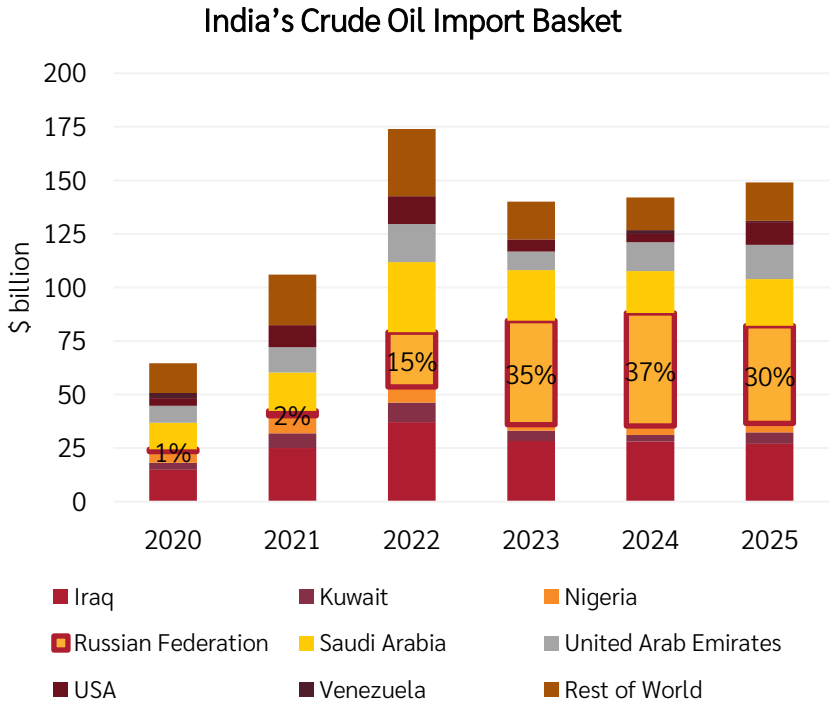
Waiver Diplomacy



- Due to the threat of punitive tariffs, India has complied by reducing Urals imports – as low as 19% in Jan-26
- The US has provided 30-day waivers to India to import Russian oil during the ongoing situation in Iran, due to the risk of global oil spikes – till June 17
- Price spike in value of crude imports in 2022 was due to the Russia-Ukraine war – also the rationale for the Russian oil price cap and recent embargoes

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Methodology and Simulations

GTAP CGE Model Overview

Computable General Equilibrium (CGE) Models

- Traces effects of economic shocks throughout the global economy and the structural realignments
- Comparative static, “what-if” / counterfactuals

GTAP Database and Model

- **GTAP v12 database: 2023 base, 65 sectors, 163 regions (study aggregates to 17 regions)**
- Model captures non-linear market dynamics
- Allows substitution between factors of production and domestic/imported goods
- Standard model assumes perfect competition and constant returns to scale; however oil markets are oligopolistic

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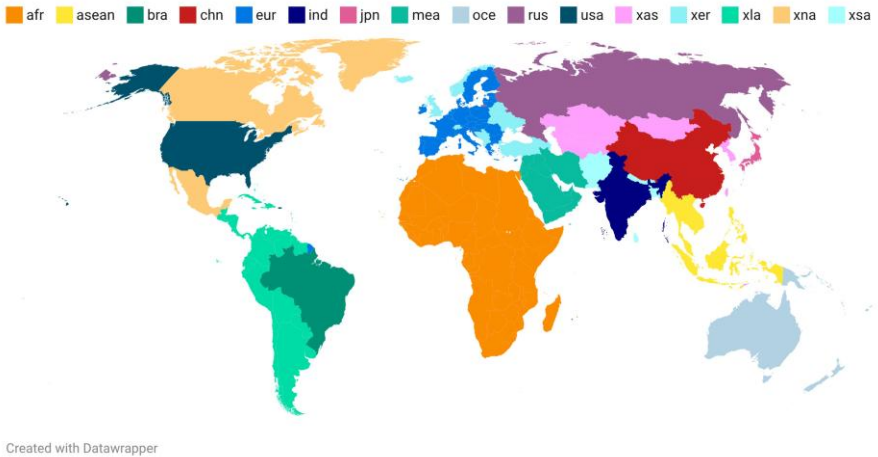
Macroeconomic Assumptions

We use the standard model closures with the following modifications:

- Unskilled labour is modelled to be in surplus in India, South Asia, and Africa – wage rates are fixed
- Western sanctions on Russian oil: we ensure that the Western Bloc (US, North America, EU, Japan, Australia) imports of Russian oil are kept constant
- Export restrictions are modelled as frictions in trade (*ams*)



Simulation Scenarios

Scenario		US Market Access	Sourcing Russian Oil	Distressed Oil Market	Multilateral Retaliation	Multilateral Liberalisation
1	Baseline universal US tariff	✓	✓			
1A	Compliance	✓	↓			
1B	Defiance	↓	✓			
2	Distressed Oil Market			↑		
2A	Compliance + Distressed Oil Market	✓	↓	↑		
2B	Defiance + Distressed Oil Market	↓	✓	↑		
3i	Coordinated Multilateral Retaliation	✓	✓		✓	
3ii	Retaliation + Plurilateral Liberalisation	✓	✓		✓	✓

Computing Trade-Weighted Tariff Shocks

- The US has exempt certain sectors from tariffs due to strategic reasons
- We mapped exemptions at HS-6 level to 45 GTAP commodity sectors, accounting for USMCA utilisation rate
- Effective trade-weighted tariff is calculated by discounting the exempt sectors and any FTA utilisation rates
  - For example, the baseline tariff on India's exports of *Paper & Paper Products* is effectively 7.2%

$$\Delta\tau_{s,r} = \tau_{base} \times \left(1 - \frac{\sum_{i \in e} \omega_{i,r}}{\sum_{j \in h} \omega_{j,r}}\right) \times (1 - U_r)$$

$\tau_{s,r}$ effective tariff by sector and region

s GTAP sector

r region

τ_{base} 10% or 35%

h all HS-6 codes in GTAP sector s

e exempt HS-6 codes in GTAP sector s

ω trade value

E_i exempt / non-exempt

U_r utilisation factor of 0.882 for USMCA; 0 for all other regions

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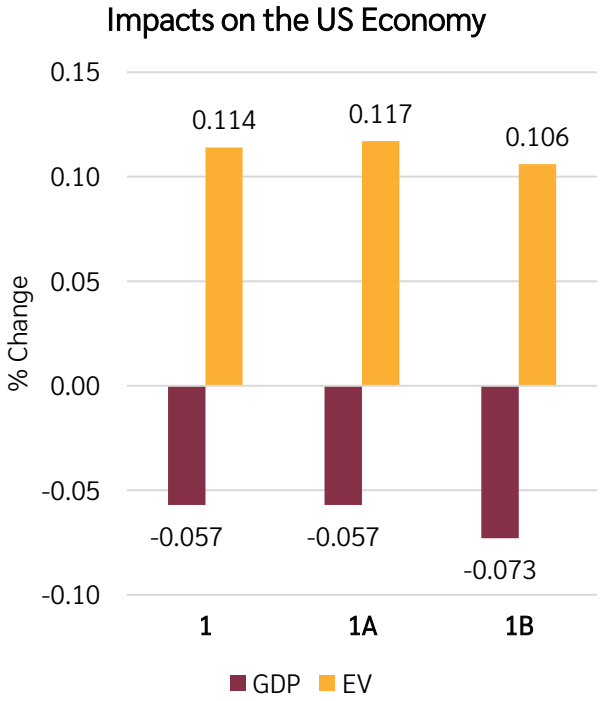
Results

US Outcomes – Weaponised Interdependence

- Why is the US pursuing this tariff regime?

  The US gains in welfare (EV) due to its large market size (“optimal tariff”, Miran 2024)
- Tariffs force global exporters to cut prices and absorb costs, improving terms of trade
- Tariffs -> reduced global aggregate demand -> lower price of capital goods globally -> relative purchase power of US regional household increases via investment-savings effect (ToT on capital goods)
- These effects outweigh losses in allocative efficiency
- The US can afford to weaponise interdependence



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Mechanics of Compliance and Defiance

Compliance (1A)

- Larger hit to GDP due to supply-side shock fracturing capital-intensive energy supply chains
- oil -> refineries -> industries
- India produces less but retains the value in the country

Defiance (1B)

- Larger hit to welfare and employment due to demand-side shock
- India maintains production levels, but transfers wealth to the US
- Labour-intensive sectors and jobs are hurt by tariffs

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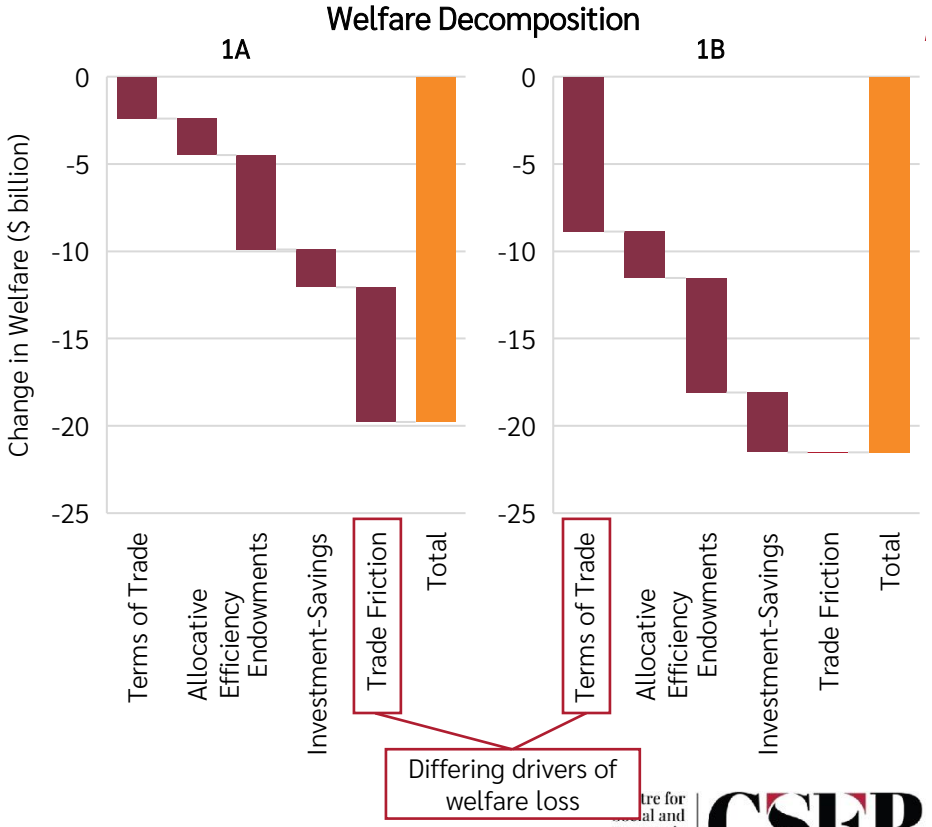
Impacts on the Indian Economy (1)

- While India's GDP contracts less in defiance, welfare losses are larger (1B)

Impact	1A: Comp.	1B: Def.
GDP (%)	-0.419	-0.254
EV (%)	-0.543	-0.591
EV ($bn)	-19.8	-21.5

- Welfare reduction in 1B is primarily by terms of trade (*tot*) loss as exporters have to reduce prices – compared to deadweight losses of restricting Urals imports (*ams*) in 1A



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Impacts on the Indian Economy (2)

- While compliance/1A leads to a larger contraction of India's GDP, the reduction in unskilled employment is greater in defiance/1B (-0.65%) than compliance/1A (-0.54%)
- On the other hand, skilled labour wages drops more in compliance/1A (-0.44%) compared to defiance/1B (-0.22%) when the economy reaches a new equilibrium
- In effect, the burden of defiance will be borne by India's factory workers, as export-intensive industries slow down

Sector	Real Output (%)		Unskilled Employment (%)	
	1A: Comp.	1B: Def.	1A: Comp.	1B: Def.
tex	-0.50	-2.93	-0.89	-3.25
wap	-0.16	-6.47	-0.44	-6.69
p_c*	-4.32	-0.33	-4.93	-0.89
i_s	-2.32	-0.79	-2.81	-1.23
omf	-3.28	-10.00	-3.77	-10.40

* as an exempt sector, petroleum products is less impacted in *defiance* as India can source oil from countries of its choice and export refined products to the US without facing higher tariffs

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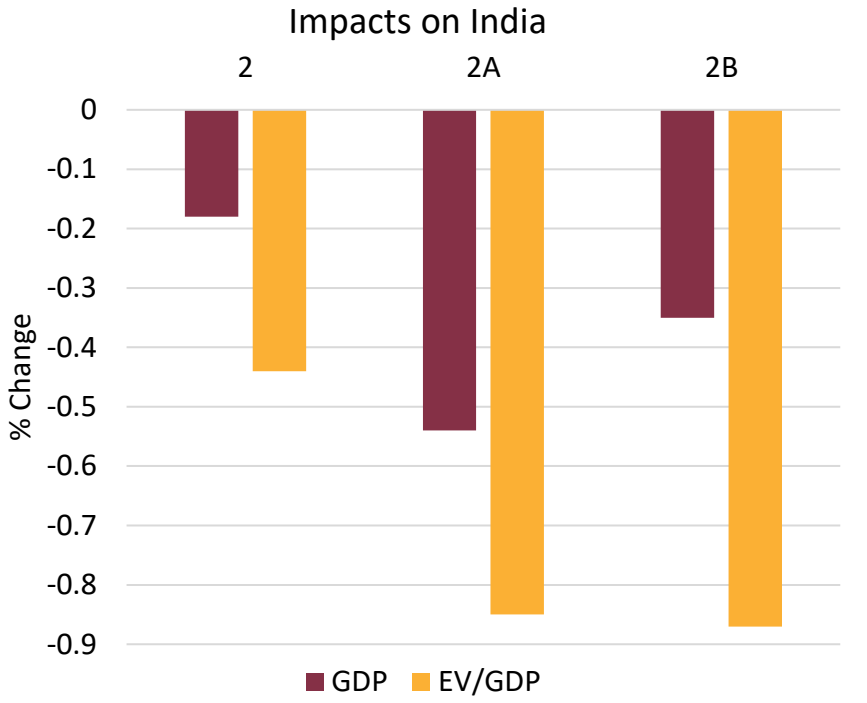
Distressed Oil Markets

- In the case of a distressed oil market (2), the gap between welfare reduction in compliance (2A) and defiance (2B) reduces to only $0.7 billion
- When oil prices are high, as they currently are with the Iran war, absolute compliance is economically unsustainable
- Defiance may be more tenable, or alternatively, getting waivers (1) by leveraging the risk of elevated global oil prices



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Coordinated Retaliation & Systemic Pushback

% Changes	1: Base	1A: Comp.	1B: Def.	2: Distress	2A: Comp.	2B: Def.	3i: Retal.	3ii: Liber.
GDP	-0.061	-0.419	-0.254	-0.176	-0.537	-0.353	-0.045	+0.024
EV	-0.156	-0.543	-0.591	-0.444	-0.846	-0.865	-0.075	-0.017
Unskilled employment	-0.151	-0.536	-0.650	-0.440	-0.843	-0.926	-0.077	+0.047
Skilled wages	-0.021	-0.437	-0.224	-0.336	-0.769	-0.520	-0.068	+0.030
Terms of trade	-0.313	-0.390	-1.444	-1.044	-1.176	-2.182	-0.134	-0.182

- In (1), the US acts as a large economy, improving its ToT and extracting economic welfare from other countries (optimal tariff theory)
- In (3i), the symmetric retaliatory tariff by all other regions neutralises this leverage – ToT collapse
- India's welfare and employment recover in (3i), with a marginal GDP growth in (3ii)

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Policy Recommendations

Policy Recommendations

SHORT	Waiver diplomacy	Leverage the importance of Urals imports to keep oil prices in check during periods of volatility, protecting consumers *in all regions*.
	Support for non-exempt industries	If India chooses defiance (1B), unskilled labour and non-exempt industries need support (e.g., through RoDTEP, low-interest credit).
MEDIUM	Coordinated response	All regions retaliate plurilaterally by imposing a symmetric tariff on US imports (though geopolitically unrealistic); India must not retaliate alone
	Tariff rationalisation	Consider reducing import tariffs to lower input costs (improved allocative efficiency) – deep bilateral FTAs or trade agreements (CPTPP)
LONG	Asian Energy Sourcing Collab.	1973 oil crisis led to the IEA; Asian countries can collaborate to negotiate supply terms, coordinate on routes, and decarbonise to reduce oil demand
	Energy sourcing diversification	If India chooses compliance (1A), secure alternative sources of crude (e.g., Guyana, Venezuela); bolster public and private strategic petroleum reserves.

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Concluding Remarks

- India's optimal path is avoiding absolute compliance and absolute defiance due to economic unsustainability:
  - Compliance penalises capital-intensive sectors (petroleum refining and downstream users), defiance penalises unskilled labour (textiles)
- The US can afford to weaponise its market size – especially when they are India's largest export destination
- India's optimal path is avoiding binary alignment or defiance: utilise waiver diplomacy while strengthening and supporting the domestic economy
- The WTO Appellate Body has been paralysed by the US, eroding multilateral values
- India must navigate the current trilemma through waiver diplomacy and diversified trade integration to de-risk against weaponised interdependence

Thank you

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Closure Swaps

- swap qe("UnSkLab", "ind") = pebfactreal("UnSkLab", "ind");
  - ind, xsa, afr
- swap ams("oil", "rus", "ind") = qxs("oil", "rus", "ind");
  - ind (when complying); usa, xna, eur, jpn, oce

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Overview of All Scenario Results

% Changes	1: Base	1A: Comp.	1B: Def.	2: Distress	2A: Comp.	2B: Def.	3i: Retal.	3ii: Liber.
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Terms of Trade	-0.313	-0.390	-1.444	-1.044	-1.176	-2.182	-0.134	-0.182

Scenario 1: universal 10% tariff imposed by the US

Scenario 2: distressed oil market due to an oil price rise (+15% *txs*) in the Middle East

Scenario 3: coordinated retaliation (symmetric tariff on the US) and systemic pushback (+10% tariff reduction on non-agricultural goods)

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