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Crude Oil Shock And CPI Inflation In India

Scenario Analysis Using the Leontief Price Model

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Abstract

The US–Israel military operation against Iran in February 2026, which severely disrupted oil traffic through the Strait of Hormuz, drove the Indian Basket crude oil price from US\$69 to US\$117 per barrel within weeks, a shock of 69 percent. This paper estimates the headline CPI inflation impact of this shock under a range of sustained year-average crude price trajectories and government pass-through stances on petrol and diesel. We extend the [Tomar \(2019\)](#) two-channel decomposition by computing fuel-specific Leontief shares from the 131-sector [Chadha et al. \(2020\)](#) Input–Output table, applying the framework separately to LPG, petrol, and diesel. Across four sustained year-average crude scenarios for 2026–27 (US\$100, US\$117, US\$120, and US\$125 per barrel), we find that the LPG revision alone with petrol and diesel frozen adds only 19–23 basis points to year 2026–27 CPI. Partial pass-through of 20–50 percent on petrol and diesel keeps headline CPI within the RBI’s 6 percent upper tolerance band at all four crude levels, but at full pass-through, every scenario at US\$117 and above breaches the ceiling, with year 2026–27 CPI rising to 7.21–7.92 percent. A stress-test scenario at US\$150 sustained, in which even 50 percent pass-through breaches the ceiling, is presented in the appendix.

Keywords: oil price shock, CPI inflation, pass-through, Input–Output analysis, Leontief price model

JEL Codes: E31, Q43, Q48, C67

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1. BACKGROUND

On 28 February 2026, US–Israeli military strikes on Iran brought tanker traffic through the Strait of Hormuz to a near-standstill. The Strait is the world’s most heavily trafficked oil chokepoint: in 2025, approximately 15 million barrels per day of crude oil transited it, representing roughly 34 percent of all global crude oil trade and around 20 percent of total global petroleum liquids consumption. India is the second-largest recipient of Hormuz crude flows after China, and with domestic production unable to keep pace with rising demand, import dependence had already climbed to **88.6 percent** of total crude consumption in FY 2025–26, according to data published by the Petroleum Planning and Analysis Cell (PPAC). Crude oil is one of India’s largest import items, accounting for over 20 percent of the total import basket. A disruption of this scale to the primary export route of West Asian producers, therefore, translated almost immediately into higher landed costs for Indian refiners and tighter supply conditions across the domestic fuel chain.

The effects radiated quickly beyond fuel markets. Shipping insurers imposed war-risk surcharges, tanker availability tightened, and freight rates on the India–Middle East route surged. The benchmark **Indian Basket crude price**, which had averaged US\$69 per barrel in February 2026, climbed to US\$117 per barrel within weeks of the conflict, a shock of 69 percent, as the exchange rate remained broadly stable through this period.

The macroeconomic implications of such a shock extend well beyond the fuel pump. Rising oil prices lift the cost of freight, fertilisers, and manufacturing inputs, which eventually feeds into consumer prices across the board. On the external balance, every US\$10 per barrel rise in crude widens India’s annual import bill by approximately US\$13–14 billion and the current account deficit by around 36 basis points of GDP, according to SBI Research. On growth, sustained high crude prices raise production costs, compress household disposable income, and weigh on investment sentiment.

As an initial response, the government chose a middle path, revising domestic LPG

cylinder prices upward while keeping petrol and diesel pump prices frozen at pre-war levels. Given this scenario, this paper asks a precise question: given the crude shock and the government's chosen policy response, by how much does headline CPI inflation rise? And how does that answer change if the conflict persists, crude climbs further, and the government eventually allows petrol and diesel prices to partially reflect global costs?

2. METHODOLOGY

2.1 WHY A STRUCTURED FRAMEWORK IS NEEDED

Measuring the inflation impact of an oil shock is less straightforward than it may appear. The RBI's oft-cited rule-of-thumb, that a 10 percent rise in crude prices raises inflation by about 30 basis points, answers a different question entirely. That coefficient assumes full and uniform pass-through to all domestic fuel prices simultaneously. It does not distinguish between which fuels have been revised and which have been frozen. When the government partially controls retail prices, as it does in India, the aggregate pass-through is neither zero nor complete. It depends on exactly which fuels have moved, by how much, and on how oil-intensive the rest of the economy is.

To produce estimates that accurately reflect actual policy choices, we need a framework that separates the two channels through which oil prices affect CPI. The **direct channel** captures price changes in fuel items that households purchase and that sit explicitly in the CPI basket. The **indirect channel** captures the cost pressures that propagate through all other goods and services, because businesses use fuel as a production input and pass higher costs forward into their prices. Getting the indirect channel right requires knowing the fuel-intensity of every sector of the economy, which in turn requires an Input–Output model. This paper builds that model.

2.2 THE TOMAR (2019) FRAMEWORK

For our analytical foundation, we follow Tomar (2019), which estimated fuel price pass-through to India’s CPI using Input–Output tables. The paper establishes the two-channel decomposition described above and provides three ingredients we borrow directly: the decomposition formulas, the concept of the aggregate fuel share of the non-oil economy, and the dynamic component of the retail pump price. We apply these to the same structure but extend the methodology in one important direction, as described in the next sub-section.

Under Tomar’s framework, the **direct effect** for any fuel is given by:

$$\text{Direct (bps)} = W_{\text{fuel}} \times \Delta P_{\text{fuel}} \quad (1)$$

where W_{fuel} is the CPI basket weight of that fuel and ΔP_{fuel} is the percentage change in its retail price.

The **indirect effect** captures the cost push transmitted through the production system:

$$\text{Indirect (bps)} = W_{\text{Non-Oil}} \times \Delta P_{\text{pump}} \times S_{\text{fuel}} \quad (2)$$

where $W_{\text{Non-Oil}}$ is the combined weight of all non-fuel items in the CPI basket, ΔP_{pump} is the percentage change in the relevant fuel’s pump price, and S_{fuel} is that fuel’s aggregate share of costs across the non-oil economy, in percentage terms.¹

2.3 THE LEONTIEF PRICE MODEL AND FUEL-SPECIFIC SHARES

Tomar (2019) computes the aggregate petroleum share from India’s Input–Output table using a direct-intensity measure: the fraction of each sector’s intermediate inputs sourced from petroleum, weighted by output shares across the economy. This captures only the first round of fuel costs. We go one step further by applying the full **Leontief price model**, which captures all rounds of cost transmission rather than only the first.

¹When using the percentage values reported in Table 1 (e.g. $S_{\text{LPG}} = 0.1666\%$), the right-hand side of Equation (2) must be divided by 100; equivalently, S_{fuel} may be entered in fractional form (e.g. 0.001666 for LPG). The worked examples in the appendices follow this convention.

The logic is as follows. A food manufacturer may use little petroleum directly, but it purchases transport services, cold-chain logistics, and packaging, all of which are themselves fuel-intensive. These upstream cost increases are real and they do eventually flow into consumer prices. The Leontief model accounts for every round of this cascade. Formally:

$$\Delta \mathbf{p} = (I - A^\top)^{-1} \cdot \Delta \mathbf{c}_{\text{oil}} \quad (3)$$

where A is the matrix of technical coefficients from the Input–Output table, with entry a_{ij} representing the value of sector i ’s output required per unit of sector j ’s output, and $\Delta \mathbf{c}_{\text{oil}}$ is a shock vector of zeros everywhere except in the petroleum row, which receives the price shock. The result Δp_i is the total cost pass-through to sector i across all upstream rounds. The aggregate fuel share S_{fuel} in Equation (2) is the output-weighted average of these sector-level pass-throughs for a particular fuel type.

We apply this to the [Chadha et al. \(2020\)](#) Input–Output table, which covers 131 sectors. This is the most recently published detailed IO table available at the time of this analysis. We cross-reference it with consumption data from [Petroleum Planning and Analysis Cell \(PPAC\) \(2016\)](#) to identify the quantity of each petroleum product, namely LPG, petrol (MS), and diesel (HSD), consumed by each sector. This disaggregation matters because the three fuels play very different economic roles: diesel dominates freight and agriculture, petrol serves primarily as a personal transport fuel, and LPG is mainly a household cooking fuel with limited industrial use. Their aggregate shares therefore differ substantially, as shown in the parameter table below. We exclude kerosene from the model on the grounds that its CPI basket weight is negligible (well under 0.1 percent), its PDS retail price is administratively set and largely insulated from international crude movements, and its household consumption has been substantially displaced by LPG under the Ujjwala scheme.

Having established how fuel intensity is measured across the economy, we now turn to how much of an international crude price movement actually reaches the domestic pump, and how much is absorbed by the tax and regulatory structure.

2.4 THE DYNAMIC COMPONENT AND PASS-THROUGH

Not all of the retail pump price of petrol or diesel moves with international crude. A portion consisting of excise duties, dealer commissions, and VAT is administered and does not change when crude prices change. Only the variable portion, termed the **dynamic component**, is exposed to international price movements.

Following Tomar (2019), we estimate the dynamic component for petrol from the Delhi pump price build-up (calculation given in the appendix of the working paper). At the pre-war retail price, the market-sensitive portion of the price received by the oil marketing company (OMC) before VAT gives a dynamic share of 73 percent, which we round to **70 percent** as the national estimate, considering diesel also. The remaining 30 percent is locked in by statute (static component) and does not respond to crude price movements.

Pass-through is then the proportion of the maximum possible domestic price change that the government actually allows to reach consumers. If crude rises by 69 percent and the dynamic component is 70 percent, the maximum possible domestic price change is $70\% \times 69\% = 48.3\%$ for petrol. At 20 percent pass-through, only $0.20 \times 48.3\% = 9.66\%$ reaches consumers; the OMC or the government budget absorbs the rest. Hence, the effective pump price change for petrol and diesel used in Equation (2) is:

$$\Delta P_{\text{pump}} = \varepsilon \times \text{PT} \times \text{Crude Shock} \quad (4)$$

where $\varepsilon = 70\%$ is the dynamic component and PT is the pass-through rate. Note this applies only to petrol and diesel and similar fuels. Fuels like LPG are handled differently, as explained below.

2.5 LPG: A SPECIAL CASE

LPG warrants separate treatment because two distinct cylinder types serve different consumers under different pricing regimes and feed into different channels of the model. Conflating them would produce incorrect estimates in both channels. Domes-

tic cylinders feed directly into the CPI through household consumption, while commercial cylinders feed indirectly: they are used as a production input across sectors, and their cost is passed through to consumers via the prices of goods and services those sectors produce.

Domestic 14.2 kg cylinders are purchased by households for cooking and sit directly in the CPI basket. Their price is administered by the government. Following the post-war revision in April 2026, two price paths apply. Non-PMUY households, who account for 68.67 percent of connections, saw the price rise from Rs. 853 to Rs. 913 per cylinder, a change of 7.03 percent. PMUY beneficiaries, who account for the remaining 31.33 percent, saw the price rise from Rs. 553 to Rs. 613, a change of 10.85 percent. Both groups received the same nominal increase of Rs. 60; the PMUY percentage is larger because of the lower base. For the direct channel, these are combined into a weighted average price change that represents what the average CPI household actually faces:

$$\Delta P_{\text{LPG, direct}} = (0.6867 \times 7.03\%) + (0.3133 \times 10.85\%) = \mathbf{8.23\%} \quad (5)$$

This 8.23 percent figure is the price change applied to Equation (1) for the direct LPG calculation.

Commercial 19 kg cylinders serve a different market entirely. Restaurants, hotels, and food processors use these as a production input. Unlike the domestic cylinder, the commercial 19 kg price is market-linked and moves with international LPG prices. Following the conflict, the commercial cylinder price rose from Rs. 1,768.50 to Rs. 2,078.50 per cylinder in Delhi, a change of 17.53 percent. This figure feeds into the indirect channel, since it is the cost increase faced by the food services sector, one of the largest components of the non-oil CPI basket.

2.6 MODEL PARAMETERS

Table 1: Model Parameters and Sources

Parameter	Value	Source
W_{LPG} – domestic 14.2 kg	1.98137%	MOSPI CPI 2024 basket
W_{MS} – petrol	4.489%	MOSPI CPI 2024 basket
W_{HSD} – diesel	0.317%	MOSPI CPI 2024 basket
$W_{Non-Oil}$ – all other	93.163%	100 – total fuel weight
S_{LPG} – Leontief share	0.1666%	Tomar (2019); MoSPI IO 2015–16
S_{MS} – Leontief share	1.1642%	Tomar (2019); MoSPI IO 2015–16
S_{HSD} – Leontief share	2.1407%	Tomar (2019); MoSPI IO 2015–16
ε – dynamic component	70%	Tomar (2019); Delhi pump build-up
Baseline CPI (February 2026)	3.21%	MOSPI provisional

Note: Diesel’s Leontief share (2.14%) is the largest of the three fuels, reflecting its central role in road freight, agriculture, and power generation. LPG’s share (0.17%) is small because its industrial use is limited to narrow activities such as metal cutting and food processing. The non-oil weight of 93.163% represents the residual of the CPI basket after netting LPG, petrol, diesel, and other minor fuel categories (e.g., kerosene) that are excluded from the model; it therefore does not equal $100\% - 6.787\%$ exactly.

3. SCENARIOS AND CASES

With the methodology in place, we now apply Equations (1) to (4) across a matrix of scenarios. Rather than selecting a single crude price forecast, we construct four sustained year-average crude price trajectories for the year 2026–27, in which the Indian Basket crude price is treated as a sustained annual mean rather than a transitory shock. The relevant policy question is then: if elevated crude prices persist for the full year, what does headline CPI inflation look like under different government pass-through choices on petrol and diesel? The four crude paths correspond to different assumptions about the duration of the West Asia conflict and are paired with the LPG action consistent with that duration.

The four sustained crude scenarios are organised in two pairs, by the assumed duration of the conflict. The first pair assumes the conflict resolves by around

September 2026: a base case in which the year 2026–27 average settles at US\$100 per barrel (a sustained shock of 44.93 percent over the pre-war US\$69 baseline), and a higher-end case in which crude continues to trade near the current observed level of US\$117 per barrel for the year (a 69.00 percent shock). Both are paired with the April 2026 LPG revision already in place (an 8.23 percent weighted-average increase on the domestic cylinder and a 17.53 percent increase on the commercial cylinder), since no further LPG action is required if the conflict winds down by September. The second pair assumes the conflict persists through around December 2026: a base case at US\$120 per barrel (a 73.91 percent shock) and a higher-end case at US\$125 per barrel (an 81.16 percent shock). Both are paired with a further LPG revision of 10 percent on the domestic price and 19 percent on the commercial price, consistent with the longer conflict duration. A more extreme stress-test scenario at US\$150 per barrel, corresponding to a protracted and escalating conflict beyond December, is presented in Appendix C.

Within each crude scenario, four pass-through cases are modelled for petrol and diesel. Case 1 holds petrol and diesel frozen, so only the LPG revision feeds through. Case 2 applies a 20 percent pass-through, representing a partial and politically managed price revision. Case 3 applies a 50 percent pass-through, representing a moderate decontrol that shares the burden between consumers and the government budget. Case 4 applies a 100 percent pass-through, representing full decontrol in which consumers absorb the entire dynamic component shock. Cases 1 and 2 become particularly costly fiscally once elevated crude is sustained for a full year, since OMCs absorb the gap on every litre of petrol and diesel sold below cost; the policy-relevant question therefore shifts toward Cases 3 and 4 as the conflict drags on, although we report all four cases for completeness.

Table 2 summarises the resulting pump price changes for petrol and diesel across all sixteen scenario–case combinations.

Table 2: Sustained Year-Average Crude Scenarios and Implied Pump Price Changes

Crude (year avg.)	Shock	ΔP pump (20% PT)	ΔP pump (50% PT)	ΔP pump (100% PT)	Direct LPG ΔP	Indirect LPG ΔP
US\$100	44.93%	6.29%	15.73%	31.45%	8.23%	17.53%
US\$117	69.00%	9.66%	24.15%	48.30%	8.23%	17.53%
US\$120	73.91%	10.35%	25.87%	51.74%	10.00%	19.00%
US\$125	81.16%	11.36%	28.41%	56.81%	10.00%	19.00%

Note: $\Delta P_{\text{pump}} = \varepsilon \times \text{PT} \times \text{Crude Shock}$, where $\varepsilon = 70\%$. Direct LPG change for the US\$100 and US\$117 scenarios is the observed April 2026 weighted-average revision (see Section 2). The US\$120 and US\$125 LPG figures are forward projections consistent with international LPG price trends under a longer conflict. The stress-test scenario at US\$150 sustained is presented in Appendix C.

4. RESULTS

4.1 CRUDE AT US\$100 SUSTAINED: CONFLICT RESOLVES BY SEPTEMBER 2026

If the conflict resolves by around September 2026, leaving the year 2026–27 Indian Basket average at US\$100 per barrel, the inflation consequences are contained but non-trivial. With petrol and diesel frozen, the April 2026 LPG revision alone adds 19 basis points to headline CPI, lifting it from the February baseline of 3.21 percent to approximately **3.40 percent**. A 20 percent pass-through to petrol and diesel raises the impact to 69 basis points (year 2026–27 CPI of 3.90 percent), and a 50 percent pass-through to 143 basis points (4.64 percent). Even at full pass-through, year 2026–27 CPI reaches **5.88 percent**, just 12 basis points below the RBI’s 6 percent ceiling. None of the four cases breach the band, though the headroom at full pass-through is thin.

Table 3: Crude US\$100 Sustained: Year 2026–27 Inflation Impact

Case	Direct (bps)	Indirect (bps)	Total (bps)	Total (%)	Year 2026–27 YoY CPI
Case 1: LPG only (petrol/diesel frozen)	16.31	2.72	19.03	0.19%	3.40%
Case 2: LPG + 20% pass-through	46.54	22.08	68.62	0.69%	3.90%
Case 3: LPG + 50% pass-through	91.91	51.14	143.05	1.43%	4.64%
Case 4: LPG + 100% pass-through	167.46	99.55	267.01	2.67%	5.88%

Note: Crude US\$100 sustained year-average for 2026–27 (shock: 44.93%). LPG: April 2026 revision (domestic $\Delta P = 8.23\%$, commercial $\Delta P = 17.53\%$). Baseline CPI: 3.21% (February 2026).

4.2 CRUDE AT US\$117 SUSTAINED: THE CURRENT OBSERVED LEVEL

If the conflict resolves by around September 2026 but crude continues to trade near the current observed level of US\$117 per barrel as the year 2026–27 average, the April 2026 LPG revision alone, with petrol and diesel frozen, adds **19 basis points** to headline CPI. Of these, 16 bps arise from the direct household price increase, and 3 bps from the indirect cost push on the food services sector through higher commercial LPG prices. Year 2026–27 CPI is approximately **3.40 percent**, comfortably within the RBI’s 2–6 percent tolerance band. The government’s price freeze on transport fuels is the dominant inflation-containment mechanism, but at the cost of OMC under-recoveries that scale with the duration of the freeze.

If petrol and diesel are partially decontrolled at a 20 percent pass-through, the total impact rises to 95 basis points, pushing year 2026–27 CPI to 4.16 percent. This remains within the band, though the move is large enough to attract attention from the Monetary Policy Committee. A 50 percent pass-through roughly triples the LPG-only impact to 209 basis points, with year 2026–27 CPI at 5.30 percent, still within the band but with limited headroom. Only a full 100 percent pass-through crosses the 6 percent ceiling, at **7.21 percent**.

Table 4: Crude US\$117 Sustained: Year 2026–27 Inflation Impact

Case	Direct (bps)	Indirect (bps)	Total (bps)	Total (%)	Year 2026–27 YoY CPI
Case 1: LPG only (petrol/diesel frozen)	16.31	2.72	19.03	0.19%	3.40%
Case 2: LPG + 20% pass-through	62.73	32.46	95.20	0.95%	4.16%
Case 3: LPG + 50% pass-through	132.37	77.08	209.45	2.09%	5.30%
Case 4: LPG + 100% pass-through	248.44	151.43	399.87	4.00%	7.21%*

Note: Crude US\$117 sustained year-average for 2026–27 (shock: 69.00%). LPG: April 2026 revision. Baseline CPI: 3.21%. ***Breaches RBI 6% upper tolerance band.** Full workings in Appendix A.

4.3 CRUDE AT US\$120 SUSTAINED: CONFLICT EXTENDS TO DECEMBER 2026

If the conflict extends through around December 2026, lifting the year 2026–27 Indian Basket average to US\$120 per barrel, the picture worsens but remains policy-tractable across most pass-through cases. With petrol and diesel frozen, the further LPG revision (10 percent on the domestic cylinder and 19 percent on the commercial cylinder) adds 23 basis points (year 2026–27 CPI: 3.44 percent). A 20 percent pass-through gives 4.25 percent and a 50 percent pass-through gives 5.48 percent, both within the band, though headroom at 50 percent has narrowed. Full pass-through clearly breaches the ceiling, with a total impact of 431 basis points lifting year 2026–27 CPI to **7.52 percent**. Because this is a year-average outcome rather than a one-month spike, a breach of this magnitude would almost certainly elicit a sustained monetary policy response.

Table 5: Crude US\$120 Sustained: Year 2026–27 Inflation Impact

Case	Direct (bps)	Indirect (bps)	Total (bps)	Total (%)	Year 2026–27 YoY CPI
Case 1: LPG only (petrol/diesel frozen)	19.81	2.95	22.76	0.23%	3.44%
Case 2: LPG + 20% pass-through	69.55	34.82	104.37	1.04%	4.25%
Case 3: LPG + 50% pass-through	144.14	82.60	226.74	2.27%	5.48%
Case 4: LPG + 100% pass-through	268.47	162.26	430.73	4.31%	7.52%*

Note: Crude US\$120 sustained year-average for 2026–27 (shock: 73.91%). LPG: further revision (domestic $\Delta P = 10.00\%$, commercial $\Delta P = 19.00\%$). Baseline CPI: 3.21%. *Breaches RBI 6% upper tolerance band.

4.4 CRUDE AT US\$125 SUSTAINED: FURTHER ESCALATION

If the conflict persists through December 2026 and crude trades at the higher end of that scenario, with the year 2026–27 average settling around US\$125 per barrel, the qualitative picture for lower pass-through cases remains favourable, though the margins narrow further. The LPG-only case adds 23 basis points (year 2026–27 CPI: 3.44 percent). A 20 percent pass-through gives 4.33 percent and a 50 percent pass-through gives 5.68 percent, both within the band. The headroom at 50 percent pass-through has, however, tightened appreciably compared with crude at US\$117 sustained.

The critical difference emerges at full decontrol. The larger crude shock amplifies the diesel indirect effect sharply: a 100 percent pass-through pushes total inflation impact to 471 basis points, with year 2026–27 CPI reaching **7.92 percent**. At sustained crude of US\$125 per barrel, full decontrol of petrol and diesel would produce inflation nearly two percentage points above the RBI ceiling, demanding a significant monetary policy response.

Table 6: Crude US\$125 Sustained: Year 2026–27 Inflation Impact

Case	Direct (bps)	Indirect (bps)	Total (bps)	Total (%)	Year 2026–27 YoY CPI
Case 1: LPG only (petrol/diesel frozen)	19.81	2.95	22.76	0.23%	3.44%
Case 2: LPG + 20% pass-through	74.41	37.93	112.34	1.12%	4.33%
Case 3: LPG + 50% pass-through	156.35	90.42	246.77	2.47%	5.68%
Case 4: LPG + 100% pass-through	292.84	177.86	470.71	4.71%	7.92%*

Note: Crude US\$125 sustained year-average for 2026–27 (shock: 81.16%). LPG: further revision (domestic $\Delta P = 10.00\%$, commercial $\Delta P = 19.00\%$). Baseline CPI: 3.21%. *Breaches RBI 6% upper tolerance band. Full workings in Appendix B.

4.5 COMBINED VIEW ACROSS ALL SUSTAINED SCENARIOS

Table 7 brings the four sustained crude scenarios together. Reading across the rows shows the inflation cost of a higher pass-through rate at each crude price level. Reading down the columns shows the cost of a more prolonged conflict, independent of any policy choice. The breach threshold lies at full pass-through for all crude levels at and above US\$117. At US\$100 sustained, even full pass-through keeps year 2026–27 CPI just below the 6 percent ceiling, at 5.88 percent.

Table 7: All Sustained Scenarios: Year 2026–27 Inflation Impact

Case	US\$100		US\$117		US\$120		US\$125		RBI band
	bps	YoY	bps	YoY	bps	YoY	bps	YoY	
Case 1: LPG only	19.03	3.40%	19.03	3.40%	22.76	3.44%	22.76	3.44%	Safe
Case 2: +20% PT	68.62	3.90%	95.20	4.16%	104.37	4.25%	112.34	4.33%	Safe
Case 3: +50% PT	143.05	4.64%	209.45	5.30%	226.74	5.48%	246.77	5.68%	Safe
Case 4: +100% PT	267.01	5.88%	399.87	7.21%	430.73	7.52%	470.71	7.92%	Breach [†]

Note: Combined results across all four sustained crude scenarios for the year 2026–27. All totals include the LPG component (direct and indirect) and the petrol/diesel component (direct and indirect). Baseline CPI: 3.21% (February 2026). [†]The breach at full pass-through applies to US\$117, US\$120, and US\$125; the US\$100 scenario at full pass-through stays at 5.88%, just below the 6% ceiling. The stress-test scenario at US\$150 sustained, which produces breaches at both 50% and 100% pass-through, is presented in Appendix C.

5. KEY FINDINGS AND POLICY IMPLICATIONS

The current arrangement is contained, but the buffer is policy-made, not structural. With only LPG revised and petrol and diesel frozen, year 2026–27 CPI stays at or near 3.40–3.44 percent regardless of where crude settles within our four scenarios. This buffer is entirely the product of administered prices and the fiscal cost that comes with them: OMCs absorb losses on every litre of petrol and diesel sold at below-cost prices, and these losses scale with the duration of the freeze. Sustained for a full year, the freeze becomes very expensive even at moderate crude levels.

Partial decontrol is manageable across all four main scenarios. Even at sustained US\$125 per barrel for the year, a 50 percent pass-through keeps year 2026–27 CPI at 5.68 percent, comfortably below the 6 percent ceiling. There is meaningful space between the breach threshold and a realistic degree of decontrol, giving policymakers room to share the fiscal burden without triggering an RBI response.

Full decontrol breaches the ceiling at US\$117 sustained and above. A 100 percent pass-through produces year 2026–27 CPI of 7.21 percent at sustained US\$117,

7.52 percent at US\$120, and 7.92 percent at US\$125, each well above the RBI's tolerance band. Only at US\$100 sustained does full pass-through stay just below the ceiling, at 5.88 percent. The implication is that, even if the conflict resolves quickly, fully passing through international prices to consumers exhausts the inflation buffer.

Diesel's indirect effect is the dominant transmission mechanism at high pass-through. Diesel's Leontief share (2.14 percent) is nearly twice petrol's (1.16 percent). At 100 percent pass-through under sustained US\$125, diesel's indirect effect alone contributes over 113 basis points, reflecting its pervasive role in freight, agriculture, and backup power across the economy.

The fiscal–inflation trade-off is explicit and asymmetric. Moving from 50 to 100 percent pass-through at sustained US\$125 crude adds approximately 224 basis points to year 2026–27 CPI. The cost of fiscal restraint, absorbing the shock in the budget, and the cost of monetary restraint, allowing the shock into prices and then raising rates, are both quantifiable. This model makes those numbers precise. The stress-test scenario at US\$150 sustained (Appendix C) shows how this trade-off worsens further if the conflict escalates: at that level, even 50 percent pass-through breaches the ceiling.

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A. DETAILED WORKINGS – CRUDE US\$117 SUSTAINED (SHOCK: 69.00%)

LPG COMPONENT – COMMON TO ALL CASES

Weighted-average direct price change: 8.23% (Equation 5). Commercial indirect price change: 17.53%.

$$\text{Direct LPG} = 1.98137 \times 8.23 = \mathbf{16.31 \text{ bps}}$$

$$\text{Indirect LPG} = 93.163 \times 17.53 \times 0.1666/100 = \mathbf{2.72 \text{ bps}}$$

$$\text{LPG Total} = 16.31 + 2.72 = \mathbf{19.03 \text{ bps}}$$

Case 1 (LPG only): Total = 19.03 bps = 0.19%. Year 2026–27 YoY $\approx$ 3.40%.

CASES 2, 3, AND 4 – PETROL AND DIESEL PASS-THROUGH

ΔP_{pump} : Case 2 = 70% $\times$ 20% $\times$ 69% = 9.66%; Case 3 = 70% $\times$ 50% $\times$ 69% = 24.15%;

Case 4 = 70% $\times$ 100% $\times$ 69% = 48.30%.

Table 8: Crude US\$117 Sustained: Petrol and Diesel Calculations

	ΔP pump	MS Direct	MS Indirect	HSD Direct	HSD Indirect	MS+HSD Total	Grand Total (incl. LPG)
Case 2 (20% PT)	9.66%	43.36	10.48	3.06	19.27	76.17	95.20 bps
Case 3 (50% PT)	24.15%	108.41	26.19	7.66	48.16	190.42	209.45 bps
Case 4 (100% PT)	48.30%	216.82	52.39	15.31	96.33	380.84	399.87 bps

Note: All cases include LPG total of 19.03 bps. Indirect bps = $W_{\text{Non-Oil}} \times \Delta P \times S_{\text{fuel}}/100$. Direct bps = $W_{\text{fuel}} \times \Delta P$.

B. DETAILED WORKINGS – CRUDE US\$125 SUSTAINED (SHOCK: 81.16%)

$$\text{Shock} = (125 - 69)/69 \times 100 = 81.16\%.$$

LPG COMPONENT – COMMON TO ALL CASES

Direct LPG ΔP = 10.00%; Indirect (commercial) ΔP = 19.00%.

$$\text{Direct LPG} = 1.98137 \times 10.00 = \mathbf{19.81 \text{ bps}}$$

$$\text{Indirect LPG} = 93.163 \times 19.00 \times 0.1666/100 = \mathbf{2.95 \text{ bps}}$$

$$\text{LPG Total} = 19.81 + 2.95 = \mathbf{22.76 \text{ bps}}$$

Case 1 (LPG only): Total = 22.76 bps = 0.23%. Year 2026–27 YoY $\approx$ 3.44%.

CASES 2, 3, AND 4 – PETROL AND DIESEL PASS-THROUGH

ΔP_{pump} : Case 2 = 70% $\times$ 20% $\times$ 81.16% = 11.36%; Case 3 = 70% $\times$ 50% $\times$ 81.16% = 28.41%; Case 4 = 70% $\times$ 100% $\times$ 81.16% = 56.81%.

Table 9: Crude US\$125 Sustained: Petrol and Diesel Calculations

	ΔP pump	MS Direct	MS Indirect	HSD Direct	HSD Indirect	MS+HSD Total	Grand Total (incl. LPG)
Case 2 (20% PT)	11.36%	51.00	12.32	3.60	22.66	89.57	112.34 bps
Case 3 (50% PT)	28.41%	127.53	30.81	9.01	56.66	224.01	246.77 bps
Case 4 (100% PT)	56.81%	255.02	61.62	18.01	113.30	447.94	470.71 bps

Note: All cases include LPG total of 22.76 bps.

C. STRESS TEST: CRUDE US\$150 SUSTAINED (SHOCK: 117.39%)

This appendix presents a stress-test scenario at US\$150 per barrel sustained as the year 2026–27 average, corresponding to a protracted and escalating West Asia conflict. This is more extreme than any of the four scenarios presented in the main body and is included to illustrate the non-linearity of the inflation response to large crude shocks. At this crude level, the LPG action is assumed to extend further to a 12 percent increase on the domestic cylinder and a 21 percent increase on the commercial cylinder, beyond the revisions used for US\$120 and US\$125. The crude shock is $(150 - 69)/69 \times 100 = 117.39$ percent.

STRESS-TEST RESULTS

The qualitative shift relative to the main scenarios is that the 50 percent pass-through case, which remains within the band at all four main crude levels, now **breaches the 6 percent ceiling** for the first time, with year 2026–27 CPI at 6.72 percent. A full 100 percent pass-through produces year 2026–27 CPI approaching 10 percent, with serious consequences for real incomes, monetary credibility, and the broader economy. Even the LPG-only case is contained on its own, but the fiscal cost of holding petrol and diesel frozen at this crude level for a full year would be very large.

Table 10: Stress Test – Crude US\$150 Sustained: Year 2026–27 Inflation Impact

Case	Direct (bps)	Indirect (bps)	Total (bps)	Total (%)	Year 2026–27 YoY CPI
Case 1: LPG only (petrol/diesel frozen)	23.78	3.26	27.04	0.27%	3.48%
Case 2: LPG + 20% pass-through	102.74	53.85	156.59	1.57%	4.78%
Case 3: LPG + 50% pass-through	221.25	129.77	351.03	3.51%	6.72%*
Case 4: LPG + 100% pass-through	418.69	256.26	674.94	6.75%	9.96%*

Note: Crude US\$150 sustained year-average for 2026–27 (shock: 117.39%). LPG: stress-test revision (domestic $\Delta P = 12.00\%$, commercial $\Delta P = 21.00\%$). Baseline CPI: 3.21%. ***Breaches RBI 6% upper tolerance band.**

LPG COMPONENT – COMMON TO ALL CASES

Direct LPG $\Delta P = 12.00\%$; Indirect (commercial) $\Delta P = 21.00\%$.

$$\text{Direct LPG} = 1.98137 \times 12.00 = \mathbf{23.78 \text{ bps}}$$

$$\text{Indirect LPG} = 93.163 \times 21.00 \times 0.1666/100 = \mathbf{3.26 \text{ bps}}$$

$$\text{LPG Total} = 23.78 + 3.26 = \mathbf{27.04 \text{ bps}}$$

Case 1 (LPG only): Total = 27.04 bps = 0.27%. Year 2026–27 YoY $\approx 3.48\%$.

CASES 2, 3, AND 4 – PETROL AND DIESEL PASS-THROUGH

ΔP_{pump} : Case 2 = $70\% \times 20\% \times 117.39\% = 16.43\%$; Case 3 = $70\% \times 50\% \times 117.39\% = 41.09\%$; Case 4 = $70\% \times 100\% \times 117.39\% = 82.17\%$.

Table 11: Stress Test – Crude US\$150 Sustained: Petrol and Diesel Calculations

	ΔP pump	MS Direct	MS Indirect	HSD Direct	HSD Indirect	MS+HSD Total	Grand Total (incl. LPG)
Case 2 (20% PT)	16.43%	73.75	17.82	5.21	32.77	129.55	156.59 bps
Case 3 (50% PT)	41.09%	184.45	44.57	13.03	81.95	323.99	351.03 bps
Case 4 (100% PT)	82.17%	368.86	89.12	26.05	163.87	647.91	674.94 bps

Note: All cases include LPG total of 27.04 bps.



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