FINANCIAL EXECUTIVE WORKSHEET

End-to-End Landed Cost & Corridor Friction Calculation Worksheet

A Structured Model for Quantifying Border Friction, Demurrage & WACC Leakage

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1. CORRIDOR HIDDEN-COST BREAKDOWN MATRIX

Standard logistics quotes omit border dwell penalties. Use this matrix to catalogue hidden operational surcharges before calculating final landed margin.

COST CATEGORY	PRIMARY TRIGGER UNIT	STANDARD CORRIDOR RANGE	FINANCIAL RISK PROFILE
Border Demurrage / Truck Detention	Per Truck / Day	$250 – $400 / day	High variance based on customs system downtime.
Border Parking & Holding Yard Fees	Per Truck / Night	$30 – $75 / night	Fixed accumulation during clearance delays.
Local Clearing Agent Surcharges	Per Shipment Entry	$150 – $450 flat fee	Unscheduled documentation correction costs.
Inland Overland Transit Insurance Premium	% of Invoice Value	0.35% – 1.25%	Escalates on routes rated high-risk for cargo theft.
Informal Facilitation Expenses	Per Border Checkpoint	$20 – $100 / transit	Unbudgeted cash leakage at unintegrated borders.

2. FILL-IN-THE-BLANKS: WORKING CAPITAL DRAG WORKSHEET

Input your shipment parameters to quantify how border delays erode your annual return on capital (WACC).

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Daily Financial Loss = (FOB Cargo Value × Annual WACC Rate / 365) + Daily Truck Detention Fee
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PARAMETER VARIABLE	USER INPUT VALUE	CALCULATION / NOTES
A. Total Cargo FOB Invoice Value ($)		Invoice Total ($ USD)
B. Annual Capital Cost / Interest Rate (WACC %)		Standard industry baseline: 15% – 24%
C. Daily Holding Cost of Capital [(A × B) / 365]		Calculated financing cost per day ($)
D. Daily Truck Detention / Demurrage Charge ($)		Rate per truck × total fleet count
E. Total Daily Corridor Friction Penalty (C + D)		Total financial leakage per day ($)

PARAMETER VARIABLE	USER INPUT VALUE	CALCULATION / NOTES
F. Unscheduled Border Delay Duration (Days)		Estimated dwell time at border post
TOTAL CORRIDOR FINANCIAL LEAKAGE (E × F)		**Direct Net Margin Reduction ($)**

3. DUAL-CORRIDOR TIPPING-POINT EVALUATION MODEL

Determining when choosing a longer, cleaner corridor (e.g., Walvis Bay) is cheaper than choosing a congested, shorter route (e.g., Northern / Durban).

Route A: Shorter / Congested Corridor

Example: Durban / Mombasa Gateway

- Shorter sea/land distance
- High risk of border congestion (3–7 days)
- Lower base freight rate, high delay variability

Route B: Longer / Efficient Corridor

Example: Walvis Bay / Nacala Gateway

- Longer overland trucking distance
- Near-zero border delay (predictable transit)
- Higher base freight rate, zero detention risk

The Trade-Off Rule Formula

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Choose Route B if: (Freight Premium B - Freight Premium A) < (Days Saved × Daily Friction Penalty E)
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Decision Insight: If Route B costs $1,500 more in baseline freight, but saves 4 days of border congestion on a $500,000 cargo ($600/day capital drag + $350/day detention = $950/day penalty), Route B yields a net savings of **$2,300** per shipment.