Tariff Impact Calculator

1. How to Use This Workbook

When a new tariff is announced, most teams react in one of two ways: they panic and raise prices immediately, or they wait and absorb the cost until the quarter-end numbers force a decision. Neither is a strategy. This workbook gives you a structured, repeatable way to measure tariff impact and compare responses in a few hours instead of a few weeks.

You can complete it with a spreadsheet and your procurement data. Each section builds on the previous one, so work through it in order the first time. After that, you can rerun only the worksheets you need whenever tariff rates change.

What you will need before you start

- **Import data:** monthly purchase value by material or component, supplier and country of origin (last 6 to 12 months)
- **Current duty rates** applicable to each item, and the announced or expected new rates
- **Product economics:** selling price, units sold per month and cost breakdown (imported materials, local materials, labour, overheads)

- **Supplier alternatives:** any quotes or shortlists for alternative or local suppliers
- **Inventory position:** current stock levels, warehouse capacity and carrying cost

The five-step workflow

1. **Map your exposure:** identify which imports are affected and by how much (Worksheet 1).
2. **Run the scenarios:** calculate the cost and margin impact at different tariff levels (Worksheet 2).
3. **Test pricing and demand:** see what happens if you pass costs on and customers buy less (Worksheet 3).
4. **Compare responses:** score sourcing and operational options side by side (Worksheet 4).
5. **Decide and act:** pick a response, set triggers for review and follow the 30-day plan.

> **Important note on figures**
>
> All numbers in this workbook are illustrative and used to explain the method. Duty structures, exemptions and how taxes are recovered vary by country, product classification and trade agreement. Confirm the applicable rates for your items with your customs broker or trade compliance team before making decisions.

2. Key Terms You Need to Know

Tariff conversations often go wrong because different teams use the same words to mean different things. Finance may talk about landed cost, procurement about invoice price and sales about list price. Agree on these definitions before you start.

Import value (assessable value)	The value on which duty is calculated, usually the cost of goods plus freight and insurance to the port of entry	A tariff percentage is applied to this figure, not to the supplier invoice alone
Tariff / customs duty	A tax charged by the importing country on goods entering it, usually a percentage of import value	This is the direct cost that changes when policy changes

Landed cost	The total cost of getting goods to your facility: purchase price, freight, insurance, duties, clearance and handling	The true cost you must compare across suppliers
Recoverable vs non-recoverable taxes	Some import taxes can be claimed back as input credit; others become a permanent cost	Only non-recoverable amounts reduce your margin
Cost pass-through	The share of the extra cost you transfer to customers through higher prices	Determines how the impact is split between you and your customers
Price elasticity of demand	How much sales volume changes when price changes	Tells you whether raising prices will protect or hurt profit
Operating margin	Operating profit as a percentage of revenue	The headline measure of how much the tariff is hurting the business

Example: a component costs ₹1,000 from the supplier, plus ₹80 freight and ₹20 insurance. The import value is ₹1,100. A 10% duty adds ₹110, not ₹100. Teams that apply the tariff to the invoice price alone consistently underestimate their exposure.

3. The Five Core Formulas

Every calculation in this workbook comes back to five formulas. Put them in a spreadsheet once and reuse them for every scenario.

Formula 1: Additional tariff cost

> **Additional tariff cost = Import value × (New duty rate − Current duty rate)**
>
> Example: ₹50,00,000 × (20% − 10%) = ₹5,00,000 per month

Formula 2: New landed cost per unit

> **New landed cost per unit = (Purchase price + Freight + Insurance + New duty + Clearance and handling) ÷ Units imported**
>
> Use this to compare suppliers fairly. A cheaper supplier in a higher-tariff country can end up costing more.

Formula 3: Tariff cost per finished unit

> **Tariff cost per unit sold = Additional tariff cost ÷ Units sold**
>
> Example: ₹5,00,000 ÷ 4,000 units = ₹125 extra per unit

Formula 4: New operating margin

> **New margin = (Revenue – Original costs – Additional tariff cost) ÷ Revenue**
>
> This shows the margin if you absorb the full cost and change nothing else.

Formula 5: Price increase needed to fully pass through

> **Required price increase % = Tariff cost per unit ÷ Current selling price**
>
> Example: ₹125 ÷ ₹4,000 = 3.1% price increase to keep profit flat, assuming volume does not change

Formula 5 includes a big assumption: that customers keep buying the same volume. In practice they rarely do, which is why Worksheet 3 tests demand sensitivity separately.

4. Worked Example: An Electronics Manufacturer

To show how the formulas work together, consider a mid-sized electronics manufacturer that assembles control units. It imports components worth ₹50 lakh every month and has just learned that import duties on these components may rise.

The company's baseline

Units sold	4,000 units
Selling price	₹4,000 per unit
Revenue	₹1,60,00,000
Imported components (₹1,250 per unit)	₹50,00,000
Local materials and direct labour (₹1,400 per unit)	₹56,00,000
Fixed overheads	₹30,00,000
Total cost	₹1,36,00,000
Operating profit (15.0% margin)	**₹24,00,000**

Step 1: Run the three tariff scenarios

The team models an additional duty of 10%, 15% and 20% on the ₹50 lakh import value, assuming the company absorbs the full cost and keeps prices unchanged.

Additional cost per month	₹0	₹5,00,000	₹7,50,000	₹10,00,000
Additional cost per year	₹0	₹60,00,000	₹90,00,000	₹1,20,00,000
Extra cost per unit sold	₹0	₹125	₹187.50	₹250
Monthly operating profit	₹24,00,000	₹19,00,000	₹16,50,000	₹14,00,000
Operating margin	15.0%	11.9%	10.3%	8.75%
Price rise to fully pass through	–	3.1%	4.7%	6.25%

At a 20% tariff, the company loses more than 40% of its operating profit if it does nothing. That single number usually ends the debate about whether action is needed.

Step 2: Test what happens if prices go up

Absorbing ₹10 lakh a month is painful, so the team tests two pricing responses for the 20% scenario. Sales estimates that a full 6.25% price increase would reduce volume by about 5%, and a smaller 3% increase would reduce it by about 2%.

A. Absorb the full cost	₹4,000	4,000	₹1.60 Cr	₹1.46 Cr	₹14.0 L	8.75%
B. Partial pass-through (+3%)	₹4,120	3,920	₹1.615 Cr	₹1.437 Cr	₹17.8 L	11.0%
C. Full pass-through (+6.25%)	₹4,250	3,800	₹1.615 Cr	₹1.402 Cr	₹21.3 L	13.2%

Option C protects the most profit on paper. But the team also notes that losing 200 units a month could mean losing two key accounts to a competitor who sources domestically. This is exactly the kind of trade-off a spreadsheet cannot settle alone, and why Section 8 compares sourcing options as well.

What the team learned

- The tariff is material: up to ₹1.2 crore a year at the 20% level.
- Pricing alone can recover most, but not all, of the margin, and it carries customer risk.
- A combination of a moderate price increase and a sourcing change is likely to beat either response on its own.

5. Worksheet 1: Import Exposure Map

Before modelling scenarios, find out where your exposure actually sits. In most businesses, a small number of items accounts for most of the tariff impact. Focusing on these first saves time and makes the later analysis sharper.

How to fill it in

- List every imported material or component affected by the tariff change. Group small items into an 'Other' line.
- Use the import value (including freight and insurance), not the supplier invoice price.
- Calculate the additional cost with Formula 1, then rank items by that figure.
- Mark any item where you have only one supplier. These are your highest-risk items.

Example: PCB assemblies	Supplier A, Country X	28,00,000	10%	25%	4,20,000	Y

Example: Power modules	Supplier B, Country X	14,00,000	10%	25%	2,10,000	N
Total						

> **Tip: apply the 80/20 rule**
>
> If the top three items account for 80% or more of the additional cost, run Worksheets 2 to 4 for those items in detail and treat the rest as a single line. You will reach a decision faster without losing accuracy.

6. Worksheet 2: Tariff Scenario Calculator

This worksheet turns your exposure total into business impact. Run at least three scenarios: the announced rate, a lower rate (in case of negotiation or exemptions) and a higher rate (in case of escalation). Add a custom column for any specific rate your leadership wants to see.

A. Monthly import value	From Worksheet 1					
B. Additional duty rate	New – current	0%				
C. Additional cost / month	A × B	0				
D. Additional cost / year	C × 12	0				
E. Units sold / month	Sales data					
F. Extra cost per unit	C ÷ E	0				
G. Monthly revenue	Price × E					
H. Monthly operating profit	Baseline – C					

I. Operating margin	H ÷ G					
J. Price rise to pass through	F ÷ price	–				

How to read the results

- **Margin falls by less than 1 percentage point:** usually manageable through efficiency gains and supplier negotiation.
- **Margin falls by 1 to 3 points:** needs an active response, typically a mix of moderate pricing and procurement action.
- **Margin falls by more than 3 points:** a structural problem. Sourcing changes should be evaluated urgently, not just pricing.

These thresholds are a starting point. Adjust them to your industry: a business with a 5% margin should treat a 1-point drop far more seriously than one with a 30% margin.

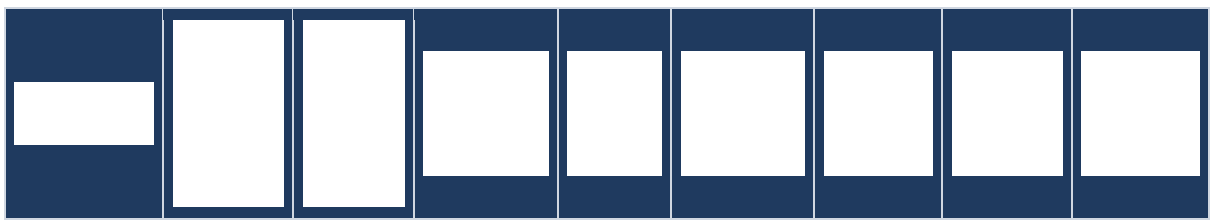
7. Worksheet 3: Pricing and Demand Sensitivity

Raising prices is the fastest response, but it is only effective if customers keep buying. This worksheet helps you test several pricing options against realistic volume assumptions. Get your sales team involved here, because their view of customer behaviour is more reliable than any formula.

Estimating volume loss

If you do not have elasticity data, use these questions to build a reasonable estimate with your sales team:

- How did volumes respond the last time we raised prices by a similar amount?
- Are competitors facing the same tariff? If yes, they are likely to raise prices too, and volume loss will be smaller.
- Is our product essential to the customer, or easy to delay or substitute?
- Are any large customers on fixed-price contracts that prevent a quick price change?



Absorb	0%		0%					
Partial pass-through								
Full pass-through								
Custom								

Remember to split fixed and variable costs

When volume drops, variable costs (materials, direct labour, imported components) fall with it, but fixed overheads do not. If you treat all costs as variable, you will overestimate profit at lower volumes. In the worked example, the ₹30 lakh of fixed overheads stays the same in every option.

Example of common pricing tactics

- **Tariff surcharge:** a separate, clearly labelled line on invoices that can be removed if the tariff is reversed. Customers often accept this more readily than a list price increase.
- **Tiered pass-through:** pass more of the cost to small or occasional buyers and less to strategic accounts.
- **Product mix shift:** push sales toward products with lower imported content, where the tariff has less effect.

8. Worksheet 4: Sourcing Response Comparison

Pricing deals with the symptom. Sourcing changes deal with the cause. This worksheet helps you compare sourcing options objectively, using weighted scores so that cost does not automatically override quality and reliability.

Step 1: Agree on criteria and weights

Choose five criteria and assign weights that add up to 100%. The weights should reflect your business priorities. A medical device maker might give quality 40%, while a commodity distributor might give cost 50%.

Total landed cost	New landed cost per unit including duty, freight and handling	30%
Quality	Defect rates, certifications, need for requalification	20%
Lead time	Order-to-delivery time and flexibility for urgent orders	15%
Supply reliability	Capacity, financial stability, exposure to future trade changes	20%
Implementation effort	Onboarding cost, testing time, contract changes	15%

Step 2: Score each option from 1 (poor) to 5 (excellent)

Here is how the electronics manufacturer scored its four options. Weighted score = sum of (score × weight).

Continue with existing supplier	2	5	4	3	5	3.55
Switch to supplier in another country	4	3	3	3	2	3.15
Shift to local sourcing	4	3	5	4	2	3.65

Dual sourcing (70% existing, 30% local)	3	4	4	5	3	3.75

Dual sourcing scored highest. It does not deliver the biggest cost saving, but it reduces dependence on one country, keeps the proven supplier for most volume and creates a tested local alternative that can be scaled up if tariffs rise further.

Your scoring table

Watch out for hidden switching costs

- Requalification and testing of new components

- Tooling, moulds or specifications that belong to the current supplier
- Minimum order quantities and early termination clauses
- Rules of origin: goods routed through a third country may still be treated as originating in the high-tariff country

9. Should You Build Inventory Before the Tariff Starts?

When a tariff is announced with an effective date in the future, buying ahead can lock in lower costs. It can also tie up cash and leave you holding stock you cannot use. Compare the duty you avoid with the cost of holding the extra inventory.

Net benefit of pre-buying = Duty avoided − Carrying cost − Risk allowance

Carrying cost = Extra inventory value × Monthly carrying rate × Average months held

Example

The electronics manufacturer considers buying two extra months of components (₹1 crore) before a 10% increase takes effect. Its carrying cost, covering capital, storage and insurance, is about 1.5% per month, and the extra stock will be held for 1.5 months on average.

Duty avoided (₹1,00,00,000 × 10%)	₹10,00,000
Carrying cost (₹1,00,00,000 × 1.5% × 1.5 months)	₹2,25,000
Risk allowance for obsolescence and demand changes (2%)	₹2,00,000
Net benefit	**₹5,75,000**

A positive result supports pre-buying, but only if the business can fund it. Check these conditions before committing:

- Is there enough working capital, and what does finance say about cash flow for the next quarter?
- Do we have warehouse space, or will we pay for overflow storage?
- Are the components at risk of design changes or shelf-life limits?
- Can the supplier actually deliver the extra volume before the effective date?

10. Using Generative AI to Speed Up the Analysis

Generative AI tools can cut the time needed for tariff analysis by structuring data, drafting scenarios and explaining trade-offs in plain language for leadership. Use the prompts below as starting points. Replace the bracketed text with your own details.

Prompt 1: Build the scenario model

> "I import [components] worth ₹[value] per month from [country]. The current duty is [x]%. Build a scenario table showing monthly and annual cost impact, cost per unit and operating margin at additional duties of 10%, 15% and 20%. My selling price is ₹[price], I sell [units] units per month and my current operating profit is ₹[profit]."

Prompt 2: Test pricing responses

> "Using the 20% scenario, compare absorbing the cost, a [x]% price increase with [y]% volume loss, and a full pass-through with [z]%

> volume loss. My fixed costs are ₹[amount] per month. Show profit and margin for each option and explain the trade-offs in simple language."

Prompt 3: Compare sourcing options

> "Create a weighted scoring matrix to compare [option A], [option B] and [option C] on landed cost, quality, lead time, supply reliability and implementation effort. Use weights of [weights]. List the questions I should ask each supplier to score them accurately."

Prompt 4: Identify hidden risks

> "I am considering moving [x]% of my purchases of [component] from [country A] to [country B]. List the operational, quality, compliance and contractual risks I should check, including rules of origin issues."

Prompt 5: Prepare the leadership summary

> "Summarise this tariff analysis in a one-page brief for senior leadership: the size of the impact, the options considered, the recommended response, the risks and the review triggers. Keep it under 300 words. [paste results]"

> **Always validate AI output**
>
> AI tools can make arithmetic mistakes, assume incorrect duty rates or miss conditions specific to your business. Check every figure against your own spreadsheet and confirm tariff rates with official sources or your customs broker. Use AI to speed up the thinking, not to replace the review.

11. Your 30-Day Tariff Response Plan

Analysis only creates value when it leads to action. Use this plan to move from announcement to a decided, communicated response within a month.

Days 1–5	Complete Worksheet 1. Confirm duty rates and effective dates. Identify single-source items.	Procurement + trade compliance

Days 6–10	Run Worksheets 2 and 3. Agree volume assumptions with sales. Brief leadership on the size of the impact.	Finance + sales
Days 11–20	Request quotes from alternative and local suppliers. Complete Worksheet 4. Run the pre-buy calculation.	Procurement
Days 21–25	Decide the response mix (pricing, sourcing, inventory). Prepare customer communication for any price change.	Leadership team
Days 26–30	Implement. Set review triggers, for example: rerun the analysis if the tariff changes by 5 points or more, or if volume falls more than expected.	All functions

Quick checklist

☐ Applied tariff rates to import value, not invoice price

☐ Separated recoverable and non-recoverable taxes

☐ Split fixed and variable costs before testing volume changes

☐ Validated volume assumptions with the sales team

☐ Included switching costs in sourcing comparisons

☐ Checked rules of origin for any alternative supplier

☐ Confirmed working capital before pre-buying inventory

☐ Set clear triggers for when to rerun the analysis

Common mistakes to avoid

- **Reacting to headlines instead of numbers:** an announced tariff may be delayed, reduced or come with exemptions. Model the range, not just the headline rate.
- **Treating the analysis as one-off:** tariff policies change often. Keep your model live and update it monthly.
- **Making procurement decide alone:** tariff responses affect pricing, customers, cash and operations. Bring finance, sales and operations in early.
- **Ignoring competitors:** if your competitors face the same tariff, your pricing room is larger. If they do not, it is much smaller.

TAKE THE NEXT STEP

Turn Tariff Analysis into a Career Advantage

This workbook shows how structured scenario planning helps businesses respond to tariff shocks. Generative AI makes that process faster, but only for professionals who know how to frame the right questions, test assumptions and turn AI output into sound decisions.

GSDC's **Certified Generative AI for Supply Chain Management (CGAISCM)** certification helps you build these skills and apply them to real supply chain challenges.

What you will learn

- How generative AI supports supply chain scenario planning and what-if analysis
- AI-assisted tariff impact and supply chain risk evaluation
- AI demand planning and forecasting concepts
- How digital twins and AI work together to model disruptions
- Responsible use of AI in procurement, logistics and operations decisions

Who it is for

Supply chain managers, procurement professionals, logistics specialists, operations leaders and professionals moving into AI-enabled supply chain roles.

GSDC
Global Skill Development Council

CERTIFIED GENERATIVE AI FOR SUPPLY CHAIN MANAGEMENT (CGAISCM)

LEARN DIRECTLY FROM GLOBAL AI PRACTITIONERS, SUPPLY CHAIN EXPERTS, AND INDUSTRY LEADERS WHO ARE TRANSFORMING SUPPLY CHAIN STRATEGY WITH GENERATIVE AI DRIVEN SOLUTIONS.



ABOUT GSDC CERTIFICATION

EBOOK

Extensive and exclusive Ebook created by world's experts to help you with understanding core concepts.

CREATED BY EXPERTS

GSDC certifications are created and authored by world's leading experts in the field.

EBOOK

Extensive and exclusive Ebook created by world's experts to help you with understanding core concepts.

LEARNING MATERIALS

Get access to learning materials such as videos, ebooks, templates, and practice exams, which will help you clear the certification exam.

LEARNING OBJECTIVE

- Utilize learning through the capstone project by emphasizing the needs of the existing supply chain.
- Acquire practical knowledge through well-structured, self-directed e-learning sessions.

Enroll now with the code **LEARN20** To avail **20%** discount

Enroll Now

www.gsdcouncil.org