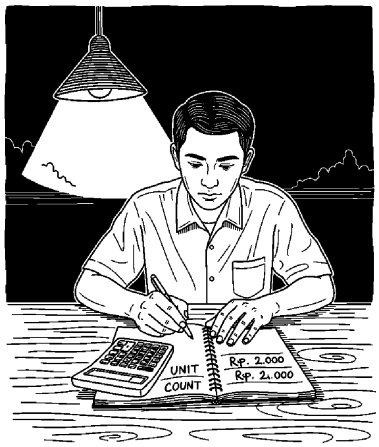
SPECIFIC-CASE

WORKSHEET 9 OF 9

Opening a Second Location — Fixed Cost Ramp

Scenario: you are evaluating a second location with $1,562/month in new fixed costs — rent, one permanent staff hire, and a contracted utility. The new location is expected to generate its own revenue stream but does not change the variable cost per unit. Your current business: $2,500/month in fixed costs, CM per unit $10, BEP 250 units per month, actual volume 320 units per month.



Complementary worksheet for

SECTION 1

What This Is For

A second location means two BEPs to manage simultaneously: the combined BEP for the whole business and the standalone BEP for the new location. This worksheet calculates both. The combined BEP determines how much total output across both locations must reach before the consolidated business breaks even. The Location 2 standalone BEP determines how long Location 1 must subsidize Location 2 during the ramp period — and at what cost per month.

This worksheet applies the Chapter 10 expansion analysis to the specific case of a second physical location, where fixed costs are additive, CM per unit does not change, and the ramp period at Location 2 has a calculable cumulative deficit that Location 1 must cover. Fill in your actual figures; the scenario numbers in the table are starting points, not constraints.

SECTION 2

Benefits

What you get when you actually run this worksheet on a real situation:

- Calculates the combined BEP that the entire operation must reach — the number that determines whether adding Location 2 puts the whole business below break-even.
- Calculates Location 2's standalone BEP: the units per month that Location 2 must reach before it stops being a drain on Location 1.
- Translates the ramp period into a cumulative deficit in dollars — the actual cash that Location 1 must fund before Location 2 becomes self-sustaining.
- Quantifies the margin-of-safety impact on Location 1 from adding Location 2's fixed costs to the combined total.
- Produces the two numbers a bank or investor will ask for: (1) combined BEP, and (2) months to Location 2 standalone BEP at projected ramp rate.

SECTION 3

Framework To Use

Two-BEP Expansion Model

Track two break-even points simultaneously: the combined floor and the Location 2 standalone floor. Both must be covered before the expansion is truly self-sustaining.

Current (One Location)	Combined (Two Locations)	Location 2 Standalone	
Fixed costs	FC_1	FC_1 + FC_2	FC_2
BEP Units	FC_1 ÷ CM	(FC_1 + FC_2) ÷ CM	FC_2 ÷ CM
Who covers deficit?	Self-sustaining	Location 1 absorbs gap	Location 1 subsidizes

SECTION 4

How To Use

Follow these steps in order. Each one builds on the previous.

1. Step 1: Write Location 1's current fixed costs, CM per unit, BEP Units, actual monthly volume, and margin of safety in the first data column. All figures must be from current actuals — not projections.
2. Step 2: Write Location 2's projected monthly fixed costs in the Location 2 Standalone column. List every fixed cost: rent, permanent staff salary plus social security, contracted utilities, insurance. Do not estimate — get quotes.
3. Step 3: CM per unit is the same across all columns — the variable cost per unit does not change when a second location is added (same product, same suppliers).
4. Step 4: Combined fixed costs = Location 1 fixed costs + Location 2 fixed costs. Combined BEP Units = Combined fixed costs ÷ CM per unit. Fill in the Combined column.
5. Step 5: Location 2 standalone BEP = Location 2 fixed costs ÷ CM per unit.
6. Step 6: Margin of safety for Combined: (Current Location 1 actual volume − Combined BEP Units). If negative, Location 1 is already below the combined BEP at current volume — the expansion cannot be covered from current production alone.
7. Step 7: Estimate Location 2's ramp rate in units per month — based on comparable location pilot data or signed customer commitments only. Write months to standalone BEP at that rate.
8. Step 8: Calculate cumulative deficit: months to standalone BEP × (Location 2 monthly fixed costs − average partial CM coverage during ramp). That is the cash Location 1 must fund.
9. Step 9: Confirm Location 1's monthly surplus above its own BEP. Is that surplus enough to fund the Location 2 deficit each month without pulling Location 1 below its own BEP?

SECTION 5

Example Use

A retail store: current fixed costs $2,500/month, CM per unit $10, BEP 250 units, actual volume 320 units. Margin of safety: 70 units (21.9%). Location 2 projected fixed costs: $1,562/month — rent $937, one staff hire at $500, contracted utilities $125. Same selling price and variable cost as Location 1. Location 2 ramp rate: based on a nearby comparable store that reached standalone BEP in 9 months.

Location 2 standalone BEP = $1,562 ÷ $10 = 156 units/month.

Combined fixed costs: $2,500 + $1,562 = $4,062/month.
Combined BEP = $4,062 ÷ $10 = 406 units/month.

Current Location 1 volume is 320 units. Combined BEP is 406 units.
Margin of safety on combined basis: 320 − 406 = −86 units.
Location 1 alone cannot cover the combined BEP. Location 2 must contribute at least 86 units per month before the combined business breaks even.

At a ramp rate averaging 17 units per month in the first 9 months, Location 2 reaches standalone BEP of 156 units in month 9. During months 1–9, Location 2 averages approximately 78 units/month. Each month it contributes $780 in CM against $1,562 in fixed costs — a monthly deficit of $782 that Location 1 must cover.

Cumulative Location 2 deficit over 9 months: approximately $7,038.
Location 1 monthly surplus above its own BEP: (320 − 250) × $10 = $700/month.
$700/month surplus × 9 months = $6,300 available from Location 1 operations.

Gap: $7,038 needed, $6,300 available from operations. $738 shortfall must come from cash reserves. At this margin, the expansion is viable — but there is no cushion for Location 1 to have a slow month during the ramp period.

SECTION 6

The Worksheet

Tear this out, copy it onto a fresh sheet, or fill it in directly.

Opening a Second Location — Fixed Cost Ramp

Scenario: you are evaluating a second location with $1,562/month in new fixed costs — rent, one permanent staff hire, and a contracted utility. The new location is expected to generate its own revenue stream but does not change the variable cost per unit. Your current business: $2,500/month in fixed costs, CM per unit $10, BEP 250 units per month, actual volume 320 units per month.

METRIC	CURRENT (ONE LOCATION)	COMBINED (TWO LOCATIONS)	LOCATION 2 STANDALONE
Total fixed costs per month ($)	$2,500		$1,562
CM per unit ($)	$10	$10	$10
BEP Units	250		
Actual volume (units/month)	320		Estimate:
Margin of safety — units	70		
Margin of safety — %	21.9%		
Months to BEP at projected ramp rate — Location 2	—	—	
Cash reserve needed to sustain deficit during ramp ($)	—	—	

SECTION 6 (CONTINUED)

Reflection Prompts

After filling in the worksheet on the previous page, work through these.

1. The combined BEP after adding Location 2's fixed costs: how many total units per month across both locations? How far is that from your current total output at full capacity?

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2. Location 2 standalone BEP = Location 2 fixed costs ÷ CM per unit. Based on comparable location data or pilot sales, how many months before Location 2 reaches that number? Each month below that BEP costs the business fixed costs with no contribution from that location.

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3. If Location 2 takes 9 months to reach standalone BEP, the cumulative deficit from that location is approximately 9 × (Fixed Costs − Partial CM Coverage). Can current cash reserves and existing location profit absorb that timeline without triggering a cash emergency at Location 1?

SECTION 7

Tips and Traps

TIPS

- Use actual pilot data or signed customer commitments for Location 2's ramp rate — not industry averages or aspirational projections. The ramp rate is the most consequential single input in this worksheet; optimism here propagates directly into a funding gap that materializes 6 months after opening.
- Calculate the combined BEP before calculating Location 2's standalone BEP. If Location 1 at current volume cannot cover the combined BEP, Location 2 must ramp faster — a constraint that must be built into the timeline.
- Test the scenario where Location 1 has a slow month during the ramp period. If Location 1 drops from 320 to 270 units in one month, its surplus drops from $700 to $200. At $200/month surplus, funding Location 2's $782 monthly deficit is impossible without drawing on reserves. Know the reserve minimum before committing.

TRAPS

- Treating the combined BEP as the only number to monitor. Location 2's standalone BEP is the number that tells you when Location 2 stops being a burden — a different and equally important threshold.
- Assuming Location 2's CM per unit will be the same as Location 1's from day one. If Location 2 launches with a promotional pricing period or offers introductory discounts to build volume, actual CM during the ramp will be lower than the stable CM used in this table. Calculate with the promotional CM if one is planned.
- Ignoring the interaction between the two locations during the ramp. If Location 1 must send staff to support Location 2 during the opening period, that time has a cost that appears nowhere in this table — it shows up as lower Location 1 output and lower monthly surplus.

SECTION 8

Appendixes

Appendix A — Cumulative Deficit Calculation During Ramp

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To estimate total cash needed to fund Location 2 during the ramp period:

Step 1: Estimate average units per month at Location 2 during ramp.
  If ramp is linear from 0 to standalone BEP (SBE_2):
    Average = SBE_2 ÷ 2 (triangular ramp approximation)

Step 2: Calculate average monthly CM coverage during ramp.
  CM_coverage = Average Units × CM per unit

Step 3: Monthly deficit during ramp.
  Monthly_deficit = FC_2 − CM_coverage

Step 4: Months to standalone BEP.
  If linear ramp from 0 to SBE_2 at constant monthly unit addition (G):
    Months = SBE_2 ÷ G

Step 5: Total cumulative deficit.
  Total_deficit = Monthly_deficit × Months

Example (from worked scenario):
  SBE_2 = 156 units.  G = 17 units/month.  FC_2 = $1,562.
  Months = 156 ÷ 17 = 9.2 → 10 months.
  Average units during ramp = 156 ÷ 2 = 78 units.
  CM_coverage = 78 × $10 = $780/month.
  Monthly_deficit = $1,562 − $780 = $782/month.
  Total_deficit = $782 × 10 = $7,820.

Cross-check against Location 1 surplus:
  Location 1 surplus per month = (Actual_1 − BEP_1) × CM
    = (320 − 250) × $10 = $700/month.
  Over 10 months: $7,000 from operations.
  Remaining gap to fund from reserves: $7,820 − $7,000 = $820.
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Appendix B — Three Location 2 Scenarios to Model

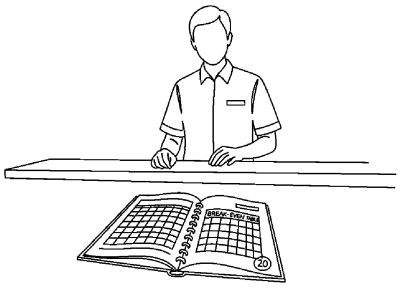
Build this table before committing to any second-location decision.
It shows cumulative deficit and cash reserve needed across three
ramp speed assumptions.

Columns:

1. Ramp scenario (Slow / Base / Fast)
2. Monthly unit addition during ramp
3. Months to standalone BEP
4. Cumulative deficit ($)
5. Location 1 operational contribution ($)
6. Reserve gap to fund ($) = Col 4 – Col 5

Fill in with your actual numbers for each scenario.
Use historical growth data for the Base case.
Use 50% of Base for Slow. Use 150% of Base for Fast.

If the Slow scenario reserve gap exceeds current cash reserves,
do not open Location 2 until reserves can cover that scenario.
The Fast scenario is not a plan — it is a hope.
Decisions should survive the Slow scenario.



WHERE THIS WORKSHEET COMES FROM

Break-Even Analysis Handbook

Calculate How Many Units Must Sell Before This Business Turns a Profit

by Ibrahim Anwar

This worksheet is one of nine in the *Break-Even Analysis Handbook* companion worksheet pack. The full pack is grouped into three categories: high-volume worksheets you can run weekly, niche-search worksheets for rare but high-value situations, and specific-case worksheets that walk you through a single concrete scenario.

Every framework, decision filter, and figure used in these worksheets is drawn from the chapters of the source book. The book sets the diagnosis, the worksheets give you the form to act on it.

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