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Module 2 Cost Examples

PAD 501

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What Is Direct? Indirect?

Cost Objective	Indirect Costs	Direct Costs
Surgical Unit	Department and Hospital	Total patient costs and unit management
Surgical Department	Hospital	Total unit costs plus department administration
Hospital	None	Total departmental costs plus hospital administration

Allocation of indirect costs

This slide showed material from the textbook:

- Figure 4-7: Direct Distribution Allocation of Support Centers
- Figure 4-8: Step-down Allocation of Support Centers

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See Chapter 4 of Finkler, Calabrese and Smith, *Financial Management for Public, Health, and Not-for-Profit Organizations*, 8th edition (Sage, 2025).

Direct distribution of support center costs

This slide showed material from the textbook:

- Table 4-6: Direct Distribution of Support Center Costs

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See Chapter 4 of Finkler, Calabrese and Smith, *Financial Management for Public, Health, and Not-for-Profit Organizations*, 8th edition (Sage, 2025).

Step-down distribution of support center costs

This slide showed material from the textbook:

- Table 4-7: Step-down Distribution of Support Center Costs
- Table 4-8: Step-down Distribution with Changed Order of Allocation

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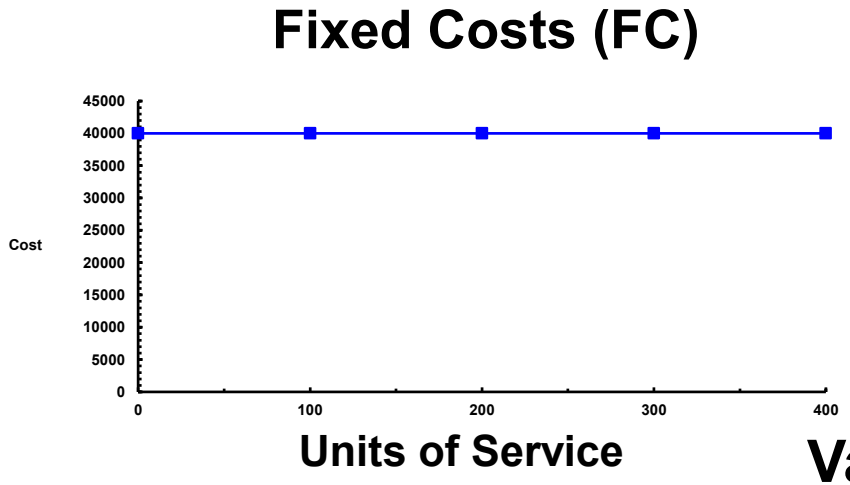
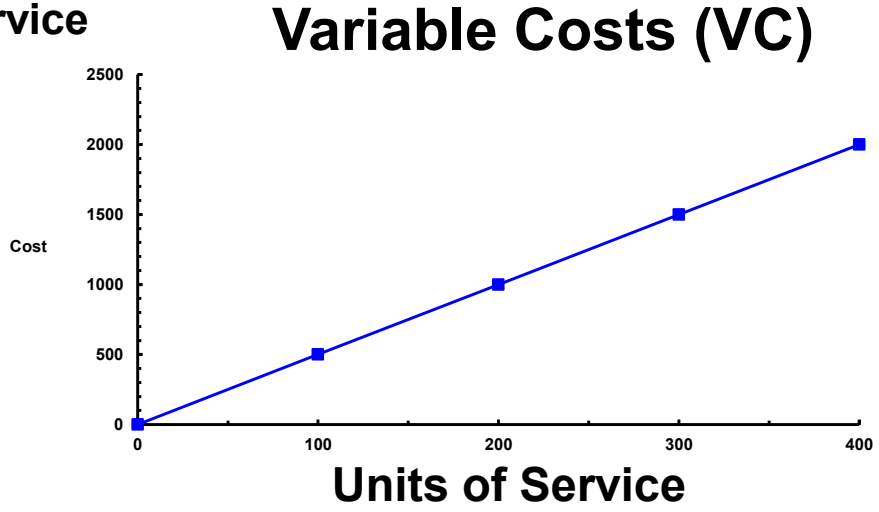
See Chapter 4 of Finkler, Calabrese and Smith, *Financial Management for Public, Health, and Not-for-Profit Organizations*, 8th edition (Sage, 2025).

Fixed and Variable Costs

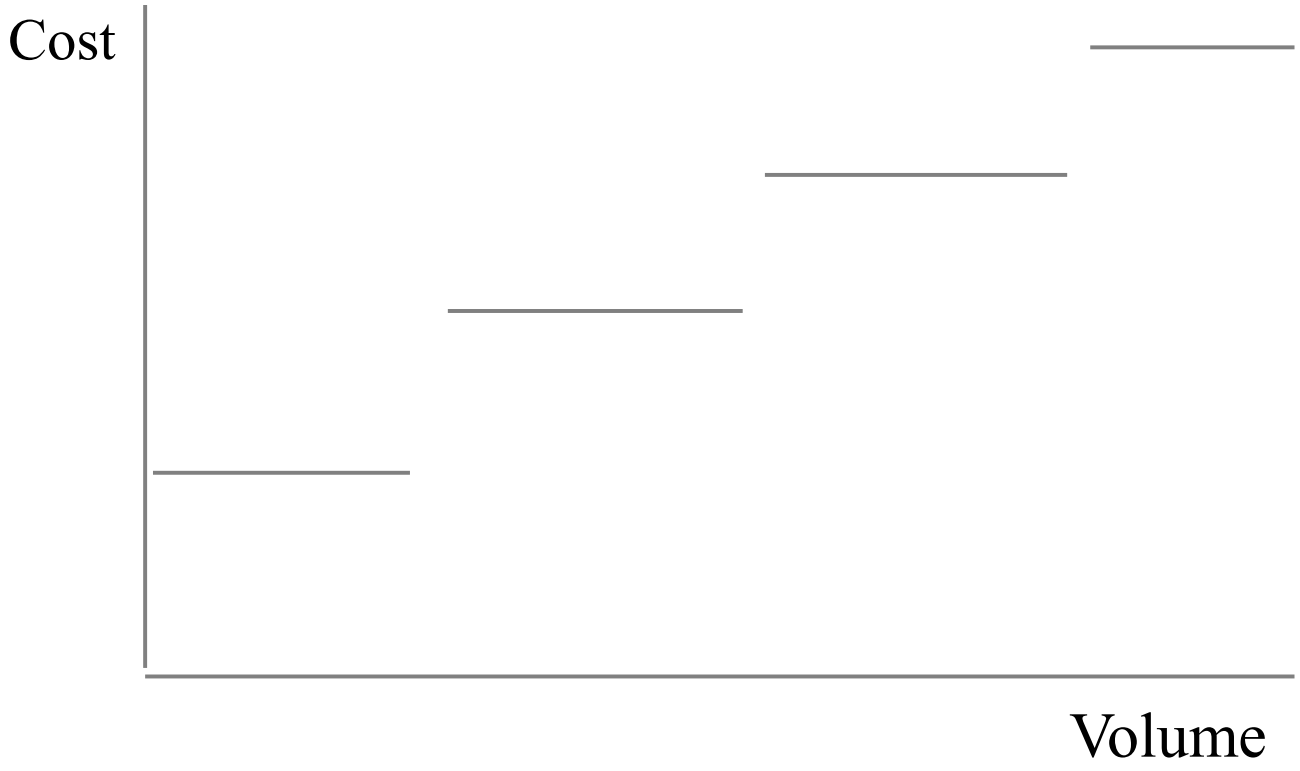


Fixed Costs do not vary with volume over the relevant range.

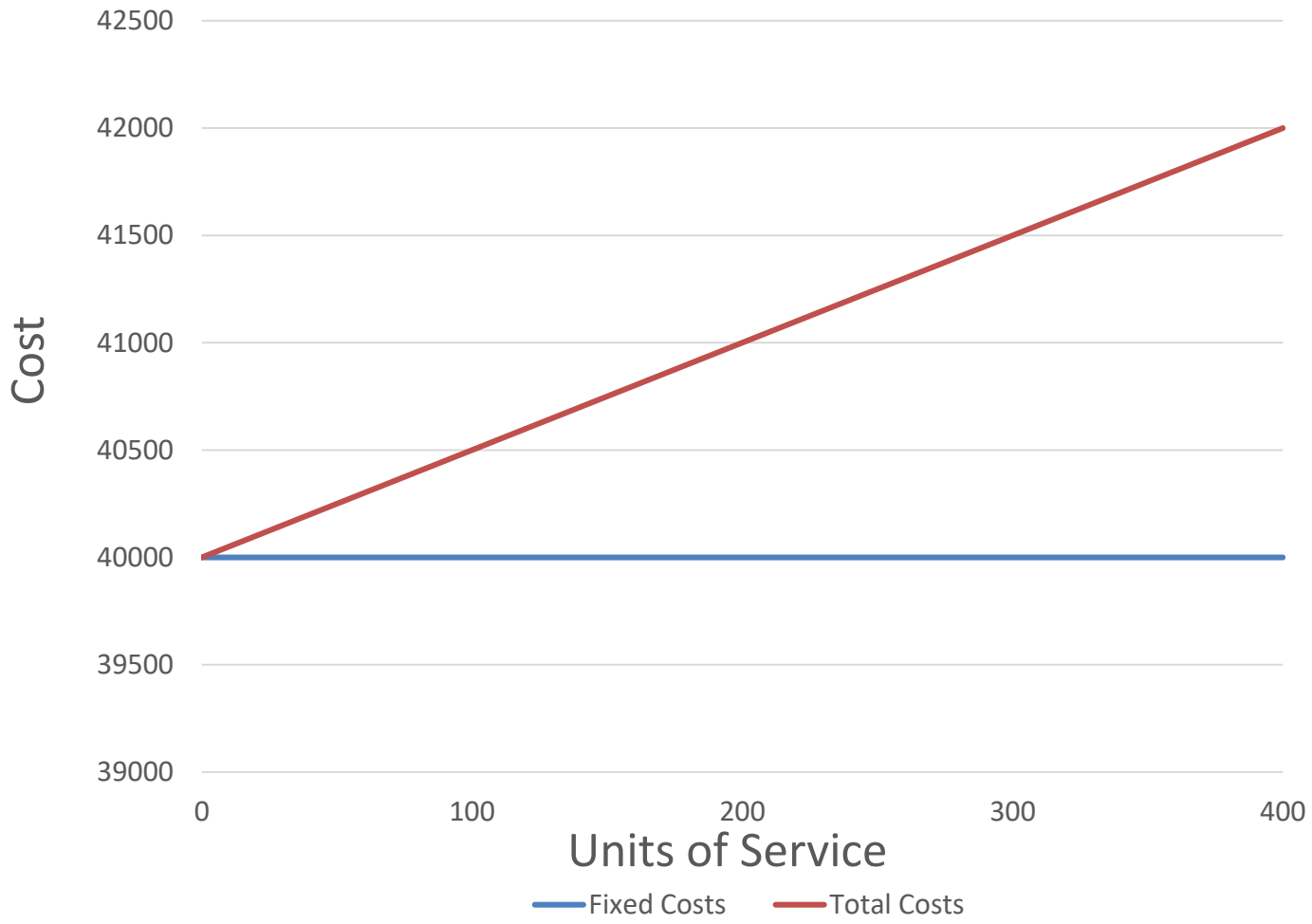
Variable Costs vary proportionately with volume.



Step-Fixed Costs



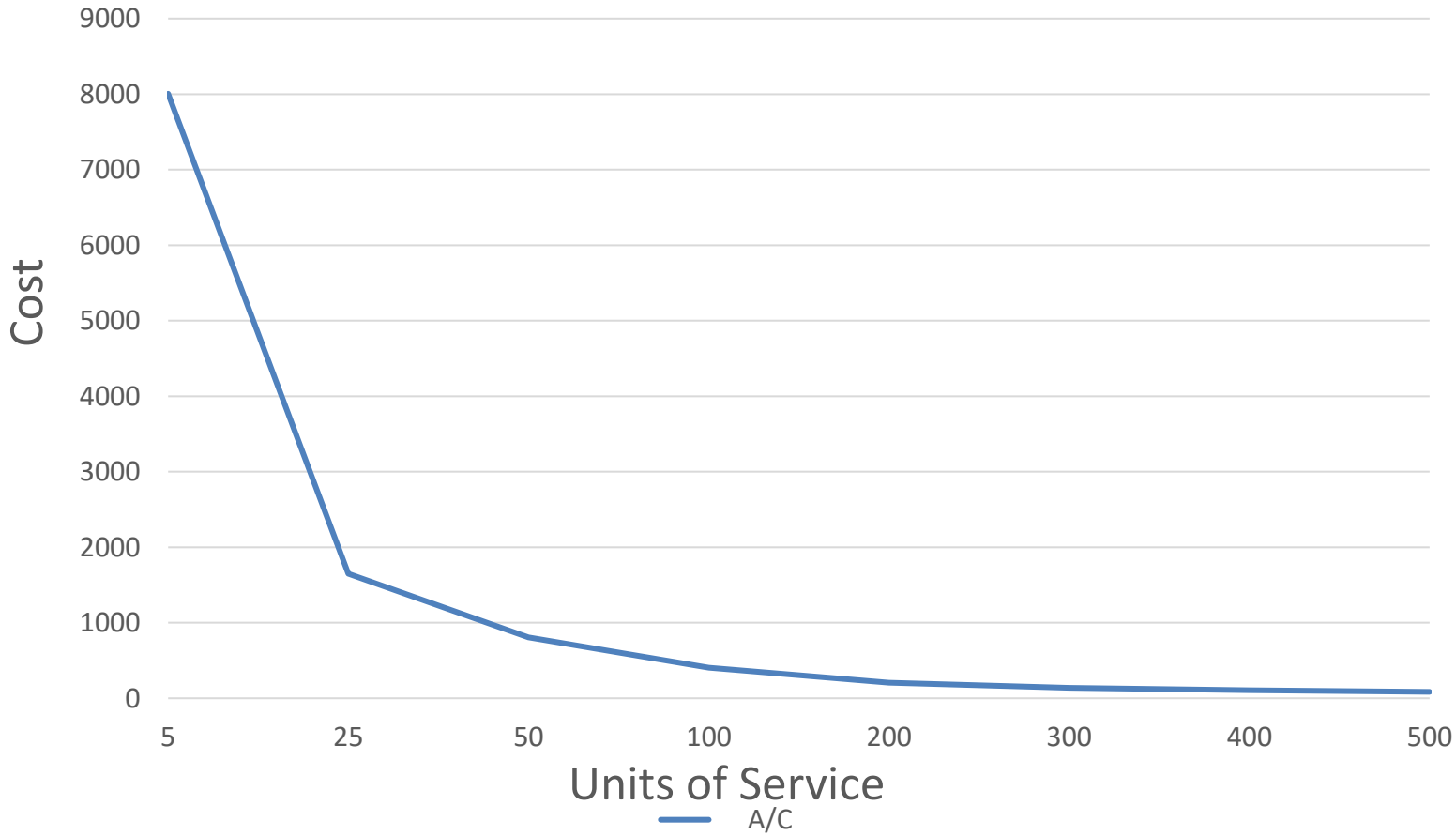
Total Cost (TC)



Average Cost

Average Cost = Total Cost/Volume

Total Cost = $40,000 FC + ($5 VC x Volume)



Relevant Cost Analysis

The urban planner for Millbridge is working on a housing project. The Fixed Costs are $300,000 for the project, and Variable Costs are $250 each time a family moves into an apartment. The cost structure of the housing project would be:

Volume	Fixed Cost	Variable Cost	Total Cost Full Cost	Average Cost
100	$300,000	$25,000	$325,000	$3,250
500	$300,000	$125,000	$425,000	$850
1,500	$300,000	$375,000	$675,000	$450
2,500	$300,000	$625,000	$925,000	$370
3,000	$300,000	$750,000	$1,050,000	$350

A Break-Even Example

Feed-A-Child Foundation wants to start a new program which will have $30 in variable costs per child and fixed costs of soliciting donations to fund the program of $10,000. If each donor were to give FAC $50, and each donor feeds one child, how many donors would be needed for FAC to break even?

Contribution Margin = (P – VC) = ($50 – $30) = $20
Fixed Costs = $10,000

BEQ = FC/CM = $10,000/$20 = 500 donors to break even

$$BEQ = \frac{FC}{P - VC} = \frac{FC}{CM} = \frac{\$10,000}{\$50 - \$30} = \frac{\$10,000}{\$20} = 500$$

Suppose that Feed-A-Child ran three regional programs with $100,000 of fixed costs and the average donations, variable costs, and mix of contributions shown below. What would the break-even volume be?

Program	Mix of Contributions	Average Donation	Average Variable Cost	Contribution Margin
Africa	70%	$36	$32	$4.00
Asia	25%	40	29	11.00
South America	5%	50	30	20.00
Total	100%			

To solve the problem, we first find the weighted average Contribution Margin and then apply the normal Break-Even formula!

Program	Percent of Donations	Contribution Margin	Weighted Average CM
Africa	70%	$4	$2.80
Asia	25%	11	2.75
South America	5%	20	1.00
Total			$6.55

BEQ = FC/CM = $100,000/$6.55 per donation = 15,267 donations

Note that this cannot be done as separate break-even calculations for each program!