CHAPTER 9

Inventory Costing
and
Capacity Analysis

Inventory Costing Choices: Summary

- Absorption Costing – product costs are capitalized; period costs are expensed
- Variable Costing – variable product and period costs are capitalized; fixed product and period costs are expensed
- Throughput Costing – only Direct Materials are capitalized; all other costs are expensed

Comparative Income Statements

Variable Costing	Absorption Costing
Revenues	Revenues
Variable Cost of Goods Sold	Cost of Goods Sold
Beginning Inventory	Beginning Inventory
Add: Variable Product Costs	Add: Variable Product Costs
	Fixed Product Costs
Cost of Goods Available for Sale	Cost of Goods Available for Sale
Less: Ending Inventory	Less: Ending Inventory
Variable Cost of Goods Sold	Cost of Goods Sold
Variable Period Costs	
Contribution Margin	Gross Margin
Fixed Product Costs	Variable Period Costs
Fixed Period Costs	Fixed Period Costs
Operating Income	Operating Income

Costing Comparison

- Variable costing is a method of inventory costing in which *only* variable manufacturing costs are included as inventoriable costs
- Absorption costing is a method of inventory costing in which *all* variable manufacturing costs and *all* fixed manufacturing costs are included as inventoriable costs

Differences in Income

- Operating Income will differ between Absorption and Variable Costing
- The amount of the difference represents the amount of Fixed Product Costs capitalized as Inventory under Absorption costing, and expensed as a period costs under Variable Costing

Comparative Income Effects

	Variable Costing	Absorption Costing
Are fixed product costs inventoried?	No	Yes
Is there a production-volume variance?	No	Yes
Are classifications between variable and fixed costs routinely made?	Yes	Infrequently

Comparative Income Effects

	Variable Costing	Absorption Costing
How do changes in unit inventory cost affect operating income if…?		
Production = Sales	Equal	Equal
Production > Sales	Lower	Higher
Production < Sales	Higher	Lower

Comparative Income Effects

	Variable Costing	Absorption Costing
What are the effects on cost-volume-profit (for a given level of fixed costs and a given contribution margin per unit?	Driven by: 1. Unit level of sales	Driven by: 1. Unit level of sales 2. Unit level of production 3. Chosen denominator level

Comparison of Alternative Inventory Costing Systems

- Variable Direct Manufacturing Cost

Actual Costing	Normal Costing	Standard Costing
Actual prices X Actual quantity of inputs used	Actual prices X Actual quantity of inputs used	Standard prices X Standard quantity of inputs allowed for actual output achieved

Comparison of Alternative Inventory Costing Systems

- Variable Indirect Manufacturing Cost

Actual Costing	Normal Costing	Standard Costing
Actual variable indirect rates X Actual quantity of cost-allocation bases used	Budgeted variable indirect rates X Actual quantity of cost-allocation bases used	Standard variable indirect rates X Standard quantity of cost-allocation bases allowed for actual output achieved

Comparison of Alternative Inventory Costing Systems

- Fixed Direct Manufacturing Cost

Actual Costing	Normal Costing	Standard Costing
Actual prices X Actual quantity of inputs used	Actual prices X Actual quantity of inputs used	Standard prices X Standard quantity of inputs allowed for actual output achieved

Comparison of Alternative Inventory Costing Systems

- Fixed Indirect Manufacturing Cost

Actual Costing	Normal Costing	Standard Costing
Actual fixed indirect rates X Actual quantity of cost-allocation bases used	Budgeted fixed indirect rates X Actual quantity of cost-allocation bases used	Standard fixed indirect rates X Standard quantity of cost-allocation bases allowed for actual output achieved

Performance Issues and Absorption Costing

- Managers may seek to manipulate income by producing too many units
- Production beyond demand will increase the amount of inventory on hand
- This will result in more fixed costs being capitalized as inventory
- That will leave a smaller amount of fixed costs to be expensed during the period
- Profit increases, and potentially so does a manager's bonus

Inventories and Costing Methods

- One way to prevent the unnecessary buildup of inventory for bonus purposes is to base manager's bonuses on profit calculated using Variable Costing
- Drawback: complicated system of producing two inventory figures – one for external reporting and the other for bonus calculations

Other Manipulation Schemes beyond Simple Overproduction

- Deciding to manufacture products to absorb the highest amount of fixed costs, regardless of demand ("cherry-picking")
- Accepting an order to increase production, even though another plant in the same firm is better suited to handle that order
- Deferring maintenance

Management Countermeasures for Fixed Cost Manipulation Schemes

- Careful budgeting and inventory planning
- Incorporate an internal carrying charge for inventory
- Change (lengthen) the period used to evaluate performance
- Include nonfinancial as well as financial variables in the measures to evaluate performance

Extreme Variable Costing: Throughput Costing

- Throughput costing (super-variable costing) is a method of inventory costing in which *only* direct material costs are included as inventory costs. All other product costs are treated as operating expenses

