



CHAPTER 2

Variable Costing: A Tool for Management

《管理会计应用指引第303号——变动成本法》



CASE1

BUSINESS FOCUS



When the economy tanks, automakers, such as General Motors and Chrysler, often “flood the market” with a supply of vehicles that far exceeds customer demand. They pursue this course of action even though it tarnishes their brand image and increases their auto storage costs, tire replacement costs, customer rebate costs, and advertising costs. This begs the question why would managers knowingly produce more vehicles than are demanded by customers?

经理人的困惑



- 经理人老王：这段时间我亲自出马，跑客户、抓销售，仓库的积压产品可卖掉了不少啊。再加上我这把铁算盘，控制住材料和人工的消耗，利润还能提高不了？……什么？我说老李，你这账没算错吧！销量提高了，库存也下降了，这利润反倒变少了？
- 财务科老李支招：别管销售，只管多生产，最好把产量提高到1-2倍
- 经过王经理提高产量增加库存后……
- 经理人老王：真让人难以置信，库存增加了这么多，利润还是大大提高了！老李，你这方法对咱厂有好处吗？
- 财务科老李：……



1 Comparison of Absorption and Variable Costing (比较)

Unit Cost Computations

Income Comparison

2 Advantages of Variable Costing and the Contribution Approach (评价)

1

Variable Costing

Under variable costing, only those manufacturing costs that vary with output are treated as product costs.

变动成本计算法：以成本性态分析为前提条件，只将变动生产成本作为产品成本的构成内容，而将固定生产成本及非生产成本作为期间成本，并按贡献式损益确定程序计量损益的一种成本计算模式。

2

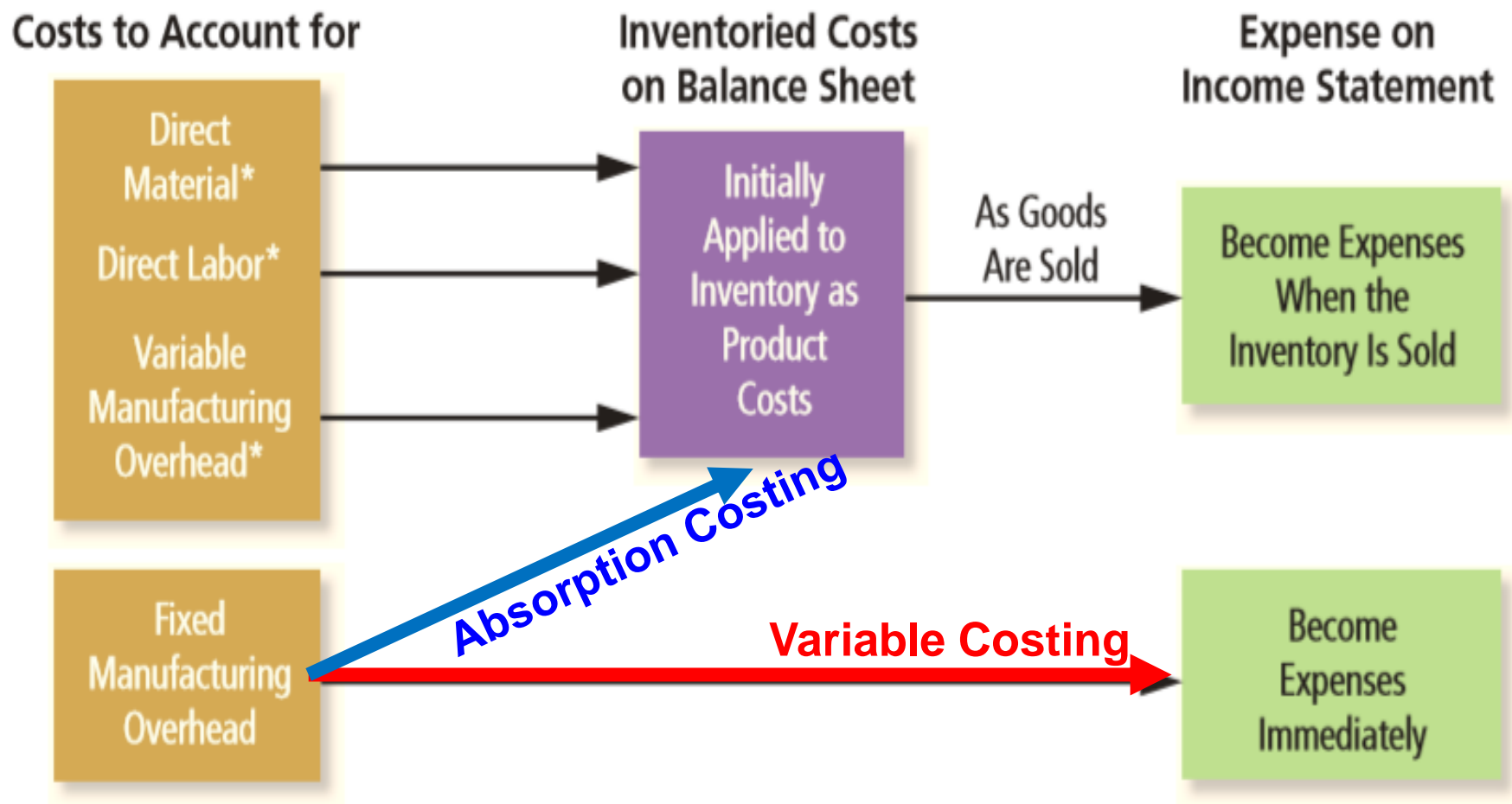
Absorption Costing

absorption costing treats all manufacturing costs as product costs, regardless of whether they are variable or fixed.

完全成本法：以成本按其经济用途分类为前提，将全部生产成本作为产品成本的构成内容，只将非生产成本作为期间成本，并按传统式损益确定程序计量损益的一种成本计算模式。

1

Unit Cost Computations



Absorption Costing Unit Product Cost

January February March

Direct materials	\$19,000	\$19,000	\$19,000
Direct labor	5,000	5,000	5,000
Variable manufacturing overhead	1,000	1,000	1,000
Fixed manufacturing overhead (\$70,000 ÷ 1 unit produced in January; \$70,000 ÷ 2 units produced in February; \$70,000 ÷ 4 units produced in March) . . .	<u>70,000</u>	<u>35,000</u>	<u>17,500</u>
Absorption costing unit product cost	<u><u>\$95,000</u></u>	<u><u>\$60,000</u></u>	<u><u>\$42,500</u></u>

Beginning inventory	0	0	1
Units produced	1	2	4
Units sold	1	1	5
Ending inventory	0	1	0

Absorption Costing Income Statements

	January	February	March
Sales	\$100,000	\$100,000	\$500,000
Cost of goods sold ($\$95,000 \times 1$ unit; $\$60,000 \times 1$ unit; $\$60,000 \times 1$ unit + $\$42,500 \times 4$ units) ...	<u>95,000</u>	<u>60,000</u>	<u>230,000</u>
Gross margin	5,000	40,000	270,000
Selling and administrative expenses	<u>30,000</u>	<u>30,000</u>	<u>70,000</u>
Net operating income (loss)	<u><u>\$ (25,000)</u></u>	<u><u>\$ 10,000</u></u>	<u><u>\$200,000</u></u>

	Per Aircraft	Per Month
Selling price	\$100,000	
Direct materials	\$19,000	
Direct labor	\$5,000	
Variable manufacturing overhead	\$1,000	
Fixed manufacturing overhead		\$70,000
Variable selling and administrative expenses	\$10,000	
Fixed selling and administrative expenses		\$20,000

	January	February	March
Beginning inventory	0	0	1
Units produced	1	2	4
Units sold	1	1	5
Ending inventory	0	1	0

Variable Costing Unit Product Cost	
Direct materials	\$19,000
Direct labor	5,000
Variable manufacturing overhead	<u>1,000</u>
Variable costing unit product cost	<u><u>\$25,000</u></u>

	Per Aircraft	Per Month
Selling price	\$100,000	
Direct materials	\$19,000	
Direct labor	\$5,000	
Variable manufacturing overhead	\$1,000	
Fixed manufacturing overhead		\$70,000
Variable selling and administrative expenses	\$10,000	
Fixed selling and administrative expenses		\$20,000

	January	February	March
Beginning inventory	0	0	1
Units produced	1	2	4
Units sold	1	1	5
Ending inventory	0	1	0

Selling and Administrative Expenses			
	January	February	March
Variable selling and administrative expense (@ \$10,000 per unit sold)	\$10,000	\$10,000	\$50,000
Fixed selling and administrative expense	<u>20,000</u>	<u>20,000</u>	<u>20,000</u>
Total selling and administrative expense	<u>\$30,000</u>	<u>\$30,000</u>	<u>\$70,000</u>



Variable Costing Contribution Format Income Statements

	January	February	March
Sales	<u>\$100,000</u>	<u>\$100,000</u>	<u>\$500,000</u>
Variable expenses:			
Variable cost of goods sold	25,000	25,000	125,000
Variable selling and administrative expense	10,000	10,000	50,000
Total variable expenses	<u>35,000</u>	<u>35,000</u>	<u>175,000</u>
Contribution margin	<u>65,000</u>	<u>65,000</u>	<u>325,000</u>
Fixed expenses:			
Fixed manufacturing overhead	70,000	70,000	70,000
Fixed selling and administrative expense ...	20,000	20,000	20,000
Total fixed expenses	<u>90,000</u>	<u>90,000</u>	<u>90,000</u>
Net operating income (loss)	<u><u>\$ (25,000)</u></u>	<u><u>\$ (25,000)</u></u>	<u><u>\$235,000</u></u>



Absorption Costing Income Statements

	January	February	March
Sales	\$100,000	\$100,000	\$500,000
Cost of goods sold ($\$95,000 \times 1$ unit; $\$60,000 \times 1$ unit; $\$60,000 \times 1$ unit + $\$42,500 \times 4$ units) ...	<u>95,000</u>	<u>60,000</u>	<u>230,000</u>
Gross margin	5,000	40,000	270,000
Selling and administrative expenses	<u>30,000</u>	<u>30,000</u>	<u>70,000</u>
Net operating income (loss)	<u><u>\$ (25,000)</u></u>	<u><u>\$ 10,000</u></u>	<u><u>\$200,000</u></u>

	January	February	March
Beginning inventory	0	0	1
Units produced	1	2	4
Units sold	1	1	5
Ending inventory	0	1	0

**Fixed Manufacturing Overhead Deferred in, or Released from,
Inventories under Absorption Costing**

	January	February	March
Fixed manufacturing overhead in beginning inventories.....	\$0	\$ 0	\$ 35,000
Fixed manufacturing overhead in ending inventories	<u>0</u>	<u>35,000</u>	<u>0</u>
Fixed manufacturing overhead deferred in (released from) inventories	<u>\$0</u>	<u>\$35,000</u>	<u>\$(35,000)</u>

Costing Method	1st Period	2nd Period	3rd Period	Total
Absorption	\$ (25,000)	\$ 10,000	\$ 200,000	\$ 185,000
Variable	\$ (25,000)	\$ (25,000)	235,000	185,000







Differences between variable costing and absorption costing net operating incomes



$$\begin{array}{ccccc} \text{Manufacturing overhead} & & \text{Fixed manufacturing} & & \text{Fixed manufacturing} \\ \text{deferred in} & = & \text{overhead in} & - & \text{overhead in} \\ \text{(released from) inventory} & & \text{ending inventories} & & \text{beginning inventories} \end{array}$$

Summary of Key Insights

Relation between Production and Sales for the Period	Effect on Inventories 	Relation between Absorption and Variable Costing Net Operating Incomes
Units produced = Units sold	No change in inventories 	Absorption costing net operating income = Variable costing net operating income
Units produced > Units sold	Inventories increase 	Absorption costing net operating income > Variable costing net operating income*
Units produced < Units sold	Inventories decrease 	Absorption costing net operating income < Variable costing net operating income†

*Net operating income is higher under absorption costing because fixed manufacturing overhead cost is *deferred* in inventory under absorption costing as inventories increase.

†Net operating income is lower under absorption costing because fixed manufacturing overhead cost is *released* from inventory under absorption costing as inventories decrease.

EXP1:price-\$20 per unit

	January	February	March
Beginning inventory	0	2	2
units produced	10	10	10
units sold	8	10	12
Ending inventory	2	2	0

Variable manufacturing costs per unit	\$7
Fixed manufacturing overhead	\$30
Variable non-manufacturing costs per unit	\$2
Fixed non-manufacturing costs	\$40

variable costing

	January	February	March	Total
Net income	18	40	62	120

absorption costing

	January	February	March	Total
Net income	24	40	56	120

EXP2:price-\$20 per unit

	January	February	March
Beginning inventory	0	2	2
units produced	12	10	8
units sold	10	10	10
Ending inventory	2	2	0

Variable manufacturing costs per unit	\$7
Fixed manufacturing overhead	\$30
Variable non-manufacturing costs per unit	\$2
Fixed non-manufacturing costs	\$40

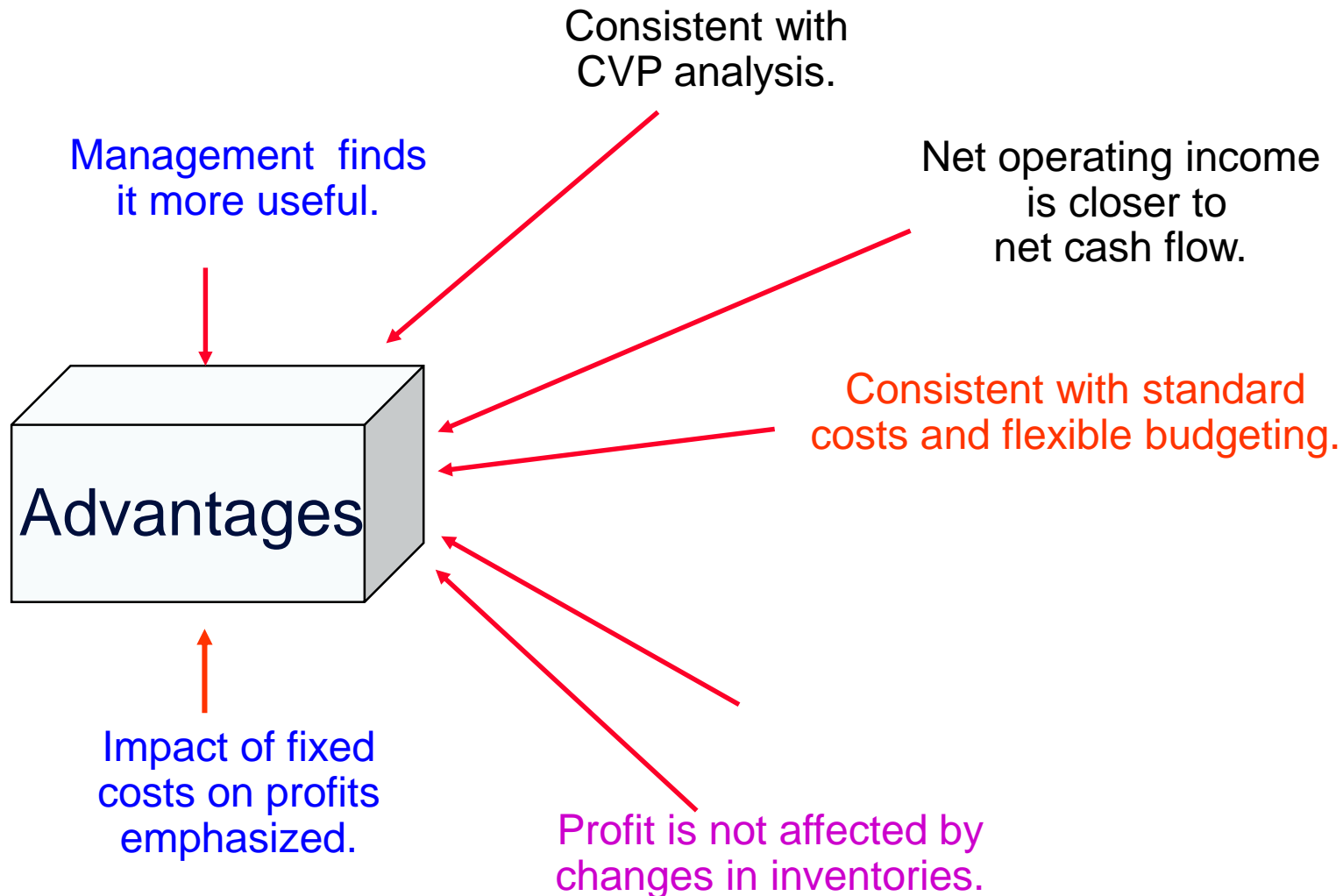
variable costing

	January	February	March	Total
Net income	40	40	40	120

absorption costing

	January	February	March	Total
Net income	45	41	34	120

2 Advantages and disadvantages of Variable Costing



External Reporting and Income Taxes ➡

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graph TD; A([To conform to GAAP requirements, absorption costing must be used for external financial reports in the United States.]) --> B([Since top executives are typically evaluated based on earnings reported to shareholders in external reports, they may feel that decisions should be based on absorption costing data.]);
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To conform to GAAP requirements, absorption costing must be used for external financial reports in the United States.

Since top executives are typically evaluated based on earnings reported to shareholders in external reports, they may feel that decisions should be based on absorption costing data.



优点

- ★变动成本法能够揭示利润和业务量之间的正常关系，有利于促使企业重视销售工作
- ★变动成本法可以提供有用的成本信息，便于科学的成本分析和成本控制
- ★变动成本法提供的成本和收益资料，便于企业进行短期经营决策
- ★采用变动成本法可以简化成本核算工作



缺点

- ★变动成本法所计算出来的单位产品成本，不符合传统的成本观念的要求
- ★变动成本法不能适应长期决策的需要
- ★采用变动成本法会对所得税产生一定的影响

结合制



期末调整公式：

某期完法的
营业利润 = 该期变法的
营业利润 + 该期两法营业
利润广义差额

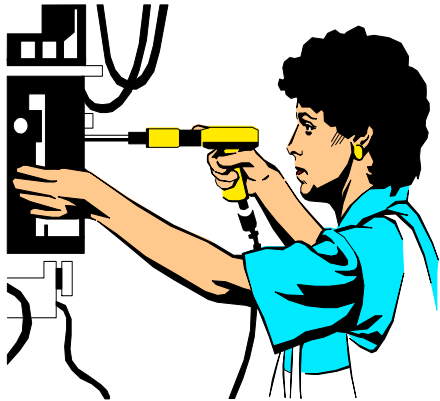
某期完法的
期末存货成本 = 该期变法的
期末存货成本 + 该期完法期末存货应
吸收的固定生产成本

Reconciliation of Variable Costing and Absorption Costing Net Operating Incomes			
	January	February	March
Variable costing net operating income (loss)	\$(25,000)	\$(25,000)	\$235,000
Add (deduct) fixed manufacturing overhead deferred in (released from) inventory under absorption costing	0	35,000	(35,000)
Absorption costing net operating income (loss)	<u>\$(25,000)</u>	<u>\$ 10,000</u>	<u>\$200,000</u>

Impact of Lean Production



When companies use Lean Production . . .



Production
tends to equal
sales . . .



So, the difference between variable and absorption income tends to disappear.

王树彤：外贸企业只会生产不会吆喝是最大问题

中国广播网 | 2014年08月06日

“外贸企业只会生产不会吆喝，这是最大的问题。与其呼吁动用国家力量，为外贸企业减负减压，不如首先让外贸企业减负减压，从一向擅长的生产，改为学会如何在海外市场销售，学会吆喝，这才是最为关键的解决之道。”



据经济之声《天下财经》报道，“外贸企业只会生产不会吆喝，这是最大的问题”这是敦煌网创始人王树彤的最新感慨。

王树彤说，与其呼吁动用国家力量，为外贸企业在海外市场打开销路，提升利润，倒不如首先让外贸企业减负减压，从一向擅长的生产，改为学会如何在海外市场销售，学会吆喝，这才是最为关键的解决之道。



Alfred M. Zeien 在吉列公司当了8年的的首席执行官且非常成功，公司每年的收益增长率为**15%到20%**。然而，他的继任者发现，这些利润增长的一部分是基于存货产生的错觉。

在**3年内**，产品存货增加了**40%**。

存货增加而销售没有增长，利润是如何增加的？

[fuyaqi](#) 上传于 15-10-11 17:54 阅读(43) 评论(0)



2000年10月10日，中国各大媒体报出猛料：富亚涂料在北京建筑文化中心举办了一个“家装安全动真格，真猫真狗喝涂料”的产品展示活动。上午9点，活动正式开始，但8点半的时候，已经围满了围观群众。由于动物保护协会的代表坚决反对用动物来测试富亚涂料的无毒性，富亚涂料公司总经理高级工程师蒋和平先生在崇文区公证处公证，众多媒体和观众的注目下，当场喝下了一杯富亚乳胶漆，以证实富亚涂料的安全无异味、环保健康，以表明对消费者安全健康的庄严承诺。事实胜于雄辩，富亚人依靠自己的诚信，赢得了媒体与消费者的认同，富亚涂料的影响力在一流品质与特殊功能的支持下急剧上升，销量迅速飙升。

- In its **first** year of operations, Kelley Company produced **10,000** units and sold **7,000** units.

direct materials	\$12
direct labor	\$8
variable manufacturing overhead	\$2
variable selling and administrative	\$1
fixed manufacturing overhead	\$50,000

(1) What is the amount of cost of goods sold under variable costing?

- a. \$220,000 b. \$161,000 c. \$154,000 d. \$230,000

$$7,000 \times (\$12 + \$8 + \$2)$$

- In its **first** year of operations, Kelley Company produced **10,000** units and sold **7,000** units.

direct materials	\$12
direct labor	\$8
variable manufacturing overhead	\$2
variable selling and administrative	\$1
fixed manufacturing overhead	\$50,000

(2)What is the amount of cost of goods sold under absorption costing?

- a. \$189,000 b. \$196,000 c. \$179,000 d. \$186,000

$$7,000 \times (\$12 + \$8 + \$2 + 5)$$

- In its **first** year of operations, Kelley Company produced **10,000** units and sold **7,000** units.

direct materials	\$12
direct labor	\$8
variable manufacturing overhead	\$2
variable selling and administrative	\$1
fixed manufacturing overhead	\$50,000

(3) Which of the following will be true?

- a. Its absorption costing net income will be \$35,000 lower than its variable costing net income.
- b. Its absorption costing net income will be \$35,000 higher than its variable costing net income.
- c. Its absorption costing net income will be \$15,000 lower than its variable costing net income.
- d. Its absorption costing net income will be \$15,000 higher than its variable costing net income.

案例分析：假定某公司专门生产A产品，原设计生产能力为每年1 000台，但由于市场竞争激烈，过去两年，每年只生产和销售500台。市场售价为每台2 500元，而该公司的单位产品成本为2600元，详细资料如下：

单位变动生产成本 1 000 元

固定制造费用 800 000 元

固定销售和管理费用 250 000 元

该公司已连续两年亏损，去年亏损300 000元，公司形势严峻。

销售经理认为：问题的关键在于每台产品的制造成本太高，但由于竞争的关系，公司不能提高售价，只能以2 500元的价格每年销售500台。因此公司的出路只能是请生产部门的工程技术人员想方设法改造工艺，减少损耗，降低制造成本。

生产部门经理认为：问题的关键在于生产能力只用了一半，如能充分利用生产能力，就可把单位固定成本降低，单位产品成本自然会下降。对策是销售人员要千方百计开展促销活动，如能每年销售1 000台，就一定能扭亏为盈。

总会计师则认为：公司目前编制利润表的方法——完全成本法，为公司提供了一条扭亏为盈的“捷径”：充分利用公司的生产能力，一年生产1 000台A产品。这样即使不增加销量，也能在利润表上“扭亏为盈”。

要求：

- (1) 按变动成本法计算该公司去年的利润，并与完全成本法下进行比较和分析。
- (2) 根据总会计师的建议，按完全成本法计算该公司的利润，并分析与变动成本法下的利润不同的原因，并对该建议做出评价。

第二章重点



变动成本的组成

变动成本法下利润表的编制（贡献式利润表）

与完全成本法下利润的差异原因、规律、调节

变动成本法的评价