Universidad del Este

Carolina, Puerto Rico

PRINCIPLES OF FOOD, BEVERAGE & LABOR COST CONTROLS

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S00903879

HMNG- COST CONTROL

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CHAPTER 1: COST AND SALES CONCEPTS

QUESTIONS AND PROBLEMS

1. Given the following information, calculate cost percentages. Round your answers to the nearest tenth of a percent.

a. Cost, $200.00; Sales, $500.00

b. Cost, $150.00; Sales, $500.00

c. Cost, $178.50; Sales, $700.00

d. Cost, $216.80; Sales, $800.00

e. Cost, $127.80; Sales, $450.00

f. Cost, $610.00; Sales, $2,000.00

2. Calculate cost, given the following figures for cost percent and sales:

a. Cost percent, 28.0%; Sales, $500.00

b. Cost percent, 34.5%; Sales, $2,400.00

c. Cost percent, 24.8%; Sales, $225.00

d. Cost percent, 31.6%; Sales, $1,065.00

e. Cost percent, 29.7%; Sales, $790.00

f. Cost percent, 21.2%; Sales, $4,100.00

3. Calculate sales, given the following figures for cost percent and cost:

a. Cost percent, 30.0%; Cost, $90.00

b. Cost percent, 25.0%; Cost, $500.00

c. Cost percent, 33.3%; Cost, $1,000.00

d. Cost percent, 27.3%; Cost, $1,300.40

e. Cost percent, 24.5%; Cost, $88.20

f. Cost percent, 34.8%; Cost, $1,113.60

4. List three examples of foodservice costs that are fixed. Are they controllable? Explain your answers. 5. List three examples of foodservice costs that are variable. Are they controllable? Explain your answers.

6. Write a short paragraph illustrating why a comparison of raw dollar costs in two restaurants would not be meaningful, but a comparison of the cost percents for food, beverages, labor, and overhead might be.

7. The present cost to Lil ’ s Restaurant for one à la carte steak is $3.20. This is 40 percent of the menu sales price.

a. What is the present sales price?

b. At an annual inflation rate of 5 percent, what is this steak likely to cost one year from today?

c. Using the cost calculated in (b) above, what should the menu sales price be for this item in one year if the cost percent at that time is to be 38 percent?

d. If you were a banquet manager planning a function six months from now and planning to use this item, what unit cost would you plan for?

e. The banquet manager in (d) above has already calculated that the other items included in this banquet menu will have increased in cost in six months from $2.00 to $2.11. What should the sales price per person be for this banquet if the desired cost percentage is 40 percent?

8. At the Loner Inn, total fixed costs for October were $28,422.80. In that month, 14,228 covers were served.

a. What was the fixed cost per cover for October?

b. Assume that fixed costs will increase by 2 percent in November. Determine fixed cost per cover if the number of covers decreases by 10 percent in November.

9. Joe ’ s Downtown Restaurant purchases domestic red wine at $9.20 per bottle. Each bottle contains 3 liters, the equivalent of 101 ounces. The wine is served in 5 - ounce glasses, and management allows for 1 ounce of spillage per 3 - liter bottle.

a. What is the average unit cost per drink?

b. What is the total cost of 60 glasses of wine?

c. The banquet manager is planning a function for 120 persons for next Friday evening. Each guest will be given one glass of wine. How many bottles should be ordered for the party?

d. What will be the unit cost of the wine? The total cost?

10. Sales records for a luncheon in the Newmarket Restaurant for a recent week were:

Item A, 196

Item B, 72

Item C, 142

Item D, 24

Item E, 112

Item F, 224

Item G, 162

Given this information, calculate the sales mix.

11. Calculate the average check from the following data:

a. Sales, $1,000.00; Number of customers, 125

b. Sales, $1,300.00; Number of customers, 158

c. Sales, $8,720.53; Number of customers, 976

12. The following table indicates the number of covers served and the gross sales per server for one three - hour period in Sally ’ s Restaurant. Determine: (a) the average number of covers served per hour per server, and (b) the average sale per server for the three - hour period.

Server	Covers Served	Gross Sales Per Server
A	71	$237.40
B	66	$263.95
C	58	$188.25

13. Use the information about Sally ’ s Restaurant identified in Question 12 to complete the following:

a. Calculate the average check.

b. Calculate the turnover for the three - hour period if there are 65 seats in the restaurant.

14. Given the information about Sally ’ s Restaurant identified in Questions 12 and 13, assume the restaurant had 85,629 customers per year and gross sales were $352,783.40.

a. Calculate the average check.

b. Calculate sales per seat for the year.

15. The financial records of the Colonial Restaurant reveal the following figures for the year ending December 31, 20XX:

Depreciation, $25,000

Food sales, $375,000

Cost of beverages sold, $30,000

Other controllable expenses, $60,000

Salaries and wages, $130,000

Beverage sales, $125,000

Employee benefits, $20,000

Cost of food sold, $127,500

Occupancy costs, $55,000

a. Following the form illustrated in Figure 1.1 , prepare a statement of income for the business.

b. Determine the following percentages:

Food cost percent

Labor cost percent (payroll, plus payroll taxes and employee benefits)

Beverage cost percent

Combined food and beverage cost percent

Percentage of profit before income taxes

c. Assuming the restaurant has 75 seats, determine food sales per seat for the year.

ANSWERS

1. Formula: COST% = COST/ SALE
    a. 200/500= 0.4= 40%
    b. 150/500= 0.3= 30%
    c. 178.50/700= 0.255= 25.5%
    d. 216.80/800= 0.271= 27.1%
    e. 127.80/450= 0.284= 28.4%
    f. 610/2,000= 0.305= 30.5%
2. Formula: COST= SALE x COST%
    a. 500 x .28= 140
    b. 2,400 x .345= 828
    c. 225 x .248= 55.80
    d. 1,065 x .316= 336.54

    e. 790 x .297= 234.63
    f. 4,100 x .212= 869.20

3. Formula: SALES= COST/ COST%
    a. 90/ .30= 300
    b. 500/ .25= 2,000
    c. 1,000/ .333= 3,003
    d. 1,300.40/ .273= 4,763.37
    e. 88.20/ .245= 360
    f. 1,113.60/ .348= 3,200
4. Examples of foodservice cost that are fixed are rent, depreciated equipment, and insurance because they do not depend on the sales. These fixed cost are non-controllable because they cannot change at the time.
5. Examples of foodservice cost that are variable are payroll, inventory, and light and water expenses. These variable cost are controllable because they can change in a short period of time.
6.
7. COST%= 40% (0.4) COST= 3.20
    a. Formula: SALE= COST/ COST%
    b. 3.20/ 0.4= 8
    c. SALE= $8
    d. ANNUAL INFLATION= 5% (0.05)
    e. 3.20 x 0.05= 0.16
    f. 3.20+ 0.16= 3.36
    g. ANSWER= 3.36
    h. COST%= .38. Formula: SALE= COST/ COST%
    i. 3.36/ .38= 8.84
    j. SALE= 8.84
    k. 3.28
    l. COST= 2.11. COST%= 40% (.40)
    m. 2.11/ .40= 13.47
    n. SALE= 13.47
8. COST= 28,422.80. COVER= 14,228
    a. 28,422.80/ 14,228= 2

b. 28,422.80 x 0.02= 568.45
c. 28,422.80 + 568.45= 28,991.25
d. COST= 28,991.25
e. 14,228 x 0.10= 1,422.80
f. 14,228 – 1,422.80= 12,805.20
g. COVER= 12,805.20
h. 28,991.25/ 12,805.20= 2.26

9.

a. AVERAGE UNIT COST PER DRINK= $0.46
b. 9.20/ 101= 0.09
c. 5 x 0.09= 0.46
d. TOTAL COST OF 60 GLASSES= $27.60
e. 0.46 x 60= 27.60
f. NUMBER OF BOTTLES TO ORDER=6
g. 120 x 20= 6
h. UNIT COST OF WINE= $55.28
- 6 x 9.20= 55.20
- 120 x 0.46= 55.20

10. FORMULA: COST%= COST/ SALE

a. ITEM	b. NUMBER SOLD	c. SALES MIX%
d. A	e. 196	f. 21.03
g. B	h. 72	i. 7.72
j. C	k. 142	l. 15.23
m. D	n. 24	o. 2.58
p. E	q. 112	r. 12.02
s. F	t. 224	u. 24.04
v. G	w. 162	x. 17.38
y. TOTAL	z. 932	aa. 100%

11. AVERAGE CHECK: TOTAL DOLLAR SALES/ TOTAL NUMBER OF COVERS
a. 1,000/ 125= 8
b. 1,300/ 158= 8.23
c. 8,720.53/ 976= 8.93

12. COVERS PER HOUR: TOTAL COVERS/ NUMBER OF HOURS OF OPERATION (3 HOURS)
a. 195/ 3 hours/ 3 servers= 21.67
b. 689.60/ 3 servers= 229.87
c.

13.

a. AVERAGE CHECK: TOTAL DOLLAR SALES/ TOTAL NUMBER OF COVERS
b. 689.60/ 195= 3.34
c. SEAT TUROVER: NUMBER OF CUSTOMERS SERVED/ NUMBER OF SEATS
d. 195/65= 3

14.

a. AVERAGE CHECK: TOTAL DOLLAR SALES/ TOTAL NUMBER OF COVERS

b. 352,783.40/ 85,629= 4.12

c. SALES PER SEAT:

d. 85,629/ 65= 1,317.37

15.

a.

b. Colonial Restaurant reveal the following figures for the year ending December 31, 20XX								
c.	**Sales**	d.			e.			
	f. Food		g.	$375,000			h.	
	i. Beverage		j.	$125,000			k.	
	l. Total sales			m.		n.	$500,000	
o.	**Cost of Sales**			p.			q.	
	r. Food		s.	$127,500			t.	
	u. Beverage		v.	$30,000			w.	
	x. Total cost of sales			y.		z.	$157,500	
aa.	**Gross Profit**			ab.		**ac.**	**$342,500**	
ad.	**Controllable Expenses**			ae.			af.	
	ag. Salaries and wages		ah.	$130,000			ai.	
	aj. Employee benefits		ak.	$20,000			al.	
	am. Other controllable expenses		an.	$60,000			ao.	
	ap. Total Controllable Expenses			aq.		ar.	$210,000	
	as. Income before Occupancy Costs, Interest, Depreciation, and Income Taxes			at.		**au.**	**$132,500**	
	av. Occupancy Costs		aw.	$55,000			ax.	
	ay. Depreciation		az.	$25,000			ba.	
	bb. Total Occupancy			bc.		bd.	$80,000	

	Costs, Interest, Depreciation, and Income Taxes		
be.	**Restaurant Profit**	bf.	**bg. 52,500**

bh.

bi.

i. Food cost percent
   bj. COST%= COST/ SALES
   bk. COST%= 127,500/ 375,000
   bl. COST%= 0.34
   bm. COST%= 34%
i. Labor cost percent (payroll, plus payroll taxes and employee benefits)
   bn. COST%= 150,000/500,000
   bo. COST%= 0.30
   bp. COST%=30%
i. Beverage cost percent
   bq. COST%= 30,000/ 125,000
   br. COST%= 0.24
   bs. COST%= 24%
i. Combined food and beverage cost percent
   bt. COST%= 157,500/ 500,000
   bu. COST%= 0.315
   bv. COST%= 31.50%
i. Percentage of profit before income taxes
   bw. %= 52,500/500,000
   bx. %= 0.105
   by. %= 10.5%

bz. FOOD SALES/ NUMBER OF SEATS
   ca. 375,000/ 75= 5,000

cb.

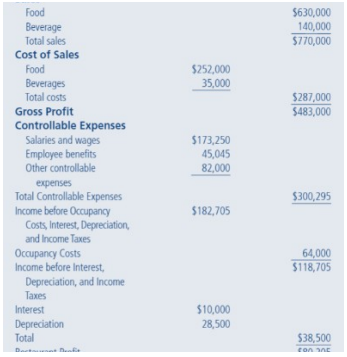
cc.

CD. CHAPTER 2: THE CONTROL PROCESS

CE. QUESTIONS AND PROBLEMS

12. The following information has been prepared by the manager of the Market Restaurant. It represents his best estimates of sales and various costs for the coming year. Using this information, prepare an operating budget for the Market Restaurant for the coming year, following the illustration provided in this chapter.
    cf. Food sales: $820,000
    cg. Beverage sales: $290,000
    ch. Cost of food: 36 percent of food sales
    ci. Cost of beverages: 24 percent of beverage sales
    cj. Variable salaries and wages: 20 percent of food sales
    ck. Fixed salaries and wages: $102,000
    cl. Employee benefit: 25 percent of total salaries and wages
    cm. Other controllable expenses: $95,000
    cn. Depreciation: $65,500
    co. Interest: $55,000
    cp. Occupancy costs: $56,000
    cq.
13. In the current year, the manager of the Downtowner Restaurant has been following the operating budget reproduced here:
    cr. For the coming year, the following changes are expected:
    a. Food sales will increase by 10 percent.
    b. Beverage sales will increase by 6 percent.
    c. Food cost percent and beverage cost percent will remain the same.
    d. Fixed salaries and wages — $69,300 for this year — will increase by $8,000. Variable salaries and wages will be 16 percent of expected food sales.
    e. Employee benefits will remain the same percentage of salaries and wages.
    f. Controllable expenses will increase by $12,000.
    g. Occupancy costs will increase by $5,000.
    h. Interest and depreciation will remain the same.
    cs. Given these anticipated changes, prepare an operating budget for the Downtowner Restaurant for the coming year.

ct.



Food		$630,000
Beverage		140,000
Total sales		$770,000
Cost of Sales		
Food	$252,000	
Beverages	35,000	
Total costs		$287,000
Gross Profit		$483,000
Controllable Expenses		
Salaries and wages	$173,250	
Employee benefits	45,045	
Other controllable expenses	82,000	
Total Controllable Expenses		$300,295
Income before Occupancy Costs, Interest, Depreciation, and Income Taxes	$182,705	
Occupancy Costs		64,000
Income before Interest, Depreciation, and Income Taxes		$118,705
Interest	$10,000	
Depreciation	28,500	
Total		$38,500

CU. ANSWERS

12.

cv. Market Restaurant reveal the following the operating budget for the upcoming year		
cw. Sales	cx.	cy.
cz. Food	da. 820,000	db.
dc. Beverage	dd. 290,000	de.
df. Total sales	dg.	dh. 1,110,000
di. Cost of Sales	dj.	dk.
dl. Food	dm. 295,200	dn.
do. Beverage	dp. 69,600	dq.
dr. Total cost of sales	ds.	dt. 364,800
du. Gross Profit	dv.	dw. 745,200
dx. Controllable Expenses	dy.	dz.
ea. Variable salaries and wages	eb. 164,000	ec.
ed. Fixed salaries and wages	ee. 102,000	ef.
eg. Employee benefits	eh. 66,500	ei.
ej. Other controllable expenses	ek. 95,000	el.
em. Total Controllable Expenses	en.	eo. 427,500
ep. Income before Occupancy Costs, Interest, Depreciation, and Income Taxes	eq.	er. 317,700
es. Occupancy Costs	et. 56,000	eu.
ev. Interest	ew. 55,000	ex.
ey. Depreciation	ez. 65,500	fa.
fb. Total Occupancy Costs, Interest, Depreciation,	fc.	fd. 176,500

and Income Taxes		
fe. Restaurant Profit	ff.	**fg. 141,200**

fh.
fi.
fj.
fk.
fl.
fm.
fn.
fo.
fp.

13.

fq. Sales	fr. Current		fs. Change %	ft. Change $	fu. Upcoming Year	
fv. Food	fw. 630,000	fx.	fy. 10 %	fz. 63,000	ga. 693,000	gb.
gc. Beverage	gd. 140,000	ge.	gf. 6 %	gg. 8,4000	gh. 148,400	gi.
gj. Total sales	gk.	gl. 770,000	gm.	gn.	go.	gp. 841,400
gq. Cost of Sales	gr.	gs.	gt.	gu.	gv.	gw.
gx. Food	gy. 252,000	gz.	ha. 40 %	hb.	hc. 277,200	hd.
he. Beverage	hf. 35,000	hg.	hh. 25 %	hi.	hj. 43,750	hk.
hl. Total cost of sales	hm.	hn. 287,000	ho.	hp.	hq.	hr. 396,550
hs. Gross Profit	ht.	hu. 483,000	hv.	hw.	hx.	**hy. 1,237,950**
hz. Controllable Expenses	ia.	ib.	ic.	id.	ie.	if.
ig. Variable salaries and wages	ih. 103,950	ii.	ij. 16 %	ik. 11 0,880 il.	im. 11 0,880 in.	io.
ip. Fixed salaries and wages	iq. 69,300	ir. 173,250	is.	it. 8,000	iu. 77,300	iv.
iw. Total salaries and wages	ix.	iy.	iz.	ja.	jb.	jc. 188,180
jd. Employee benefits	je. 45,045	jf.	jg. 25 %	jh.	ji. 47,045	jj.

jk. Other controllable expenses	jl. 82,000	jm.	jn.	jo. 12,000	jp. 94,000	jq.
jr. Total Controllable Expenses	js.	jt. 300,295	ju.	jv.	jw.	**jx. 329,225**
jy. Income before Occupancy Costs, Interest, Depreciation, and Income Taxes	jz. 182,705	ka.	kb.	kc.	kd. 197,875	ke.
kf. Occupancy Costs	kg.	kh. 64,000	ki.	kj. 5,000	kk.	kl. 69,000
km. Income before Interest, Depreciation, and Income Taxes	kn.	ko. 118,705	kp.	kq.	kr.	ks. 128,875
kt. Interest	ku. 10,000	kv.	kw.	kx. -	ky. 10,000	kz.
la. Depreciation	lb. 28,500	lc.	ld.	le. -	lf. 28,500	lg.
lh. Total	li.	lj. 38,500	lk.	ll.	lm.	ln. 38,500
lo. Restaurant	lp.	lq. 80,205	lr.	ls.	lt.	**lu. 90,375**

Profit						

LV. CHAPTER 3: COST/ VOLUME/ PROFIT RELATIONSHIPS

LW. QUESTIONS AND PROBLEMS

1. Given the following information, determine total dollar sales:
    a. Cost of sales, $46,500; cost of labor, $33,247; cost of overhead, $75,883; profit, $3,129.
    b. Cost of sales, $51,259; cost of labor, $77,351; cost of overhead, $42,248; loss, $41,167.
2. Given the following information, find contribution margin:
    a. Average sales price per unit, $13.22; average variable cost per unit, $5.78
    b. Average sales price per unit, $14.50; average variable rate, .36
    c. Average sales price per unit, $16.20; average contribution rate, .55
    d. Average variable cost per unit, $6.20; average variable rate, .3
    e. Average variable cost per unit, $3.60; average contribution rate, .6
    (From this point on, the term average is eliminated from the problems. This will affect neither the problems nor the solutions.)
3. Given the following information, find variable rate:
    a. Sales price per unit, $19.25; variable cost per unit, $6.70
    b. Total sales, $164,328; total variable cost, $72,304.32
    c. Sales price per unit, $18.80; contribution margin, $10.72
    d. Sales price per unit, $16.37; total fixed costs, $142,408; total unit sales, 19,364; total profit, $22,952.80
4. Given the following information, find contribution rate:
    a. Sales price per unit, $18.50; contribution margin, $10.08
    b. Sales price per unit, $17.50; variable cost per unit, $6.95
    c. Total sales, $64,726; total variable cost, $40,130.12
    d. Sales price per unit, $16.50; profit, $33,381.80; number of customers, 18,440; total fixed costs, $136,137
5. Given the following information, find break - even point in dollar sales:
    a. Fixed costs, $48,337.80; contribution rate, .6
    b. Variable rate, .45; fixed costs, $155,410.31
    c. Variable cost per unit, $5.85; sales price per unit, $17.40; fixed costs, $164,065.60
6. Given the following information, find break - even point in Number of Customers:
    a. Fixed costs, $113,231.64; contribution margin, $2.28
    b. Sales price per unit, $17.22; fixed costs, $215,035.68; variable cost per unit, $6.98
    c. Contribution rate, .6; sales price per unit, $18.20; fixed costs, $219,423.16
7. Given the following information, find dollar sales:
    a. Fixed costs, $60,000; profit, $18,000; sales price per unit, $8.00; variable cost per unit, $5.00
    b. Variable rate, .45; profit, $21,578.10; fixed costs, $58,382
    c. Sales price per unit, $16.60; profit, $21,220; contribution margin, $9.29; fixed costs, $126,000

8. Given the following information, find number of customers:
    a. Fixed costs, $58,922; profit, $9,838; contribution margin per unit, $3.82
    b. Profit, $33,603; sales price per unit, $17.00; fixed costs, $97,197; contribution rate, .6
    c. Variable cost per unit, $5.30; profit equal to 18 percent of $211,000; sales price per unit, $16.30; fixed costs, $86,609
    d. Sales price per unit, $16.20; fixed cost, $129,425.36; variable rate, .4; profit, $44,000
9. Given the following information, find fixed costs:
    a. Total sales, $104,672; profit, $18,000; variable rate, .42 92
    b. Profit, $12,000; number of customers, 32,392; variable cost per unit, $4.63; sales price per unit, $10.34
    c. Sales price per unit, $14.60; profit, $34,000; number of customers, 26,712; variable rate, .35
    d. Contribution rate, .65; sales price per unit, $18.40; number of customers, 26,549; profit, $33,000
10. Given the following information, find profit:
    a. Fixed costs, $82,449.40; total sales, $167,543.20; variable cost, $55,629.60
    b. Variable rate, .4; number of customers, 26,412; fixed costs, $193,764.40; sales price per unit, $17.60
    c. Total sales, $190,830.66; variable cost per unit, $5.64; fixed costs, $75,919.70; sales price per unit, $16.22
11. The owner of the Barn Lodge Restaurant estimates that fixed costs for the coming year will be $360,000. Based on his investment in the business, he wants a profit of $120,000 for the year. Experience has shown that the average check is $12.00.
    a. If total variable cost is $720,000, what level of dollar sales will be required to earn the target restaurant profit?
    b. Given total variable cost and total sales figures calculated in Question 11a, what variable rate is the owner projecting?
    c. Given the variable rate calculated in Question 11b, determine the contribution rate.
    d. Given the contribution rate calculated in Question 11c, determine the average contribution margin based on a $12.00 average sale.
    e. At what level dollar sales will the restaurant breakeven?
12. The following information is from the records of Daphne ’ s Restaurant:
        lx. Sales $800,000
        ly. Variable cost $342,400
        lz. Fixed cost $345,600

    ma. Assume that sales volume equals 40,000 covers:
    a. Calculate profit.
    b. Calculate average dollar sale
    c. Calculate dollar sales required to earn a profit of $125,000, assuming variable rate does not change.

mb.

MC. ANSWERS