

Accounting for Managers

Prepared by Dr. Emad Zaher

Assistant Professor of Accounting

MGM341

Lecture (7) Budgetary Planning



Budgetary Planning

Learning Objectives

- LO 1** State the budget concept , benefits ,and the components of the master budget.
- LO 2** Prepare budgets for sales, production, and direct materials.
- LO 3** Prepare budgets for direct labor, manufacturing overhead , and and selling and administrative expenses.
- LO 4** Prepare a cash budget
- LO 5** Apply budgeting principles to non-manufacturing companies.

Effective Budgeting and the Master Budget

Budget: a formal written statement of management's plans for a specified future time period, expressed in financial terms.

- Primary method of **communicating** agreed-upon objectives throughout the organization.
- Promotes **efficiency**.
- **Control device** - important basis for performance evaluation once adopted

The Benefits of Budgeting

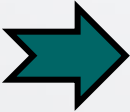
Primary benefits of budgeting:

1. Requires all levels of management to **plan ahead**.
2. Provides **definite objectives** for evaluating performance.
3. Creates an **early warning system** for potential problems.
4. Facilitates **coordination of activities** within the business.
5. Results in greater **management awareness** of the entity's overall operations.
6. It **motivates personnel** throughout organization to meet planned objectives.

Benefits of Budgeting

Question

Which of the following is not a benefit of budgeting?

- a. Management can plan ahead.
- b. An early warning system is provided for potential problems.
-  c. It enables disciplinary action to be taken at every level of responsibility.
- d. The coordination of activities is facilitated.

Essentials of Effective Budgeting

Length of the Budget Period

- May be prepared for **any period of time**.
 - Most common - **one year**.
 - Supplement with monthly and quarterly budgets
 - Different budgets may cover **different time periods**.

Essentials of Effective Budgeting

The Budgeting Process

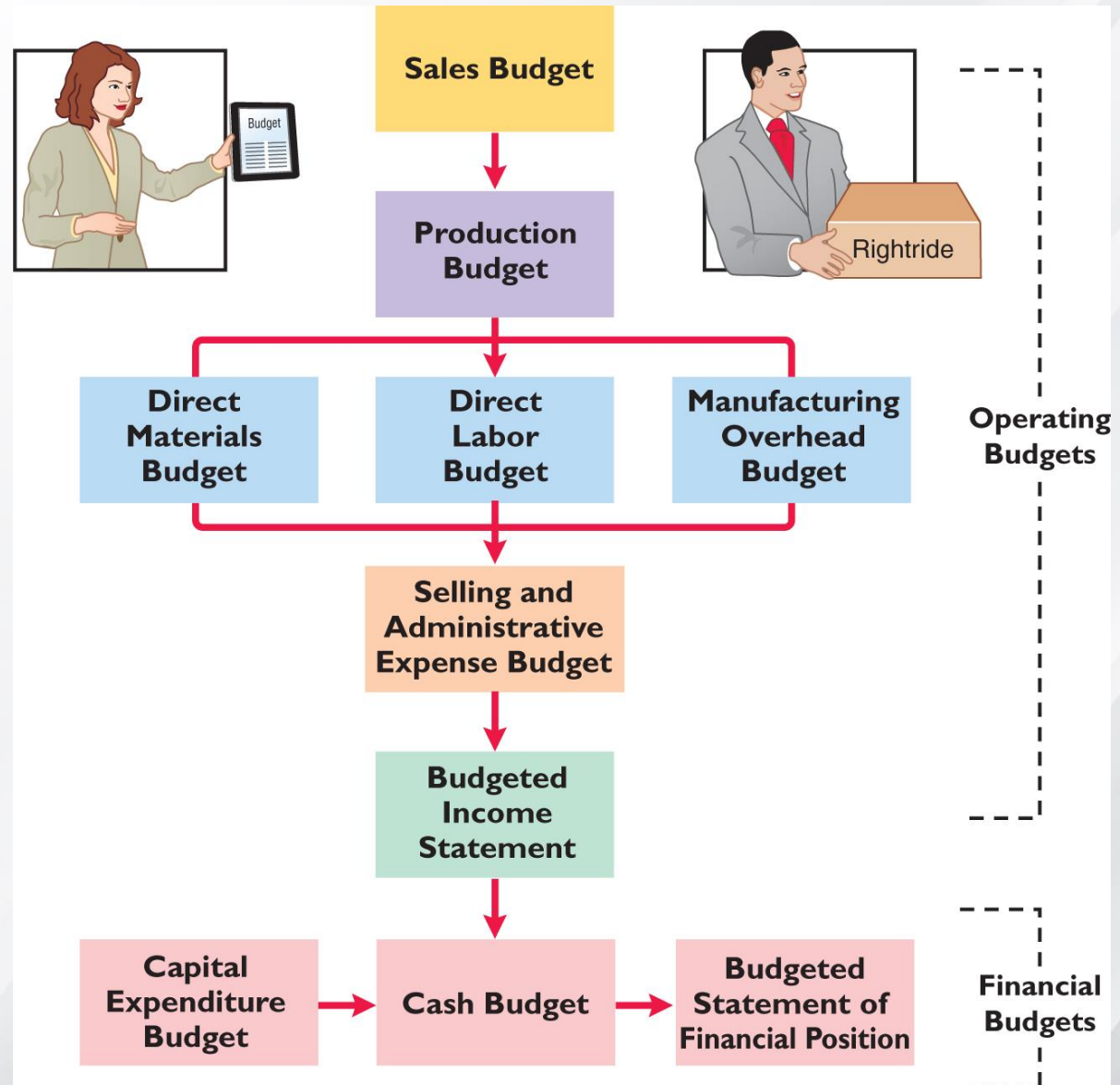
Factors considered in Sales Forecasting:

1. General economic conditions
2. Industry trends
3. Market research studies
4. Anticipated advertising and promotion
5. Previous market share
6. Price changes
7. Technological developments

The Master Budget

- Set of **interrelated budgets** that constitutes a plan of action for a specified time period.
- Contains **two classes** of budgets:
 - **Operating budgets.** → Individual budgets that result in the preparation of the budgeted income statement – establish goals for sales and production personnel.
 - **Financial budgets.**

The Master Budget



Sales, Production, and Direct Materials Budgets

Sales Budget

- First budget prepared.
- Derived from sales forecast.
 - Management's best estimate of sales revenue for the budget period.
- Every other budget depends on sales budget.
- Prepared by multiplying expected unit sales volume for each product times anticipated unit selling price.

Sales Budget

Illustration: Hsieh Cycle

- Expected sales volume: 3,000 units in the first quarter with 500-unit increases in each succeeding quarter.
- Sales price: €60 per unit.

Hsieh Cycle Sales Budget						
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	A	B	C	D	E	F
1	Hsieh Cycle Sales Budget For the Year Ending December 31, 2020					
2						
3						
4		Quarter				
5		1	2	3	4	Year
6	Expected unit sales	3,000	3,500	4,000	4,500	15,000
7	Unit selling price	× €60	× €60	× €60	× €60	× €60
8	Total sales	€180,000	€210,000	€240,000	€270,000	€900,000

DO IT!

Karma company is preparing its master budget for 2020. Relevant data pertaining to its sales budget are as follows :

Sales for the year are expected to total 1000000 units.

Quarterly sales are 20% , 40% , 25% ,and 15% respectively.

The sales price is expected to be L.E 4 per unit for the first quarter and then be increased to L.E 6 per unit from the second quarter .

Required

Prepare the sales budget.

Sales Budget:

	Q1	Q2	Q3	Q4
Expected Unit sales	200,000	400,000	250,000	150,000
×	×	×	×	×
Price per unit	4	6	6	6
	800,000	2,400,000	1,500,000	900,000

Production Budget

- Shows *units that must be produced* to meet anticipated sales.
- Derived from sales budget plus the desired change in ending finished goods inventory
- Essential to have a realistic estimate of ending inventory.

$$\begin{array}{ccccccc} \text{Budgeted} & & \text{Desired Ending} & & \text{Beginning} & & \text{Required} \\ \text{Sales Units} & + & \text{Finished Goods} & - & \text{Finished} & = & \text{Production} \\ & & \text{Units} & & \text{Goods Units} & & \text{Units} \end{array}$$

Grey Company has 50,000 units in beginning finished goods. If sales are expected to be 120,000 units for the year and Grey desires ending finished goods of 30,000 units, how many units must the company produce?

- a. 100,000
- b. 120,000
- c. 126,000
- d. 150,000

Answer (a)

DO IT!

The production budget shows expected unit sales are 100,000. The required production units are 104,000. What are the beginning and desired ending finished goods units, respectively?

Beginning Units	Ending Units
a. 10,000	6,000
b. 6,000	10,000
c. 4,000	10,000
d. 10,000	4,000

Answer (b)

DO IT!

The following forecasts have been prepared.

	Q1	Q2	Q3	Q4
Units Sales	120000	140000	90000	105000

- Prior quarter ending finished goods inventory 12000.
- Ending inventory is 10% from **next** quarter sales.

Required

Prepare the production budget.

Production Budget

	Q1	Q2	Q3	Q4
Expected Unit sales	120000	140000	90000	105000
+ Ending F.G. Inventory	14000	9000	10500	Zero
- Beginning F.G. Inventory	(12000)	(14000)	(9000)	(10500)
Production units	122000	135000	91500	94500

Direct Materials Budget

- ◆ Shows both the quantity and cost of direct materials to be purchased.
- ◆ Formula for direct materials quantities.

Direct Materials Units Required for Production	+	Desired Ending Direct Materials Units	–	Beginning Direct Materials Units	=	Required Direct Materials Units to Be Purchased
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- ◆ Budgeted cost of direct materials to be purchased = required units of direct materials x anticipated cost per unit.
- ◆ Inadequate inventories could result in temporary shutdowns of production.

DO IT!

The following forecasts have been prepared

Quarter	Q1	Q2	Q3	Q4
Units Sales	121000	142000	89000	103500
Ending Material Inventory	12000	14000	8000	6000

- Needs From Material Production unit 8 unit.
- **Prior** Quarter ending Inventory 13000
- Materials cost per unit 1.2\$

Required

Prepare the Direct Material budget

production budget:

	Q1	Q2	Q3	Q4
Expected Unit sales +	121000	142000	89000	103500
Ending F.G. Inventory	--	--	--	--
Beginning F.G. Inventory	(-)	(-)	(-)	(-)
Production units	121000	142000	89000	103500

Direct material budget

	Q1	Q2	Q3	Q4
Production Unit Material Per Unit (×)	121000 8	142000 8	89000 8	103500 8
Needs From Material (+)	968,000	1,136,000	712,000	828,000
Ending Material Inventory	12000	14000	8000	6000
Beginning Material inventory	(13000)	(12000)	(14000)	(8000)
Material Purchase (×)	967,000 1.2	1,138,000 1.2	706,000 1.2	826,000 1.2
Direct Materials Purchase cost	1160400	1365600	847200	991200

Direct Labor and Manufacturing Overhead

Direct Labor Budget

- Shows both quantity of hours and cost of direct labor necessary to meet production requirements
- Critical in maintaining a labor force that can meet expected production
- Total direct labor cost formula:

Units to Be Produced	×	Direct Labor Hours per Unit	×	Direct Labor Cost per Hour	=	Total Direct Labor Cost
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DO IT!

The following forecasts have been prepared:

	Q1	Q2	Q3	Q4
Production unit	60,000	30,000	45,000	75,000

- Each unit requires 2 hours .
- Direct labor cost per hour 10 \$

Required

Prepare direct labor budget

Direct labor budget:

Quarter	Q1	Q2	Q3	Q4
Production Unit	60000	30000	45000	75000
(×)	×	×	×	×
Needed labor/ hour	2	2	2	2
Total hours needed	120000	60000	90000	145000
(×)	×	×	×	×
Rate per hour	10	10	10	10
Total Labor cost	1200000	600000	900000	1450000

Pell Manufacturing is preparing its direct labor budget for May. Projections for the month are that 33,400 units are to be produced and that direct labor time is three hours per unit. If the labor cost per hour is \$12, what is the total budgeted direct labor cost for May?

- a. 1,159,200.
- b. 1,180,800.
- c. 1,202,400.
- d. 1,296,000.

Answer (c)

Manufacturing Overhead Budget

- Shows the expected manufacturing overhead costs for the budget period.
- Distinguishes between fixed and variable overhead costs.

DO IT!

The following forecasts have been prepared

	Q1	Q2	Q3	Q4
Production unit	121000	142000	89000	103500

- Direct labor time per unit 1.5
- Direct labor cost per hour 18.5 \$
- Variable over rate \$ 4/ Direct labor hour.
- Fixed over head 120000 / quarter
- Depreciation 25000/ quarter

Required:

Prepare the needed Budgets

Direct labor budget

Quarter	Q1	Q2	Q3	Q4
Production Unit (x)	121000 x	142000 x	89000 x	103500 x
Needed labor/ hour	1.5	1.5	1.5	1.5
Total hours needed (x)	181500 x	213000 x	133500 x	155250 x
Rate per hour	18.5	18.5	18.5	18.5
Total Labor cost	3,357,750	3940500	2469750	2872125

Factory overhead budget:

Quarter	Q1	Q2	Q3	Q4
Direct labor hours (x)	181,500	213,000	133,500	155,250
Variable overhead rate	4	4	4	4
Variable overhead cost (+)	726,000	852,000	534,000	621,000
Fixed overhead cost	120000	120000	120000	120000
Total Factory overhead cost (-)	846,000	972,000	654,000	741,000
Deprecations	(25000)	(25000)	(25000)	(25000)
Cash Payments	821,000	947,000	629,000	716,000

Cash Budget

Cash Budget

- Shows anticipated cash flows.
- Often considered to be the most important output in preparing financial budgets.
- Contains three sections:
 - Cash Receipts
 - Cash Disbursements
 - Financing
- Shows beginning and ending cash balances.

Cash Budget

Any Company Cash Budget			
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	A	B	C
1	Any Company Cash Budget		
2			
3	Beginning cash balance	€X,XXX	
4	Add: Cash receipts (itemized)	X,XXX	
5	Total available cash	X,XXX	
6	Less: Cash disbursements (itemized)	X,XXX	
7	Excess (deficiency) of available cash over cash disbursements	X,XXX	
8	Financing	X,XXX	
9	Ending cash balance	€X,XXX	

Cash Budget

- **Cash Receipts Section**
 - Expected receipts from the principal sources of revenue.
 - Expected interest and dividends receipts, proceeds from planned sales of investments, plant assets, and the company's share capital.
- **Cash Disbursements Section**
 - Expected cash payments for direct materials, direct labor, manufacturing overhead, and selling and administrative expense
- **Financing Section**
 - Expected borrowings and repayments of borrowed funds plus interest.

Cash Budget

- Must prepare in sequence.
- Ending cash balance of one period is beginning cash balance for next.
- Data obtained from other budgets and from management.
- Often prepared for the year on a monthly basis.
- Contributes to more effective cash management.
- Shows managers the need for additional financing before actual need arises.
- Indicates when excess cash will be available.

DO IT!

Zaher corporation has gathered the following information:

May 30 ending cash balance	L.E 45000
Dividends paid in June	L.E 12000
Cash expenditure in June of operating exp.	L.E 36800
Depreciation expense in June	L.E 4500
Cash collection in June	L.E 89000
Merchandise purchases paid in cash	L.E 56200
Purchase equipment for cash	L.E 17500

Zaher corporation desires to keep minimum cash balance of L.E 10.000

Required

Prepare a **cash budget** for June and indicate whether **zaher** company meets minimum cash requirements.

Beginning cash balance	45000
+	
Cash collection	89000
Total cash available (A)	134000
Cash disbursements	
Merchandise purchases	(56200)
Operating expenses	(36800)
Equipment purchase	(17500)
Payment of dividends	(12000)
Total cash disbursement (B)	122500
Minimum cash balance	10.000
Total cash needed (C)	(132500)
Surplus (A – C)	1500

DO IT! 4 | Cash Budget

Tviw Ltd. management wants to maintain a minimum monthly cash balance of NT\$450,000. At the beginning of March, the cash balance is NT\$495,000, expected cash receipts for March are NT\$6,300,000, and cash disbursements are expected to be NT\$6,600,000. How much cash, if any, must be borrowed to maintain the desired minimum monthly balance?

4	Beginning cash balance	NT\$ 495,000
5		
6		
7		
8		
9		
10	Ending cash balance	NT\$ 450,000
11		

Budgeting in Non-Manufacturing Companies

Merchandisers

- ◆ **Sales Budget:** starting point and key factor in developing the master budget.
- ◆ Use a **purchases budget** instead of a production budget.
- ◆ Does **not** use the manufacturing budgets (direct materials, direct labor, manufacturing overhead).
- ◆ To determine budgeted merchandise purchases:

Budgeted Cost of Goods Sold	+	Desired Ending Merchandise Inventory	–	Beginning Merchandise Inventory	=	Required Merchandise Purchases
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DO IT!

1. The direct materials budget must be completed before the production budget because the quantity of materials available for production must be known.

False

2. Financial budgets must be completed before the operating budgets can be prepared.

False

3. A budget can be used as a basis for evaluating performance.

True

4. A budget is a formal written statement of management's plans for a specified future time period, expressed in financial terms.

True

5. Cash Disbursements Section in the cash budget shows the expected cash payments for direct materials, direct labor , manufacturing overhead, and selling and administrative expense.

True

6. In the cash budget cash surplus is computed by subtracting total cash available minus total cash needed.

True

Thank You