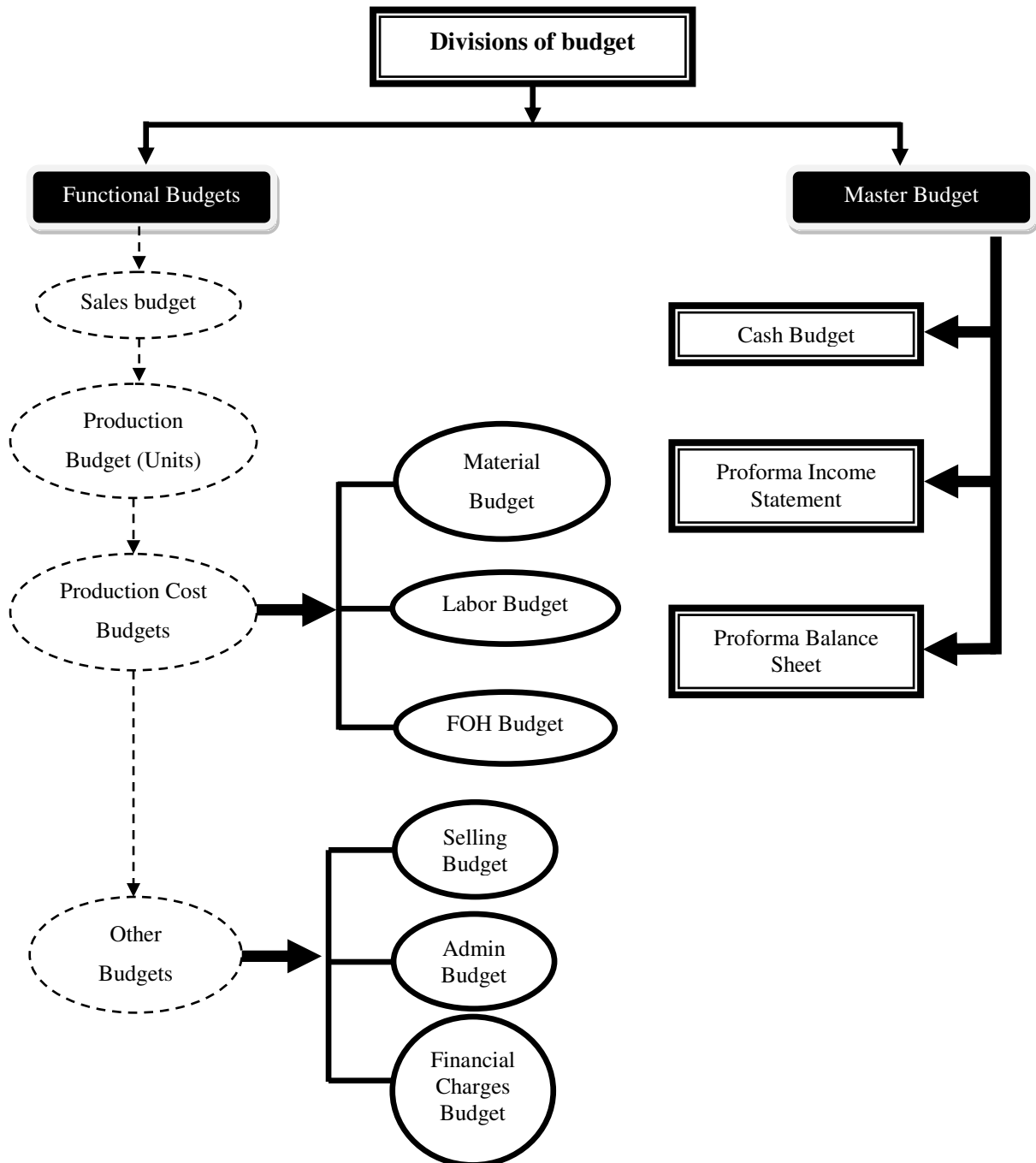


FUNCTIONAL BUDGETS

Functional budgets are forecasts for related business functions, like sales, production, material, labor or FOH etc. A budget is quantitative expression of a plan of action, which are prepare in advance of the period to which it relates. Budget set out the cost and revenue that are expected to be incurred or earned in future periods. In short, functional budgets represent a comprehensive expression of management's plans for future and how these plans are to be accomplished.

17.1 Divisions of Budget

- Budgets can be divided into functional budgets and master budgets



17.1.1 Functional Budgets

- It usually consists of a number of separate but interdependent budgets. One budget may be necessary before the other can be initiated
- Following are different types of budgets

17.1.1.1 Sales Budget:

- ✓ The sales budget is the starting point in preparing the master budget
- ✓ A sales budget is a detailed schedule showing the expected sales for the budget period; typically, it is expressed in both amount and units of production
- ✓ An accurate sales budget is the key to the entire budgeting in some way. If the sales budget is sloppily done then the rest of the budgeting process is largely a waste of time
- ✓ The sales budget is constructed by multiplying the budgeted sales in units by the selling price
- ✓ The Sales Manager is directly responsible for the preparation and execution of this budget. Usually taking into consideration the following organizational and environmental factors while preparing the sales budget

Internal

Past sales figures and trends
 Salesmen's estimates
 Plant capacity
 Orders on hand

 Availability of material or supplies

 Cost of distribution of goods
 Financial aspect

External

General trade prospects
 Seasonal fluctuation
 Potential market
 Government controls, rule and regulator relating to the industry
 Political situation and its impact on Market

Example # 17.1: Following data are extracted from ABC manufacturing Ltd. You are required to prepare sales budget?

Estimated Sales:

Product	Karachi	Lahore	Sales Price
A	5,000 units	4,000 units	Rs. 40 per unit
B	7,000 units	1,000 units	Rs. 10 per unit
C	12,000 units	7,000 units	Rs. 30 per unit

Solution:

Sales Budget (in units and Rupees)

Product	Karachi			Lahore			Total	
	Units	Price	Amount	Units	Price	Amount	Units	Amount
A								
B								
C								
Total	24,000	-	630,000	12,000	-	380,000	36,000	1,010,000

Example # 17.2: Estimated sales percentages for the first three-month period of the coming year of the Midland Company

Cities	January	February	March	Total
Karachi	50%	30%	20%	100%
Lahore	55	30	15	100
Islamabad	50	25	25	100
Peshawar	50	25	25	100

Estimated unit sales (at Rs. 2 per unit) by district for the three months are:

District	Units Sales
Karachi	20,000
Lahore	30,000
Islamabad	10,000
Peshawar	40,000
Total	100,000

Requirements: An estimate of sales by units and Rupees for each of the first three months for each district and in total

Solution:

Sales Budget (in units and Rupees)

Cities	January		February		March		Total	
	Units	Amount	Units	Amount	Units	Amount	Units	Amount
Karachi								
Lahore								
Islamabad								
Peshawar								
Total	51,500	103,000	27,500	55,000	21,000	42,000	100,000	200,000

17.1.1.2 Production Budget (Units):

- ❖ The production budget is prepared after the sales budget
- ❖ The production budget lists the number of units that must be produced during each budget period to meet sales needs and to provide for the desired ending inventory
- ❖ Production Budget (units) = Forecast sales + closing inventory of finished goods - opening inventory of finished goods

Example # 17.3: The ABC Company's sales forecasts for the next quarter, ending June 30, indicates the following

Product	Expected Sales
X	21,000 Units
Y	37,500
Z	54,300

Inventories at the beginning and desired quantities at the end of the quarter are as follows:

Product	March 31 st	June 30 th
X	5,800 units	6,200 Units
Y	10,600	10,500
Z	13,000	12,200

Requirement: A Production Budget in units for next quarter

Solution:

Production Budget (in units)

Description	Product X	Product Y	Product Z
Budgeted Sales			
Expected Ending Inventory			
Total Units Requirements			
Beginning Inventory			
Production Budget (in Units)	21,400	37,400	53,500

Example # 17.4: From the following details of Cement Works Limited, complete the production budget for the three-month period ending March 31, 2012

Types of Product	Estimated Stock on January 1, 2012	Estimated Sales	Estimated Stock on March 31, 2012
P	1,000	5,000	1,500
Q	1,500	7,500	2,500
R	2,000	6,500	1,500
S	500	6,000	1,000

Solution:

Production Budget (in units)

Description	Product P	Product Q	Product R	Product S
Production Budget (in Units)	5,500	8,500	6,000	6,500

17.1.1.3 Production Cost Budgets

⊗ Production cost budgets consist of Material Budget, Labor Budget and FOH Budget

17.1.1.3.1 Materials Budget:

- ❖ It is also called purchase or purchase requirement budget
- ❖ Material budget shows the amount of goods to be purchased from its suppliers during the period
- ❖ Materials budget is prepared after computing production requirements by preparing a production budget
- ❖ Direct materials budget details the raw materials that must be purchased to fulfill the production
- ❖ Material budget = Production requirement + ending inventory - opening inventory

Example # 17.5: Prepare Production Budget and Material Budget (units and amount) from the following figures:

Product	Expected Sales	Required material per unit	
		Material 1	Material 2
A	80,000	1 kg	2 Kg
B	40,000	2	4
C	100,000	3	1

Estimated Inventories at the beginning and desired quantities at the end of period as follows

Material KG	Beginning	Ending	Purchase Price per
1	10,000 Kg	12,000 Kg	Rs. 3
2	12,000	15,000	Rs. 5

Product	Beginning	Ending
A	5,000 Units	6,000
B	4,000	2,000
C	10,000	8,000

Solution:

Production Budget (in units)

Description	Product A	Product B	Product C
Budgeted Sales			
Expected Ending Inventory			
Total Units Requirements			
Beginning Inventory			
Production Budget (in Units)	81,000	38,000	98,000

Material Budget (in units and amount)

<i>Description</i>	Material 1	Material 2
Product A		
Product B		
Product C		
Production Requirement		
Desired Ending Inventory		
Total Requirement		
Beginning Inventory		
Material Budget (in unit)		
Purchase Price		
Material Budget in (amount)	1,359,000	2,075,000

Example # 17.6: Following data are extracted from XYZ manufacturing Ltd. You are required to prepare Production budget in unit and Material budget in unit and amount?

Estimated Sales:

Product	Sales units	Sales Price
X	700 units	Rs. 250 per unit
Y	500 units	Rs. 450 per unit
Z	900 units	Rs. 150 per unit

Inventories of material required:

Material	Opening inventory	Closing inventory	Unit cost
101	300 units	400 units	Rs. 10.00
102	100 units	250 units	Rs. 15.00
103	200 units	350 units	Rs. 25.0

Inventories of finished goods/product required:

Product	Opening inventory	Closing inventory	Unit cost
X	20 units	70 units	Rs. 125.70
Y	80 units	100 units	Rs. 82.50
Z	50 units	40 units	Rs. 64.00

Material Requirements:

Products	Material Requirements		
	101	102	103
X	2	7	3
Y	5	3	6
Z	4	8	1

Solution:

Production Budget (in units)

<i>Description</i>	<i>Product X</i>	<i>Product Y</i>	<i>Product Z</i>
Production Budget (in Units)	750	520	890

Material Budget (in units and amount)

<i>Description</i>	<i>101</i>	<i>102</i>	<i>103</i>
Material Budget (in amount)	Rs. 77,600	Rs. 211,200	Rs. 160,250

17.1.1.3.2 Labor Budget

- The direct labor budget is developed from the production budget
- Direct labor requirements must be computed so that the company will know whether sufficient labor time is available to meet the budgeted production needs
- Labor Budget = No of hours * rate per hour

Example # 17.7: A company produces products MM and KK and has budgeted to produce 6,000 units and 1,000 units respectively in coming year. The data about the labor hours required is mentioned below:

	MM per unit	KK per unit
Direct labor hours	8	12

Moreover, standard rate for direct labor is Rs. 5.20

Requirement: You are required to prepare labor budget in rupees

Labor Budget (in rupees)

<i>Product</i>	<i>Production</i>	<i>Hours per Unit</i>	<i>Total Hours</i>	<i>Rate Per Hour</i>	<i>Total</i>
MM					
KK					
Labor Budget (in rupees)					Rs. 312,000

Example # 17.8: A company produces products Chairs and Tables has budgeted to produce 900 units and 500 units respectively in coming year. The data about the labor hours required is mentioned below:

	Chair per unit	Table per unit
Direct labor hours	14	16

Moreover, standard rate for direct labor is Rs. 40 per hour for chair and Rs. 50 per hour for table

Requirement: You are required to prepare labor budget in rupees

Labor Budget (in rupees)

<i>Product</i>	<i>Production</i>	<i>Hours per Unit</i>	<i>Total Hours</i>	<i>Rate Per Hour</i>	<i>Total</i>
Labor Budget (in rupees)					Rs. 904,000

17.1.1.3.3 Manufacturing Overhead Budget

- The manufacturing overhead budget provides a schedule for all costs of production other than direct materials and direct labor

Example # 17.9: A company produces product MM and KK has budgeted to produce 6,000 units and 1,000 units respectively in coming years. The following data about the machine hours required to produce product MM and KK and the standard production overhead per machine hour is relevant to coming year

	MM per unit	KK per unit
Machine hours	8	12

Production overhead per machine hour

Variable	Rs. 1.54 per machine hour
Fixed	Rs. 0.54 per machine hour

Required: Calculate the overhead budget for the coming year?

Overhead Budget

Product	Production	Hours per Unit	Total Hours	Variable	Fixed	Total
MM						
KK						
Overhead Budget						Rs. 124,800

Example # 17.10: Following data are extracted from Wood manufacturing Ltd. You are required to prepare complete set of budgets?

Estimated Sales:

Product	Mansehra	Abbottabad	Sales Price
A	4,000 units	3,000 units	Rs. 200 per unit
B	6,000 units	5,000 units	Rs. 150 per unit
C	9,000 units	6,000 units	Rs. 100 per unit

Inventories of material required:

Material	Opening inventory	Closing inventory	Unit cost
X	30,000 units	40,000 units	Rs. 12.00
Y	10,000 units	12,000 units	Rs. 14.00
Z	2,000 units	2,500 units	Rs. 17.00

Inventories of finished goods/product required:

Product	Opening inventory	Closing inventory	Unit cost
A	200 units	250 units	Rs. 125.70
B	400 units	200 units	Rs. 82.50
C	500 units	400 units	Rs. 64.00

Material Requirements:

Products	Material Requirements		
	X	Y	Z
A	12	5	2
B	8	3	1
C	6	2	1

Labor Requirement:

Product	Labor Requirement (in hours) and Rates		
	Cutting Dept.	Assembling Dept.	Finishing Dept.
A	0.5	2.5	0.8
B	0.375	2.0	0.5
C	0.370	1.75	0.5
Rate per hour	Rs. 8	Rs. 10	Rs. 9

Overhead Requirement:

Product	Cutting Dept.	Assembling Dept.	Finishing Dept.	Total
A	Rs. 3.00	Rs. 7.50	Rs. 4.80	Rs. 15.30
B	2.25	6.00	3.00	11.25
C	2.75	5.25	3.00	10.50

Solution:

Sales Budget (in units and Rupees)

Production Budget (in units)

Further Study and Practice of Functional Budgets

Video Lecture (Functional Budgets)

<https://youtu.be/UhsGFXO2cGE>

Workbook Solution (Functional Budgets)

<https://www.accountancyknowledge.com/functional-budgets/>

Practice MCQs (Functional Budgets)

<https://www.accountancyknowledge.com/functional-budgets-mcqs/>

Problems and Solutions (Functional Budgets)

<https://www.accountancyknowledge.com/functional-budgets-problems-and-solutions/>