



جامعة صلاح الدين  
كلية الادارة والاقتصاد  
قسم المحاسبة  
مرحلة الرابعة

## Chapter Two

# Flexible Budget

مدرس المادة:

م. هوشنگ محسن كريم

[hoshang.karim@su.edu.krd](mailto:hoshang.karim@su.edu.krd)



## Outlines

- Introduction to flexible budget, capacity, and volume
- Analysis of cost behavior, fixed, variable, and mixed costs
- Preparing flexible budget
- Flexible budget variances, and sales volume variance

# **What Is A Flexible Budget?**

# FLEXIBLE BUDGET

**FLEXIBLE BUDGET** is financial plan of estimated cost and revenue for different levels of output. It sets the standard to measure the variances of the budget estimates and the actual performance of the company.

It consists of following parts:

- Fixed Cost
- Fixed part of Semi-variable Cost
- Variable Cost
- Variable part of Semi-variable Cost

## IMPORTANCE

- Helps in analyzing cost variance
- Helps in recognition of operating inefficiencies
- Helps in project acquisitions
- Helps in assessing management performance
- Helps in better profit planning.

eFinanceManagement.com

## DISADVANTAGES

- Requires skilled labors
- Any error in accounting may mislead the budget.
- Forecast may not be accurate all the time as prediction is highly volatile.
- Nature of expenses are not same.

## PREPARING FLEXIBLE BUDGET

### Tabular Method

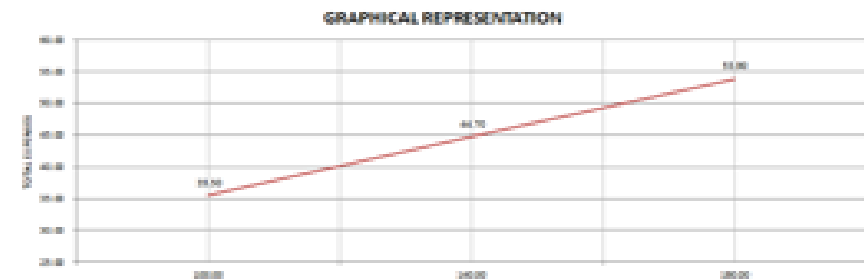
In this method, a table is prepared where various estimates are row headings & level of activity are column headings

### Formula Method

Here formula is used to calculate Flexible budget = Fixed cost + (actual unit of activity x variable cost per unit of activity).

### Graphic Method

Graph/chart is prepared with X-axis as level of activity, and Y-axis as estimated cost.



# What Is A Flexible Budget?

Flexible budget is a budget that is mostly used as a static budget and basically changes with the changes occurring in the volume or activity held in production, also helpful for increasing the manager's efficiency and effectiveness because it is set to benchmark for the actual performance of the company



## Flexible Budget for what

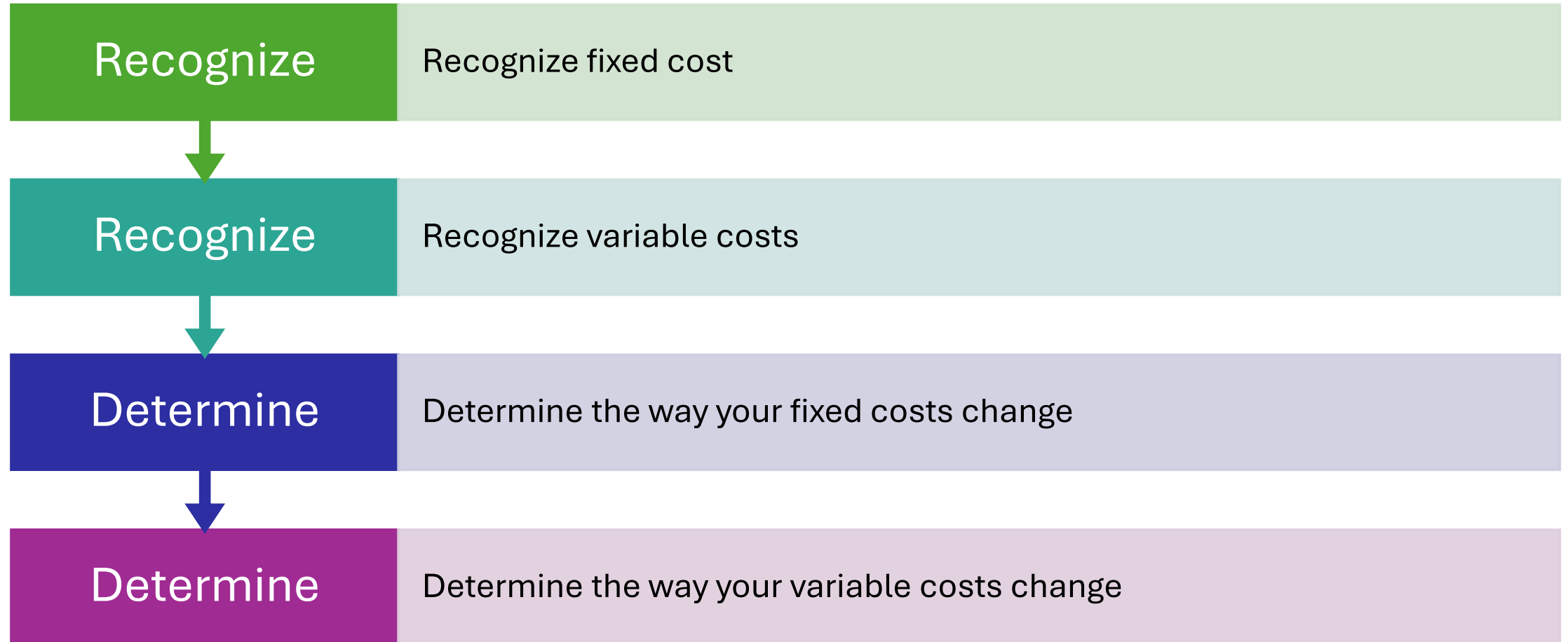
It is useful for both planning purposes and control purposes and is generally used to estimate factory costs and operating costs.

A flexible budget is much more realistic than fixed budget since it gives emphasis on cost behavior at different levels of activity

# Flexible Budget Explained

- A flexible budget can be found suitable when business conditions are constantly changing. Accurate estimates are expected if the resources are available with the experts. A big organization should hire experts to prepare a flexible budget and to help their organization make a clear vision about what output should be produced to achieve the targeted profit
- When preparing a flexible budget, managers are forced to consider the different scenarios and their responses to them. Thus, for a number of different situations, managers will have calculated their costs and revenues. If an unexpected event does occur, changing the level of activity, the management will be better prepared.

# How to prepare a flexible budget





# Preparing flexible budget

---

The formula derived following the flexible budget definition is:

---

**Fixed cost + (actual unit of activity x variable cost per unit of activity)**

# Preparing flexible budget – Formula Method

## Flexible Budget Formula

- The relationship between activity and total budgeted overhead is given by:

$$\text{Total budgeted monthly overhead cost} = \left( \begin{array}{l} \text{Budgeted} \\ \text{variable-} \\ \text{overhead cost} \\ \text{per activity unit} \end{array} * \begin{array}{l} \text{Total activity} \\ \text{units} \end{array} \right) + \begin{array}{l} \text{Budgeted fixed-} \\ \text{overhead cost} \\ \text{per month} \end{array}$$

**Flexible Budget Variance (Level 2) = Actual result – Flexible budget**

**Sales Volume Variance (Level 2) = Flexible budget – Static budget    Or**

**Sales Volume Variance (Level 2) = (Budgeted contribution margin per unit) × (Actual units sold – Static budget units sold)**

**Companies develop their flexible budget in three steps; are**

Step 1: Identify the Actual Quantity of Output

Step 2: Calculate the Flexible Budget for Revenues Based on **(Budgeted Selling Price × Actual Quantity of Output)**.

Step 3: Calculate the Flexible Budget for Costs Based on **(Budgeted Variable Cost per Output Unit × Actual Quantity of Output)**, and Budgeted Fixed Costs.

# Example 1

Firm A is looking to determine the supplies and electricity costs, with a \$20 cost per machine hour plus a fixed cost of \$45000.

Fixed cost for insurance premiums, rent, etc., remains stable monthly. The equipment in the factory operates for 3000 to 5000 hours on an average monthly.

- **Assuming in June, the factory utilizes 4000 machine hours:**
- The monthly flexible budget for June can be calculated as  $=\$45000+(20\times 4000) = \$125,000$ .
- **On the other hand, if the factory utilizes 3000 machine hours in July:**
- The flexible budget in July will be calculated as  $= \$45000+(20\times 3000)=\$105,000$

# Example 2

Here is one of the flexible budget examples that provides the following details of a factory expected to operate at 70% level of activity (i.e., 14000 hrs)-

- **Variable Expenses: \$2,520**
- **Fixed Expenses: \$3,600**
- **Semi-Variable Expenses: \$2,400**

Now, between 85% and 95% of the activity level, its semi-variable expenses increase by 10%, and above 95% of the activity level, they grow by 20%. Prepare a flexible budget for the three scenarios wherein the activity levels are 80%, 90%, and 100%.

## Solution:

Activity Level	70%	80%	90%	100%
Budgeted hrs	14000	16000	18000	20000
Variable expenses (V)	\$2,520	\$2,880	\$3,240	\$3,600
Semi-variable expenses (SV)	\$2,400	\$2,400	\$2,640	\$2,880
Fixed expenses (F)	\$3,600	\$3,600	\$3,600	\$3,600
<b>Total expenses</b>	<b>\$8,520</b>	<b>\$8,880</b>	<b>\$9,480</b>	<b>\$10,080</b>
<b>Recovery rate per hr</b>	<b>\$0.61</b>	<b>\$0.56</b>	<b>\$0.53</b>	<b>\$0.50</b>

# Example 3 Preparing a Flexible Budget

Cars'4'Cheap is a Canadian company that owns and operates a large car wash near Kingston, ON. The following table provides data concerning the company's cost.

	Fixed Cost per Month	Cost per Cash Washed
Cleaning products		\$0.85
Utilities	\$ 1,000	0.12
Maintenance and Repair		0.35
Salaries and Wages	2,500	0.45
Depreciation	5,000	
Rent	4,000	
Administrative Costs	2,000	0.10

The company charges customers \$12 for a car wash.

Prepare a flexible budget for the month of September for 6,700 and 7,700 washed cars.

Details		Variable Per unit	Level 1	Level 2
Units			6700	7700
<b>Sales</b>		<b>\$12.00</b>	<b>\$80,400</b>	<b>\$92,400</b>
Variable Costs	Cleaning products	\$0.85	\$5,695	\$6,545
	Utilities	\$0.12	\$804	\$924
	Maintenance and repair	\$0.35	\$2,345	\$2,695
	Salaries and wages	\$0.45	\$3,015	\$3,465
	Admin cost	\$0.10	\$670	\$770
<b>Total Variable</b>		<b>\$1.87</b>	<b>\$12,529</b>	<b>\$14,399</b>
Fixed Costs	Utilities	\$1,000	\$1,000	\$1,000
	Salaries and wages	\$2,500	\$2,500	\$2,500
	Depreciation	\$5,000	\$5,000	\$5,000
	Rent	\$4,000	\$4,000	\$4,000
	Admin cost	\$2,000	\$2,000	\$2,000
<b>Total Fixed</b>		<b>\$14,500</b>	<b>\$14,500</b>	<b>\$14,500</b>
<b>Net profit</b>			<b>\$53,371</b>	<b>\$63,501</b>





# Budgetary control

is the comparison of the actual results against the budget. Where the actual level of activity is different from that expected, comparisons of actual results against a fixed budget can give misleading results.

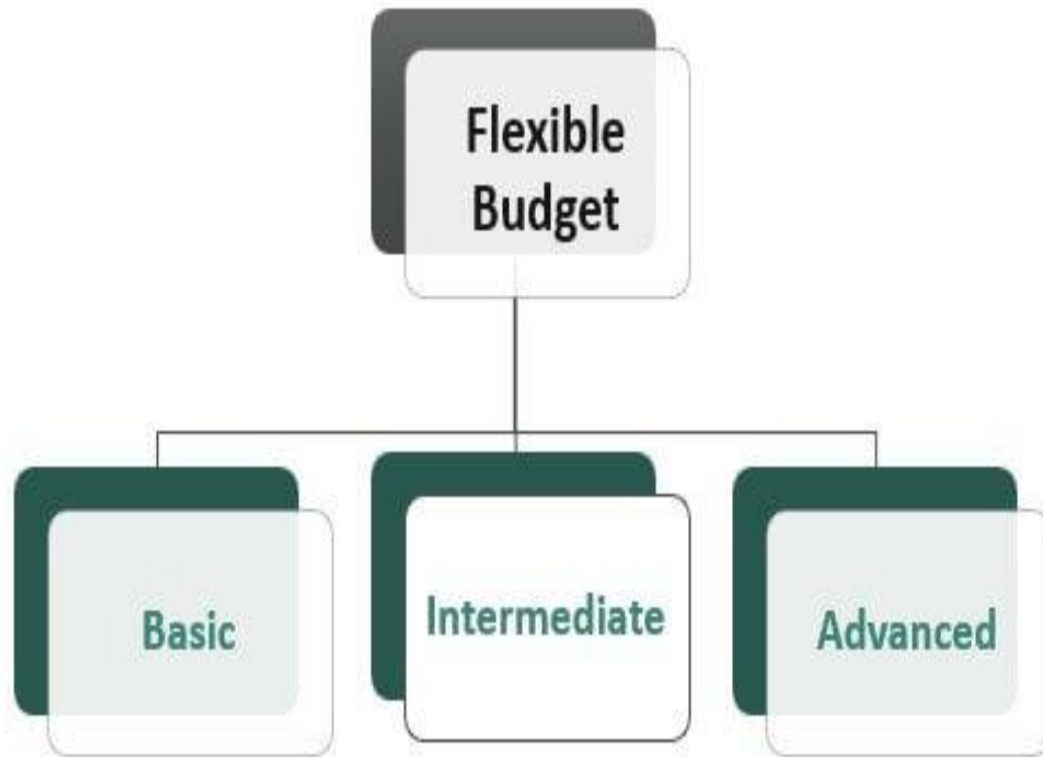
Prepare a flexible budget performance report

- Assuming 6,700 cars were washed in September

Actual Data for 6,700 cars	
Revenue	\$ 83,848.00
<b>Variable Costs</b>	
Cleaning products	\$ 6,164.00
Utilities	871.00
Maintenance and Repair	2,500.00
Salaries and Wages	4,000.00
Administrative Costs	2,144.00
<b>Fixed Costs</b>	
Utilities	\$ 1,100.00
Salaries and Wages	3,000.00
Depreciation	5,000.00
Rent	4,000.00
Administrative Costs	2,150.00

Details		Variable Per unit	Actual	Budget	flexible budget variance
Units				6700	
<b>Sales</b>		<b>\$12.00</b>	<b>\$83,848</b>	<b>\$80,400</b>	<b>\$3,448</b>
Variable Costs	Cleaning products	\$0.85	\$6,164	\$5,695	(\$469)
	Utilies	\$0.12	\$871	\$804	(\$67)
	Maintenance and repair	\$0.35	\$2,500	\$2,345	(\$155)
	Salaries and wages	\$0.45	\$4,000	\$3,015	(\$985)
	Admin cost	\$0.10	\$2,144	\$670	(\$1,474)
<b>Total Variable</b>		<b>\$1.87</b>	<b>\$15,679</b>	<b>\$12,529</b>	<b>(\$3,150)</b>
Fixed Costs	Utilies	\$1,000	\$1,100	\$1,000	(\$100)
	Salaries and wages	\$2,500	\$3,000	\$2,500	(\$500)
	Depreciation	\$5,000	\$5,000	\$5,000	\$0
	Rent	\$4,000	\$4,000	\$4,000	\$0
	Admin cost	\$2,000	\$2,150	\$2,000	(\$150)
<b>Total Fixed</b>		<b>\$14,500</b>	<b>\$15,250</b>	<b>\$14,500</b>	<b>(\$750)</b>
<b>Net profit</b>			<b>\$52,919</b>	<b>\$53,371</b>	<b>(\$452)</b>

## Flexible Budget Types



# Flexible Budget Types

# Advantages

- It can help in sales, costs, and profit calculation at different levels of operating capacity.
- It helps to determine the quantity/amount of output to be produced to help the company achieve the desired profit level.
- The most significant advantage of this budget is that it helps the management of the company to determine the production level in different markets and business conditions.
- It also helps in the reclassification of various levels of budgeted costs along with sales so that managers can easily identify the profit areas and thus may act accordingly.
- This budget can be re-casted on the basis of the activity levels. It is not rigid.

# Disadvantages

- This budget requires skilled workers to work on it. The availability of skilled workers becomes a challenge for the industry. Therefore, many Industries and companies can't use this budget despite its enormous advantages.
- It depends upon the proper accounting disclosures. The result cannot come out to be correct if there are any mistakes in the Books of Accounts provided. A flexible budget depends very much upon a forecast of past business performance. So the historical information used needs to be accurate.
- It is an expensive affair. Skilled workers are to be appointed, and they should be paid for their services. It's quite a laborious task too. Thus many companies and industries can't afford to have this budget.
- It also depends upon the factors of the production, which are not in the hands of the management. Therefore the predictions can be inaccurate due to these conditions.
- **Variance Analysis** provides useful information as each cost is analyzed according to its nature. Thus it becomes difficult for the experts to prepare Flexible budgets

**Example 3:** Zanko Corporation has this information related to its performance is given below:

Sales Revenue	\$ 2,500	Per Project
Variable Cost of Wages	\$ 400	Per Project
Fixed Cost of Wages	\$30,000	
Variable Cost of Supplies	\$ 100	Per Project
Variable Cost of Utilities	\$ 0	Per Project
Fixed Cost of Utilities	\$ 3,000	
Variable Cost of Entertainment	\$ 200	Per Project
Fixed Cost of Rent	\$18,000	
Fixed Cost of Insurance	\$ 2,400	
Fixed Cost of Business License	\$ 5,000	
Variable Cost (Company Car)	\$ 75	Per Project
Fixed Cost (Company Car)	\$ 6,000	

**Required:**

- A) Prepare the static Budget in the beginning of the year expecting 100 consulting projects.
- B) Find out the variance between Static Budget and Actual Production.
- C) Prepare the Fixable Budget for consulting 130 Projects.
- D) Find out the Variance between Fixable Budget and Actual Production.

**Note:** Actual Details Information shown in the below Table

**Example 3:** Zanko Corporation has this information related to its performance is given below:

Detailies	Static Budget	Activity Variance	Flexible Budget	Revenue & Spending Variance	Actual Production
Consulting Project	100		130		130
Sales Revenue	?	?	?	?	\$ 318,000
Expences					
Entertainment	?	?	?	?	\$ 49,000
Wages	?	?	?	?	\$ 79,000
Supplies	?	?	?	?	\$ 13,200
Utilities	?	?	?	?	\$ 3,100
Rent	?	?	?	?	\$ 18,000
Insurance	?	?	?	?	\$ 2,400
Business License	?	?	?	?	\$ 5,000
Company Car	?	?	?	?	\$ 22,000
Operating Profit	?	?	?	?	\$ 126,300



**Example 3:** Zanko Corporation has this information related to its performance is given below:

Detailies	Static Budget	Activity Variance	Flexible Budget	Revenue & Spending Variance	Actual Production
Consulting Project	100		130		130
Sales Revenue	\$ 250,000	\$ 75,000	\$ 325,000	\$ (7,000)	\$ 318,000
Expences					
Entertainment	\$ 20,000	\$ 6,000	\$ 26,000	\$ 23,000	\$ 49,000
Wages	\$ 70,000	\$ 12,000	\$ 82,000	\$ (3,000)	\$ 79,000
Supplies	\$ 10,000	\$ 3,000	\$ 13,000	\$ 200	\$ 13,200
Utilities	\$ 3,005	\$ 2	\$ 3,007	\$ 94	\$ 3,100
Rent	\$ 18,000	\$ -	\$ 18,000	\$ -	\$ 18,000
Insurance	\$ 2,400	\$ -	\$ 2,400	\$ -	\$ 2,400
Business License	\$ 5,000	\$ -	\$ 5,000	\$ -	\$ 5,000
Company Car	\$ 13,500	\$ 2,250	\$ 15,750	\$ 6,250	\$ 22,000
Operating Profit	\$ 108,095	\$ 51,749	\$ 159,844	\$ (33,544)	\$ 126,300