Chapter 2:-

An Introduction to Cost terms & Purposes:-

cost: sacrifice (تضحية) of resorces ⇒ Explicit

↳ Implicit (time) (opperanity cost) (تكلفة بديلة)

Expense ✓ مصروف ⇒ Cost

Cost : The forgone benifit from the ~~[illegible]~~ best forgone alternative.

* الفرق بين ال Actual وال Budgted

ال actual (التكاليف) هي واقعية وصارفينها و مستحقة

أما ال Budget فهي لسا ما تتحقق بس متوقعة.

- Cost object ⇒ anything for which a cost measurment is desired.

Cost object :-

Product, service, production, Customer Department, the whole organization.

Cost object → Direct

↳ Indirect

مصنع

50

PC — Desktop

cost accumulation

DM

direct materials

$20,000

softwares

$10,000

labor

$40,000

Utilities

in total 60,000

130000 ~~2600~~

50

لما يكون in total فهي بتكون للجهتين ونعطي كل خط

إنتاج يعني ال 60,000 هي مش بس لل PC

هي أيضاً لل Desktops

*Direct cost: تكلفة يربطها علاقة مباشرة مع C.O

Indirect cost: تكلفة لا يمكن أن نربطها علاقة مباشرة مع الـ cost object

PS *the specific cost may be both a direct cost of one cost object and an indirect cost of another cost object.

<u>Rule of thumb</u>

≥ net income 5%

طالما يكون نسبة (قيمة تكلفة) أقل من 5%

يكون unmaried أما طالما يكون أكبر

*Factors Affect ~~in~~ direct /indirect cost class

1. The materiality of the cost in question.
2. The available information - gathering technology.
3. Design of ~~oper~~ oprations.

Cost Behavior:

كيف تتغير التكلفة نتيجة للتغير في حجم النشاط. ⟸

Variable cost: تكلفة متغيرة

تتغير بعلاقة طردية مع حجم النشاط

Fixed cost: تكلفة ثابتة

تكلفة لا تتأثر بحجم النشاط

(يعني لو انا متأجر محل وقل عندي الانتاج أو زاد

سعر الايجار رح يظل ثابت).

*Cost are fixed or variable only with respect to a spesific activity or given time period.

fixed and variable (mixed)

بتكون مثل الفاتورة الكهرباء يعني فيها

تكلفة ثابتة غير تكلفة الكهرباء اللي

احنا بنصرفها (تكلفة شبه متغيرة).

(Tires) Direct: بيضاف سعرها مباشرة ①
(العمال) Variable: بتختلف تكلفته باختلاف الكمية

(Salary of Supervisor) Direct: تضاف بسهولة
② Fixed: ليس له علاقة بالكمية المنتجة

(Power costs) Indirect: لا يمكن احتوائها بشكل مباشر
③ خط الانتاج عداد الكهرباء
Variable: الها علاقة بالكمية المنتجة

(Annual lease cost) Indirect: لا يمكن ادراجها بسهولة ④
Fixed: ليس لها علاقة بالكمية   الايجار السنوي

Differant Type of firms:-
1 Service-sector companies: الشركات الخدماتية
(لا يكون لديها Inventory (B.S)، ويكون ضمانها غير ملموسة مثل مكاتب المحاماة).
2 Marchandising sector companies: الشركات التجارية
شركات تشتري المنتج جاهز وبتخزنه وبتبيعه دون احداث تغير على المنتج.

الـ Inventory في الـ B.S. Balance بتكون
marchindaising inventroy.

* $\boxed{3}$ Manufacturing sector companinies:

الشركات الصناعية تقوم بشراء مواد خام (غير جاهزة)
وتحتاج المواد الخام للانتاج بضاعة جاهزة من خلال
خط الانتاج لتصبح قابلة للبيع للزبائن)

DM	الـ Inventory (الشي يلي بتكون) ← مواد خام
WIP	(في Balance Sheet) ← مواد تحت التصنيع
FG	← مواد جاهزة

① Direct Materials (FC)

② work in process (WIP

③ Finished goods.

1 Direct labor ← عمال حتى يصنع بكون بحاجة عمال

2 machines ← آلات ومعدات (manufacturing overhead)

3 raw materials ← مواد خام

2-DM 2-DL 2-MOH

Cost Behavior Summarized:-

* Variable cost: Total Dollars ⇒

change in propration with output

(More output = more cost)

Produce	Total var.
100	$3 \times 100 = 300$
200	$3 \times 200 = 600$

Cost Per unit ⇒

Unchange in relation output

Produce	Total cost
100	3
200	3

* Fixed cost: Total Dollars ⇒

Unchange in realation to output

produce	Total ← Fixed cost rent = 600
100	600
200	600
50	600

Cost per unit ⇒

change with output (لما تكثر بقل)

Produced Per unit

$\frac{600}{100}$ = 6

$\frac{300}{100}$ = 3

$\frac{50}{100}$ = 2

⇒ دايماً الأفضل نطلع عن تكلفة

(Total) general S

var. cost per unit = 3

\+ Fixed cost = 3

Total Pre unit ⇒ 6

طالبين اتطلع per unit لازم انتبه لانو

في عندي Fixed costs.

Wages ⇒ Per day (~~variable~~)
↳ Per hour (Fixed)
Salaries ⇒ Per month (variable)

Labor → wages → variable.

differant types of firms تقسيم ال *

① Balance Sheet [No inventory]
Income Statment [service rev.]
[No C.G.S]

② Income Statment
Sales <u>Less</u> C.G.S. = Gross profit.
Balance Sheet [Inventory]
Income Statmena [No invenrory]

*Marchindising companies
- Retailers   - whole salers (بائعين جملة)
(marchandise inventory)

Income Statment :-

Sales xxx

less: C.G.S xxx

Gross profit xxx

Retailer :-

Purchased * 100 units 3 $

Sold 60 units 8 $

Sales = 60x8 = 480

C.G.S = 60x3 = 180

Gross profit = 300

Manufacturing Company :-

Raw materials inv 50000

labor wages 120000

other manufacturing 130000

- Started produced 100 000 units

⇒ 60 000 units

$\frac{300000}{100000} = 3 \Rightarrow 3 \times 60000 = 180000$

Cost Flow:

⇒ C.G.S

* Non manufacturing costs : ما الها دخل بالتصنيع

① Marketing ② Selling costs

③ Administrative costs ⇒ مصاريف إدارية

* Manufacturing costs

① Direct materials (DM)

② Direct Labor (DL)

③ Manufacturing overhead (MOH)

↳ (All indirect manufacturing cost)

indirect materials ⇒ وقود سيارات

indirect labor ⇒ صيانة / إشراف,

other indirect manufacturing

rent, depreciation, taxes ⇐ ضر

Insurance, maintance (صيانة)

2021

Raw mat. inv. (All direct materials)

Beg. Balance 40000	150000
Purchases 160000	
End. balance 50000	

① Beg. DM inv. + Purchase of DM − End DM = DM used

⟹ $40000 + 160000 − 50000

= 150000

WIP

DM used 150000	
DL 300000	
MOH 250000	
700000$	

WIP inv

Beg. 200000	?
DM, DL, MOH 700000	650000
End.B 250000	(تكلفة السلع المصنعة)

900000 − 250000

② DM used + DL + MOH = Total Manufacturing

150000 + 300000 + 250000

= 700000

③ Beging WIP inv. + Total manufacturing cost incurred

= Total WIP

200000$ + 700000$ = 900000 $

2021

Finished good inv.

B.B 300000 | ? → C.G.S
C.G.M 650000 |

950000 ← Total Finished

450000 ← Finished goods

(4) Total WIP - End WIP inv. = C. G manufacturing

900000 - 250000 = 650000

(5) Beg. Finished good inv. + C. G manufacturing = Total Finished good available for sale

300000 + 650000

= 950000

(6) Total finished goods available for sale - Finished goods inventory = C.G.S

950000 - 45000

C.G.S = 50000 ⇒ Income Statment.

Hadeel Rmawi

Exercise 1:

The distinction between fixed costs and variable costs is an extremely important concept in managerial accounting. For each of the following phrases, indicate if the phrase is more closely related to fixed costs (FIX) or to variable costs (VAR) in reference to the number of units produced.

تعامل العمال بحجم النشاط.

VAR a. labor sewing garments in a garment factory

VAR b. changes in total when the level of production changes

نفس القيمة بغض النظر عن حجم النشاط.

FIX c. depreciation calculated by the straight line method (declining balance (Fixed) وهو تنوا يتغير ناتج من ال Book Value).

FIX d. insurance

FIX e. changes on a per unit basis when the level of production changes

VAR f. direct materials (المواد الخام .)

FIX g. security at the plant (بشكل عام بعتبرها ← salaries)

FIX h. does not change in total when the level of production changes

VAR i. ingredients used to manufacture a food product (direct materials)

VAR j. does not change on a per unit basis when the level of production changes

Exercise 2:

Butler Hospital wants to estimate the cost for each patient stay. It is a general health care facility offering only basic services and not specialized services such as organ transplants.

Required:

a. Classify each of the following costs as either direct or indirect with respect to each patient.
b. Classify each of the following costs as either fixed or variable with respect to hospital costs per day.

	Direct	Indirect	Fixed	Variable
(المراقبة الالكترونية) Electronic monitoring	✓			✓
(الوجبات) Meals for patients	✓			✓
(الأجور) Nurses' salaries		✓	✓	
(الصيانة) Parking maintenance		✓	✓	~~✓~~
Security		✓	✓	

Exercise 1.

U.S. Systems Inc., had the following activities during 2018.

Direct materials.	
Beginning inventory	$ 24,000
Purchases	61,600
Ending inventory	11,000
Direct manufacturing labor	18,000
Manufacturing overhead	11,500
Beginning work-in-process inventory	1,000
Ending work-in-process inventory	3,500
Beginning finished goods inventory	25,000
Ending finished goods inventory	19,000

Required.

a. What is the cost of direct materials used during 2018?

b. What is cost of goods manufactured for 2018?

c. What is cost of goods sold for 2018?

A) DM used = Beginning inv. + Purchase - Ending inv.
= 24000 + 61600 − 11000
= 74600

DM

Beg. inv 24000	?
Purchase 61600	
Ending inv. 11000	

74600

B) Total manufacturing = DM used + DL + MOH
= 74600 + 18000 + 11500
= 104100

Beging WIP + Total manufacturing - Ending WIP inv. = C. G manufacturing
1000 + 104100 - 3500 = 101600

C) Beg. Ending G. inv. + C. G manufacturing - Finished End. G. inv.
25000 + 101600 ~~+~~ - 19000
= 107600

Using the following information find the unknown amounts. Assume each set of information is an independent case.

a. Merchandise Inventory	Purchases	$210,000
	Cost of goods sold	223,000
	Beginning balance	41,000
	Ending balance	?
b. Direct Materials	Beginning balance	$ 7,000
	Ending balance	14,000
	Purchases	48,000
	Direct materials used	?
c. Work-in-process Inventory	Ending balance	$ 22,000
	Cost of goods manufactured	21,000
	Beginning balance	8,000
	Current manufacturing costs	?
d. Finished Goods Inventory	Cost of goods manufactured	$62,000
	Ending balance	20,000
	Cost of goods sold	61,000
	Beginning balance	?

a) BB + Purchase - Ending = C.G.S

= 41000 + 210000 - Ending = 223000

251000 - Ending = 223000
- 251000 -251000

- Ending = - 28000 ⇒ $\boxed{\text{Ending} = 28000}$

b) DM used = Beginning balance + Purchase - Ending

= 7000 + 48000 - 14000

= 14000

C) Begining WIP inv. + Total manufacturing - Ending WIP

= C. G manufacturing.

$8000 + ? - 22000 = 21000$

$-14000 + ? = 21000$
$+14000 \qquad +14000$

Total manufacturing = 35000

D) Beginning Balance + C. G. manufacturing - Ending Balance = C. G.S

$? + 62000 - 20000 = 61000$

$? + 42000 = 61000$
$-42000 \qquad -42000$

$\Rightarrow$ Beginning Balance = 19000

Exercise 3.

Messinger Manufacturing Company had the following account balances for the quarter ending March 31, unless otherwise noted.

Sales	1300000	
Work-in-process inventory (January 1)	$ 140,400	← Beginning Balance
Work-in-process inventory (March 31)	171,000	← Ending Balance
Finished goods inventory (January 1)	540,000	
Finished goods inventory (March 31)	510,000	
Direct materials used	378,000	
Indirect materials used	84,000	MOH = 84000
Direct manufacturing labor	480,000	+186000
Indirect manufacturing labor	186,000	28800
Property taxes on manufacturing plant building	28,800	264000
(غير تصنيعي) Salespersons' company vehicle costs	12,000	135000
Depreciation of manufacturing equipment	264,000	92400
Depreciation of office equipment	123,600	790200
Miscellaneous plant (مصنع) overhead ←	135,000	
Plant utilities	92,400	
General office expenses	305,400	
Marketing distribution costs	30,000	

(تشغيلية تأتي بعد التصنيع)

Required. Prepare a partial income statement for the quarter ending March 31.

* Sales

Less: C.G.S

Gross Profit

Less: opperating exp.

opperating profit

WIP

BB 140400	
Total manu. (DL+DM+MOH)	C.G.manufacturing ← ?
Ending 171000	

2021

Finished good inv.

B.B 300000	? → C.G.S
C.G.M 650000	
950000 ← Total Finished	
450000 ← Finished goods	

④ Total WIP - End WIP inv. = C.G manufacturing

900000 - 250000 = 650000

⑤ Beg. Finished good inv. + C.G manufacturing = Total Finished goo[ds] available for sal[e]

300000 + 650000

= 950000

⑥ Total finished goods available for sale - Finished goods inventory = C.G.S

950000 - 45000

C.G.S = 50000 ⇒ Income Statment.

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