

MANAGERIAL ACCOUNTING

- This is all internal, for management.
- What is cost of "Cost Object"?
 - product service Dept Activities etc.
- How to use cost? Reduce?

→ Can trace to COST OBJECT

→ <u>Direct</u>	and	<u>Indirect Costs</u>	LOOK AT <u>ONE PLANT</u>
{ Cost of Keypads		{ Salary of CEO	
{ Wages of workers.		{ R and D	
{ Utilities		{ Market Research	

ONLY THESE	→ <u>Manufacturing</u>	and	<u>Non-Manuf.</u>	DM: Nails, Screws are <u>not</u> there. Non-trivial!
	{ Direct Materials		{ Marketing	
	{ Direct Labor		{ Administrative	
	{ Manuf. Overhead		{ Depreciation	
			{ Utilities	
			{ Salaries for CEO	
	⇕		⇕	
	<u>Product / Inventoriable</u>		<u>Period / Non-Inv.</u>	
	End up on Bal. Sheet as ① Inventory (cost)		These are <u>expensed</u> immediately!	
	Then, when sold ② COGS.			

Cost of Product does not have period costs
 Why? We don't know what they will be.

Eg: \$7,000 in heat. 100 pens made, 80 sold ← MAY
 20 sold ← June.

Spread this

MAY → COGS =	$(\frac{80}{100})(7000) = 5600$
Inv. =	$(\frac{20}{100})(7000) = 1400$
JUN → COGS =	1400

→ Merch Companies — Only one Inv. (on Bal. Sheet)
 ✓ $COGS = BI + \text{purchases} - EI$

→ Manuf. Companies — 3 Inv — Raw Mat ← Direct
 Fin. Goods ← Indirect
 WIP
 $COGS = BI + COGM - EI$
 (Cost of goods manuf.)

✓ $COGM = B_{WIP} + \left[\underbrace{DM + DL + MO}_{B_{DM} + \text{Purchases} - E_{DM}} \right] - E_{WIP}$

→ "Depreciation of prod. facilities" is included!
 → Indirect labor included!

OP.

$$\text{Net Income} = \text{Sales} - \text{COGS} - \text{OpEx}$$

$$\begin{array}{ccc} \text{"Account for Sales"} & (BI + COGM - EI) & \text{"Finished Goods"} \\ & | & \\ & BWIP + (DL + DM + MO) - EWIP & \\ & \swarrow & \\ & (B_{\text{raw mat}} + P_{\text{urch raw}} - E_{\text{nding RAW}}) & \end{array}$$

✓ Net Income = Raw Mat + Fin. Goods + WIP

Over head Allocation.

Determine some base OH Rate = $\frac{\text{Tot. Overhead}}{\text{Tot. Activity}}$

This is usually Labor Hours ("Cost Driver",
"Allocation Base")

This is tough to do. So, use estimates of θ and Actr .

$$\text{Predicted}_{OH} = \frac{OH_{est}}{A_{est}}$$
 "Activity!"

Use $\downarrow$

$$\text{Applied}_{OH} = \text{Pred}_{OH} \times A_{actual}$$

$$\text{Applied}_{OH} = \text{Pred}_{OH} \times A_{\text{actual}}$$

Find out Actual_{OH} | if App_{OH} > Act_{OH} ← "over applied"
App_{OH} < Act_{OH} ← "under applied"

$A_{off} < A_{on} \leftarrow \text{"Underapplied"}$

→ What to do with this? Add/Sub from COGS

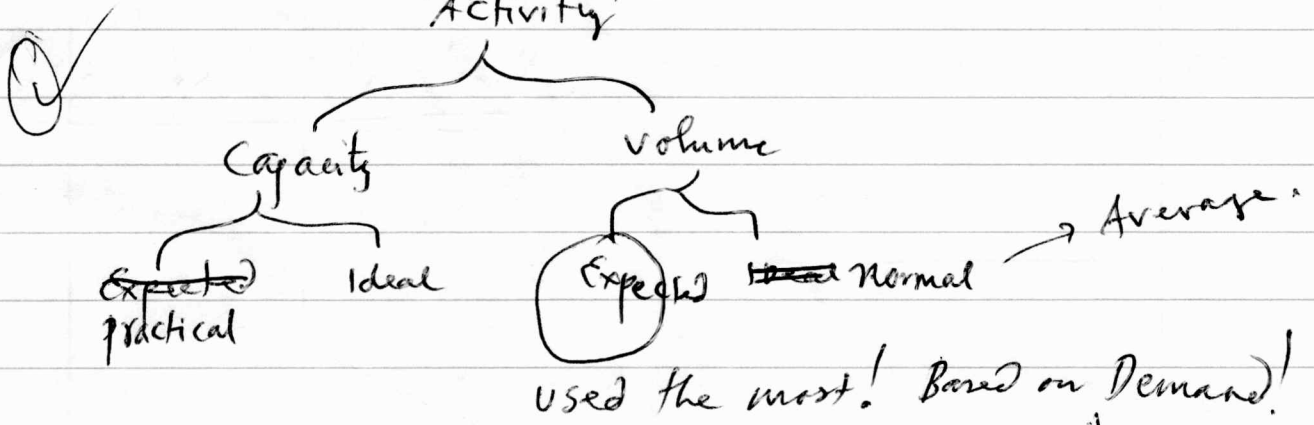
✓ COGS + Underapplied OH
COGS - Overapplied OH.

→ Plant OH \$15/hr

Dept A	\$10/hr	OVER COSTED by \$5
Dept B	\$20/hr	UNDER COSTED by \$5

(need 20, got 15 ")

→ OH Rate = $\frac{\text{OH}}{\text{"Activity"}}$



→ Depression ⇒ Demand Falls
⇒ Exp. Vol. Falls
⇒ Pred_{OH} Rises
⇒ App_{OH} Rises
⇒ Cost of prod Rises
⇒ Prod Selling Price Rises
⇒ Demand Falls!

"The Death Spiral" yo

Direct Labor Costing is BANANA-GA-CALCULATE.
Activity-Based Costing (ABC! Easy as 123!)

Eg: Plant 1: Only Black & White pens.
Plant 2: All sorts of shit!

→ DM, DL might be same, but MOH might be diff.

→ ABC uses Activities (not Dept) and (not Volume)
↳ ∴ Complexity is diff,

(SEE Power Point!!)

→ Although used for Manuf / Product / Inv. Costs
BUT use for Non-Manuf as well.

Why! → Inc. part of costs
→ Have multiple cost systems
for internal decision-making!

→ Spread among cost drivers!

$$r_{\text{cost driver}} = \frac{\text{Total Overhead}}{\text{Total driver (Volume) driver}}$$

Then $(r_{\text{cost-d}})(\text{actual use}) + \dots = \text{ABC Cost}$

Cost Variances

$$\text{Cost} = \text{Price} \times \text{Quant.} \quad (\text{of DM})$$

$$\begin{array}{ccccc} AC & = & AP & \times & AQ \\ \text{(Actual Cost)} & & \text{price} & & \text{quant} \end{array} \quad \left. \vphantom{\begin{array}{ccccc} AC & = & AP & \times & AQ \end{array}} \right\} \text{easy!}$$

$$\begin{array}{ccccc} SC & = & SP & \times & SQ \\ \text{(Standard)} & & \parallel & & \parallel \\ \text{"What it should"} & & \text{Budgeted} & & \text{Budget Quant!} \\ \text{have cost to} & & \text{Price} & & \text{(you don't know this until the end!)} \\ \text{make something"} & & \text{(Set at beg. of period)} & & \end{array} \quad \left. \vphantom{\begin{array}{ccccc} SC & = & SP & \times & SQ \end{array}} \right\} \text{FUCK!}$$

How to set Standards? — { Ideal (COL)
normal (most used)
Early attain (HISTORY)

→ Discount pricing: "2/10, n/30"

"Invoice due in 30, but if paid in 10, 2% discount!"
⇒ MAKE SURE TO DO THIS if "all discount taken"

$$\begin{array}{ccc} SR & \times & SH \\ | & & | \\ \text{Budgeted} & & \text{Budgeted hours} \\ \text{Wage rate} & & \text{"Estimated hours"} \end{array}$$

"Quantity" is # of units

(Not) Price/unit!!

DM Variance Analysis

ORDER IS IMPORTANT!
NOT COMMUTATIVE!
SIGN!!

<u>Actual</u>		<u>Input @ Standard</u>		<u>Standard</u>
$AQ \times AP$	$\xrightarrow{\Delta}$	$AQ \times SP$	$\xrightarrow{\Delta}$	$SQ \times SP$

✓ Mat. Price Var (MPV) Mat. Quant. Var (MQV)

$$AQ(AP - SP) \leftarrow \text{"Paid more than I should have"}$$
$$SP(AQ - SQ) \leftarrow \text{"Used more than I should have"}$$

if $MPV \text{ or } MQV > 0 \rightarrow$ Unfavorable

$MPV \text{ or } MQV < 0 \rightarrow$ favorable

*

$\Rightarrow$ Quant. Purchased $\neq$ Quant Used "

So, MQV $\rightarrow$ Use $\leftarrow$ Quant. used

MPV $\rightarrow$ Use all of it (purchased)

DL Variance Analysis

<u>Actual</u>		<u>Input @ Standard</u>		<u>Standard</u>
$AH \times AR$	$\xrightarrow{\Delta}$	$AH \times SR$	$\xrightarrow{\Delta}$	$SH \times SR$

Lab. Rate Var (LRV)

$$AH(AR - SR)$$

Lab. Eff. Var (LEV)

$$SR(AH - SH)$$

Same deal with Un/Favorable.

* Change in output does not cause MQV!
(Change both SQ and AQ)

$$LCV = LRV + LEV$$

Labor Cost Var

MCV

Mat. Cost Var

$$= MPV + MQV$$

Decision-Making

How do costs change
w/ business activity?

Fixed : and Variable Cost

{ Utilities (MAYBE)
CEO salary
R&D
Market Research

{ DM
DL
MO

How much can
manager affect
things?

Controllable and Non-Controllable

{ CEO salary
R&D

Sunk

and

Opp. Cost ← (NOT a Δ !!)

"Already made it..."

Use your stupid head for incremental — cost
{ Revenue
profit (R-C)

Relevance of Costs for Decision Making

What is "relevant"? Future costs / ^{revenues} ~~alternatives~~ that differ
among alternatives

→ Fixed Costs — Direct — Avoidable (RELEV)
Unavoidable (NOPE)
Allocated / common fixed (NOPE)

* Why? You'll be doing incrementals
So things will cancel out! ☺

"Relevant"

- Variable — Usually relevant BUT NOT ALWAYS!
Eg. Car of same type, same miles.
(Gas is relevant)
- Opportunity — (Relevant) — (mostly....)
- Sunk — (NOPE)

Baking Example.

* If Variable, RELEVANT

* Allocated Eg: Rent / Utilities can move elsewhere.

* If avoidable: RELEVANT.

* "Overhead fixed at $\frac{2}{3}$ " $\Rightarrow$ use $\frac{1}{3}$ of OH cost!
at that volume

* For existing capacity of production,

FOCUS ON WHAT IS RELEVANT

III
could be more vol.

If above capacity,

✓ [New order amt (Sale - cost)] - [op. profit] -

[any fixed increases]

20,000
x (Their price - ^{new} cost) (5000 you cannot make). (your price - old cost)