Cost Accounting Prof. Varadraj Bapat School of Management Indian Institute of Technology, Bombay

Lecture - 12 Case Study: JSW Ispat Steel

[FL]. While our continuing of our discussion on marginal costing CVP, BEP, short term decision making we have discussed various cases. Today, let us see how taking a real life scenario we are able to compute break-even point or we are able to make some decisions taking the real figures. So, I hope you have taken the print out of this case. Let us try to solve it together.

(Refer Slide Time: 00:58)

ase.z		(material)	Marra	
Profit & Loss account of JSW SPAT Steel	Rs. Cr.			
	Total	Product Line A	Product Line B	
		Cost %	Cost %	
Net Sales	11,105	70	30	
Other Income	-162			
Raw Materials	7,644	65	35	
Power & Fuel Cost	1,993	80	20	
Employee Cost	261	65	35	
Other Manufacturing Expenses	159	70	30	
Selling and Admin Expenses	231	65	35	
nterest	180			

So, we have been given profit or loss account of JSW Ispat steel. They are primarily operating on two product lines. So, these are the actual figures from P and L net sales, other income, raw material, power fuel, employee cost, other manufacturing expenses, selling admin, interest. Then a break up is given about each of these costs because there are two product lines A and B.

(Refer Slide Time: 01:36)

rome men rapropolar revention Malings Reven Ves Art	an crops capes	and the last test of test o			
Full Screen Web Cuties Draft	New Arrange Split	inchronous Scrolling Switch M	11 <mark>9</mark>		
Feading Layout Document views Show Zoom	Hindow All 12 1	eset Weston Pesition Windows *	8711		
Other Manufacturing Expenses	159	/0	30		
Selling and Admin Expenses	231	65	35		
Interest	180				
Cost structure					
Direct cost %					
Raw Materials	100				
Power & Fuel Cost	80				
Employee Cost	70				
Other Manufacturing Expenses	60				
Admin Expenses	10				
Selling Expenses	60				
Selling and Admin Expenses- break up					
Sellina Expenses	80				
a				10 14 2 m 2000	0.

Cost structure has been estimated that what is a percentage of direct costs. So, raw material is 100 percent; power 80 percent; employees is 70 percent and so on.

(Refer Slide Time: 01:52)

🖉 🖬 🤨 0 • 🛛 Off talgetig - Morark Kird Protoc Activity Tallet	Tala Tala	. a x
Evene mark Tage (and) Anteress Marrie Arress Ver All Evene Tage (and) Anteress Marrie Arress Ver All Evene Tage (and) Anteress Marrie Arress Ver All Evene Tage (and) Anteress Anteress Evene Tage (and) Anteress Anteress Evene Tage (and) Anteress	All and Design Calculat Control Control Contr	
Other Manufacturing Expenses	U	
Admin Expenses	10	
Selling Expenses	60	
Selling and Admin Expenses- break up		
Selling Expenses	80	
Admin Expenses	20	
All indirect costs are fixed. Admin. Overheads are common co The break-up of other costs is give Kindly compute costs	əsts ahd cannot be linked to any product n.	l-line.
6		. 2
(本)		
the second		

Since the costs of selling and admin is given together break up is given for selling 80 percent and admin 20 percent. All indirect costs are fixed. Admin overheads are common costs and cannot be linked to any product line. The breakup of other costs is given.

(Refer Slide Time: 02:18)

ase.2		Window	Millores	
Profit & Loss account of JSW SPAT Steel	Rs. Cr.			
	Total	Product Line A	Product Line B	
		Cost %	Cost %	
Net Sales	11,105	70	30	
Other Income	-162			
Raw Materials	7,644	65	35	
Power & Fuel Cost	1,993	80	20	
Employee Cost	261	65	35	
Other Manufacturing Expenses	159	70	30	
Selling and Admin Expenses	231	65	35	
nterest	180			

So, this particular breakup is not applicable to admin overheads, but for other things you can break them down as per the given percentage.

(Refer Slide Time: 02:29)

Ad Screen Web Cuties Crait Reading Light Conterest Door 1000 B Fee Conterent Views Door 2000 B Fee	Pages New Arrange Spl window All	III, Synchronous Scraling III Reset Window Position Window	Switch Marris	
Totaled test and the		1750	1971	
Total Employee Cost	Total	Product Line A	Product Line B	
Variable Admn Evnenses				
Variable Selling Expenses				
Variable Selling Expenses				

Now, you are required to compute following. A few things have been asked like for example, total employee cost broken into product line A and B; variable admin expenses again broken; variable selling expenses; operating profit and PV ratio.

(Refer Slide Time: 02:53)

	In Table Table	- 0 X
Home Insert Page Layout Parlenences Mailings Review	Vex Arobat Design Layout	
Ad Screen Web Culler Draft Fading Light Document Views Show Zoom	One Flage Then Flages Page Holds Hand State Hand	
Variable Admn Expenses		
Variable Selling Expenses		
Operating profit		
PV RATIO		
Advice on short term decision Compute resultant operating	and profit for the company	
Advice on short term decision Compute resultant operating 1. Which product line should product line.	and profit for the company be focused, if total sales can be increased	by 20% for any one
Advice on short term decision Compute resultant operating 1. Which product line should I product line. Revised figures	and profit for the company be focused, if total sales can be increased Total	by 20% for any one
Advice on short term decision Compute resultant operating 1. Which product line should I product line. Revised figures Total Contribution	and orofit for the company be focused, if total sales can be increased Total	by 20% for any one
Advice on short term decision Compute resultant operating 1. Which product line should I product line. Revised figures Total Contribution FC	and orofit for the company be focused, if total sales can be increased Total	by 20% for any one
Advice on short term decision Compute resultant operating 1. Which product line should I product line. Revised figures Total Contribution FC Revised operating profit	and orofit for the company be focused, if total sales can be increased Total	by 20% for any one
Advice on short term decision Compute resultant operating 1. Which product line should I product line. Revised figures Total Contribution FC Revised operating profit	and profit for the company pe focused, if total sales can be increased Total Total be focused, if Direct <u>labour</u> is in short supp	by 20% for any one

And, then we have to advice the management on certain short term decisions and compute the resultant operating profit based on those decisions.

Now, which product line should be focused if total sales can be increased by 20 percent for any one of the product lines? So, assuming that you cannot go for both the lines any one product line you can increase the sales. So, which one will you focus ?

(Refer Slide Time: 03:26)

thread broad Brandhavers Balleroom Marine Ballero alle	Table Texts	- 0 ×
None Hast Topic Lipid Pathencist Malling means output None None<	Arobal Design Cayou get April New Arrange Split Midb Window All	The second secon
PV RATIO		
Advice on short term decision ar Compute resultant operating pro 1. Which product line should be product line.	id fit for the cor focused, if to	mpany otal sales can be increased by 20% for any one
Revised figures	Total	
Total Contribution		
50		
FU		
Revised operating profit		3

And, for that you have to calculate contribution FC and revised operating profit.

(Refer Slide Time: 03:31)

d Screen Meb Cutine Draft Zoom 102%	New Arrange Sale	il, synchronous foralling	Salta Martin					
Izeding Leyout Interception Pane Interception Pane Interception Pane	Window All	III fead Window Peables w	indows * * Macros					
C		1						
Revised operating profit		1						
Which product line should be for	cueed if [Direct Jahour	ie in chart eu	nnly				
the company proposes to increase	cuseu, il t	any one pred	uctling by 20	pply	the Dire	at labour		
ne company proposes to increas	e sale or a	any one prod	uctine by 20	1%, using	g the Dire	ectilabour		
rom other product line, by cutting	down its i	Direct labour.						
Revised figures	Total	A	В					
ncremental Contribution								
table Constitution								
otal Contribution		1						
Revised operating profit								
otal Contribution Revised operating profit								
otal Contribution Revised operating profit								
otal Contribution Revised operating profit							è.	
otal Contribution Revised operating profit								
otal Contribution Revised operating profit								
otal Contribution Revised operating profit								
otal Contribution Revised operating profit							,	

In second part which product line should be focused if direct labour is in short supply. Now, the company proposes to increase the sales of any one product line by 20 percent, but they do not have any extra direct labour. So, using direct labour from the other line by cutting down it is direct labor and calculate the incremental contribution etcetera for this decision ok.

So, let us go ahead. First of all please do the basic calculation because we know the total information; break it down into product line A and B. Simultaneously, we also have to break down variable and fixed because we know that in marginal costing our emphasis is on segregating variable and fixed costs and we write in a particular format. So, take sales of each line; calculate the variable cost for that line and separate it into A and B; first of all only variable cost you will get contribution from contribution reduce the fixed costs that will give you profit ok.

(Refer Slide Time: 05:10)

$\begin{array}{c c} \underline{A} & 0 \\ \hline B_{2} & 0 \\ \hline B_{2} & 0 \\ \hline \mathcal{F} & form, failer \\ \hline \mathcal{F} & form, failer \\ \hline \mathcal{F} & \mathbf{X}^{-1} \\ \hline \mathbf{X}^{-1}$	D Wap Ted 0 D Merge & Center +	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	Normal Indiced Formut as multing 1 Table 1	Bad Neutral		Delete Format	E Antoine - 27 Re- Cont - Sorth - Her - S	A line a	
A337 • - A Employee Cost	H 5	Number 13	9/4	1		(alt	LdSeg		-
A	В	С	D	Е	F	G	н	1 1	
Profit & Loss account of									
JSW ISPAT Steel	Rs. Cr.								
	Total	Product L	Product Line	9					
		A %	B %						
Net Sales	11,105	70	30						
Other Income	-162								
Raw Materials	7,644	65	35						
Power & Fuel Cost	1,993	80	20						
Employee Cost	261	65	35						
Other Manufact Expenses	159	70	30						
2 Selling and Admin Expenses	231	65	35						
Interest	180								
(March Steel) (2				-				1 0	

So, please calculate along with me. Now, this is the given data. Do not worry, I will not show you solution so that you can solve it yourself.

(Refer Slide Time: 05:30)

1 A CO	And (1) (2) (2) = = = + + -	D map Ted 0	ereral -	N 🖉 🖻	rmal Bad	- 1 - 2	K anton . 27	6
110	national # 2 X 1 (1) (A) A/ B B B (R R	🖬 Marge & Center - 🕴	1-5 × 15 2 2	onditional Format as Go ormatting * Table *	od Neutral	a meet be	the Format (2 Clear * Sort & Fo	dā ed:
A133	fa Employee Cost	et 0	NUMBER 12		39/41	. 0	n (389)	¥.
	A	В	С	D	Ε	F	G H	1 1
2 T	he company proposes to inc	rease sale	of any on	e product	line by 20%	, using th	ne Direct labour	from ot
3		Total	A	B				
4 Ir	cremental Contribution							
5 T	otal Contribution							
6 R	evised operating profit							
7								
8								
9 S	oln.		0					
0 C	urrent revenues and costs						Current re	venues
1		Total	Product L	Product I	ine			Total
2			A	В	A %	B %		
	lat Calaa	11 105			70	20	Color	44.40
53 IN	let Sales	11,105			70	30	Sales	11,10
74								
55 R	aw Materials	7,644			65	35	Materials	7,64
(wis	Arts1/Seet2 Seet3				Ú*(* []

I have just shown you the structure.

(Refer Slide Time: 05:36)

	$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Strap Teel N	Hamber 5	ndtoral format as Good matting * Table *	al Bad Neutral Styles		Cefts	2 Dear * Sort & Find Call Char * Sort & Find Editing	*	
7	C66 • (* β. =866*ε66% Δ	B	C	D	F	F	G	н	1	
51		Total	Product L	Product L	ine	,	0		Total	
52			A	В	A %	B %				
53	Net Sales	11,105	7773	3331	70	30		Sales	11,10	
55	Raw Materials	7,644	4969	2675	65	35		Materials	7,64	
66	Power & Fuel Cost	1,993	1595	399	80	20		Fuel	1,99	
57	Employee Cost	261	170	91	65	35		e Cost	26	
58	Other Manufa Expenses	159	111	48	70	30		Manufact	15	
59	Admin Expenses	46	30	16	65	35		Expense	4	
70	Selling Expenses	185	120	65	65	35		Selling	18	
71		10,288	6,994	3,294	٥				10,28	
72 73	Operating profit	816	779	37				Operating	81	
74	Sterl Sterl Seel 12				14	Average M2 Court	14 Sam 1374		* *)	

To begin with for current revenue and cost total net sales are given percentages are given. Please apply the percentage and compute the relevant cost for A and B.

(Refer Slide Time: 06:01)

1	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	15 map Teel Na 18 Marga & Cantar + 1	unter	notional Format as Good	nal Bad d Neutral	1	Delete Format	E satular - 27 d	A .	1
Op	toard 5 fort 5 Highne	et 6	Number 5		9)/m		Celts	Edling		-
1	A	В	С	D	E	F	G	Н	1	1
76	Current revenues and Variable	costs								
77		Total	Product L	Product L	ine					
8			A	В	VC %	Total V	FC			
9	Net Sales	11,105	7773	3331	100	11105	0			
0										
1	Raw Materials	7,644	4969	2675	100	7644	0			
2	Power & Fuel Cost	1,993	1276	319	80	1595	399			
3	Employee Cost	261	119	64	70	183	78			
4	Other Manufa Expenses	159	67	29	60	95	64			
5	Admin Expenses	46	3	2	10	5	42			
6	Selling Expenses	185	72	39	60	111	74			
7	VC	10,288	6,505	3,127		9632	656			
8			0							
9	Contr									
%	PV RATIO				1		_			
P										-

Now, to do this you will have to first of all divide the variable component and then for variable charge it to A and B separately, for fixed charge it to A and B separately. So, what is the variable component of sales? Obviously, it is 100 percent and then you will be easily able to charge the sales for A and B. Now, what is the variable component of

raw material? Again it is 100 percent; charge it in relevant proportion, getting it? Like that you will have to go ahead.

For sales and raw material it is simple, but what will you do with power and fuel? First of all you will have to look at the variable component which is 80 percent; compute the total VC. So, total cost is 1193. No problem as far as sales and raw material is concerned because they were 100 percent variable, but for power 1,993 only 80 percent is variable. So, we have calculated 1595 as a variable portion of power cost and then you can apply it to A and B; are you getting me?

The percentage of A and B is given in the problem; for raw material it was 6535 for power it was 8020 and so on, getting it? So, what we have done is first of all we have calculated the variable component and then 80 percent of that was the variable power cost remaining is fixed. So, in sales nothing is fixed, raw material nothing is fixed, but for power and fuel 399 is fixed, getting it?

Now, let us do it for all the costs for employee 70 percent is variable. So, you can calculate the total variable and total fixed and then divide it has 119 and 64; for employee cost you know the ratio was 65 to 35. For other manufacturing 60 percent is variable; so, 9564 that 95 is again broken into A and B as 67 and 29. Admin only 10 percent variable; so, 5 VC and 42 FC, it can be broken as 3 and 2; for selling 60 percent is variable. So, 111 and 74 divided as 72 and 39.

Now, at this stage you will be able to compute the total variable cost for the whole company segregated into A and B, are you able to do it? You can cross check it for the whole company the total variable cost is 9632 and total fixed cost is 656. VC plus FC will match with the total right.

(Refer Slide Time: 10:30)

	$\begin{array}{cccc} & Aud & -11 & -K & \mathcal{L} \\ \hline & Croy + \\ \hline & Formul Failure \\ & Gal \\ \hline & Gal \\ \hline & Gal \\ \hline & Formul \\ Gal \\ \hline & Gal \\ \hline & Form \\ Gal \\ \hline & Gal \\ \hline & Gal \\ \hline & Form \\ \hline & Gal \\ \hline \\ \hline & Gal \\ \hline \\ \hline & Gal \\ \hline &$	Strings Text Ger St Strings & Center + 19 prinet G	Number 5	Addresal Format as matting * Table *	Bad Neutral		Delete Format	2 Day - Sort & 2 Day - Sort & Edding	PA Find th Jelect -	
_	090 • 6 = 089/079				-					
70	A Not Salas	B 11 105	7772	0	£ 100	11105	G	н		
/9	Iver odles	11,105	1113	3331	100	11105	0			
81	Raw Materials	7,644	4969	2675	100	7644	0			
82	Power & Fuel Cost	1,993	1276	319	80	1595	399			
83	Employee Cost	261	119	64	70	183	78			
84	Other Manufa Expenses	159	67	29	60	95	64			
85	Admin Expenses	46	3	2	10	5	42			
86	Selling Expenses	185	72	39	60	111	74			
87	VC	10,288	6,505	3,127		9632	656			
88										
89	Contr	1,473	1,268	204						
90	PV RATIO	0.13261	0.16318	0.06128						
91	Contr/ DL COST									
92										
97	Mart 1 / Steel . Steel . D			040			_		×0*	

Now, using this data compute the contribution because for most of the decision making contribution calculation is anyway required. So, we will compute the contribution for A is 1268, for B 204, total for the company is 1473, getting it? We have to take certain decisions on product mix which product to focus on and so on for that this is useful. Also let us calculate the PV ratio you know the formula contribution upon sales. So, PVR is 0.16 and 0.06 for A and B and 0.13 average, are you getting me?

Now, you can also complete this table for whole of the company without breaking into fixed and variable. This particular calculation will be useful when breakup is only product wise. So, they have given a particular breakup. So, based on that you can break it down into A and B and compute the operating profit from A and B.

Please keep in mind that originally there were two more figures given that is other income and interest other income has nothing to do with operations. So, please do not include it in cost calculation; interest is a finance cost. So, that is also not included in cost calculations, but the other cost calculations have been done. Have you got it? Any questions? So, we have separately done for total cost we have also done it for variable cost.

(Refer Slide Time: 13:04)

$ \begin{array}{c c} A & O \\ \hline a & O \\ \hline a & O \\ O \\ C \\ C \\ P \\ T \\ T$	Strong Test Conter - 1	eneral	ndional format as Goo	al Bad Neutral		Delete Format	E nation · 27 d	A nd h net *	1
Options 6 Fort 6 High E37 • (* fa	et ù	Number 15		Styles		(sh	Lóting		-
A	В	С	D	E	F	G	Н	1	-
All indirect costs are fixed.									
Admin. Overheads are comm	on costs a	nd cannot	be linked t	product	-line				
The break-up of other costs is	given.								
Current revenues and costs		0 0	>						
3	Total	Product L	Product L	ine					
1		A	В						
Total Employee Cost	261	170	91						
Variable Admn Expenses	46	3	2						
Variable Selling Expenses	185	72	39						
Operating profit	816	779	37						
PV RATIO	0.13261	0.16318	0.06128						
)				G (0)0 -					
L									
Advice on short term decision	and								
Sheet 9heet 9heet 12								#] [0	1

Now, there were few questions which were asked: for current they have asked what is the total employee cost for A and B and also total of the total? I think since now we have calculated all the costs. You can easily take this figures and go for showing the total employee costs, getting it? Same way you can record calculate the variable admin expenses, variable selling expenses, operating profit and so on. For variable, go to the lower table where we have separately shown the variable costs. So, admin, selling and total, getting it?

Operating profit broken into A and B, here you can take the total operating profit. I hope you are able to do with me and the last one was PV ratio. We have already calculated the PV ratios both for the company as a whole and as per the product line ok. So, you will be able to easily mention the answers for the first part if you do this to working notes carefully.

(Refer Slide Time: 15:10)

X H	x 8 -]a		State of Concession of Concession, Name	-					• 0 X	đ x
- 16	Home Inset Reprilayout Romalas Data Review View	houbat								× 0
ha	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	🕃 Wap Text 🗃 Marija & Center +	General - ₩ - % - % 25 (2	Indianal Formut as a meeting * Table *	ormal Bad ood Neutral		Delete Format	K Autotum - 27 R na - 501 A A 2 Char - 501 A A	A lot a	
Op	oard 0 Fort 0 stipme 90 * - A +CB9/C79	4 6	Number G		9)/e1		(alt)	Edding	W	6
	A	В	С	D	E	F	G	Н	1.	- 1
40					B.0x0+					
41										
42	Advice on short term decision	and								
43	Compute resultant operating p	rofit for th	ne compan	у						
44									1	
45	1. Which product line should b	e focusse	ed, if total s	ales can	be increase	d by 20%	6 for an	ny one pr	oduct lin	
46		Total								
47	Total Contribution									
48	FC									
49	Revised operating profit									
50										
51	Which product line should b	e focusse	ed, if labou	r is in sho	rt supply					
52	The company proposes to incr	ease sale	e of any on	e product	line by 20%	6, using	the Dire	ect labour	r from ot	
53		Total	A	В						
54	Incremental Contribution									
Sets (c)	Shared Shared Shared Table				04				- I - 0	_
ige 2 of 1	an err 👌 topin tilsi		_	-				10	0.018.016.0	0.0
	Type here to search	e 🗎 🖻	i 💼 🖻 🖻					18 1 1 1	tor of the st	x6-2019

Now, there is a decision making part; this was just the calculation.

(Refer Slide Time: 15:19)

X) 14 1	+ (1 -	- 14				- 386, 566	and the owner of	and the second second				O X	O X
	Horee	inset Page	Layout Formulas De	ata Review View	Arthur Ind	Annual		Territoria	1		Enterior Aur an	× Q = # 1	
Parts 10	Copy -	1.7	A - A		P Wap Tee	every all the second	A Conditional	Format Roood	Bad	insert Delete Format	TE- ZI CA		
Clipt	Format	Faiter	Fort	1 10	mat	6 Number	Formatting *	Table *		Cells	2 Cear · Her · Select		
1	im.	*(*	4									Y	
		С	D	E	F	G	Н	1	J	К	L	Μ 1	
37		72	39										
38		779	37										
39	0.	16318	0.06128										
40				B (0/1 *									
41													
42													
43 3	e cc	ompany	1										
44													
45 0	d, if	f total sr	ales can b	e increas/	ed by 20	% for a	ny one p	roduct line.					
46							.,						
47													
48													
49													
50													
51	d-if	flabour	ie in short	teunnly					Column				
	6	1/9ee2_3	heet) /2	suppy				14	(there is	6			
See 150	the p	pen INTR or i	hoose Paste						_	ч		0 0	
age 2 of 3-	-	8.877 🕥 Kogin	in (US)		-	-		_			a 10 🖬	1 11 101% -	0

The decision making part says that which product line should be focused if total sales can be increased by 20 percent for any one of the products. So, out of A and B which product line will you choose? Will you go by operating profit or contribution or sales or PV ratio? Here you can see all the information. I think most of you know that we will emphasis on PV ratio because PV ratio in a scenario of limitation on sales will maximize your contribution. Since fixed costs are anyway going to remain constant we will emphasize on PV ratio and if you look at the PV ratio product line a has a better PV ratio which is 0.16.

So, to respond to this question which product line will be focused? The answer is A and now the question is what will be the resultant contribution. So, compute the total contribution and the revised operating profit. Keep in mind that fixed cost is anyway not going to change. So, what is going to change is only your operating only your contribution which will change the operating profit.

Now, this product line a currently has a contribution of 1268. Just increase the contribution by 20 percent, are you getting it? There is no need to do any other calculation like new sales, new raw material cost, etcetera because whenever there is a increase in sale of 20 percent in the same proportion you experience increase in the contribution. So, compute the revised total contribution. So, what I will do is we will take the current contribution, I think that will clarify it more.

(Refer Slide Time: 18:00)



So, you are having total A and B current contributions. Now, the revised total contribution is very simple to calculate. We will continue the current contribution and to that add only 20 percent of A. So, revised total contribution becomes 1726; your current fixed costs which is 656 is unchanged and the revised profit will be new contribution minus fixed costs, so, 1070. What was your old profit? The old profit was 816. Now, this 20 percent increase in sales of A has led to new profit of 1070, are you getting me? So,

answer was which product line to be focused the answer is A should be focused and the revised profit is 1070.13, fine.

Now, in the second part what has been asked is which product line should be focused if labour is in short supply? So, what company wants to do is wanting to increase the sale of one product by cutting down the labour of other product. So, out of the two products A and B which product first of all will you prefer? Which product has a more rank? If labour is in short supply. I hope you remember this is called as a decision making with limiting factor or a key factor.

So, what will be your decision making factor? In question number 1, we had emphasized on PV ratio, but in scenario 2 since labour is in short supply contribution per direct labour will be your key decision making factor. So, let us calculate the contribution per direct labour cost. We know the contribution individually for A and B. You also know the employee cost now this is the variable portion of employee cost.

(Refer Slide Time: 21:23)

2 H -	J + (* -)		N. Managerian Di	and the second data of					· 0 ×	0	2
10 M	$\begin{array}{c} \text{Fight} & Fi$	Britisge Text Carter - Britisge Balance	nal	Normal notices - Table -	Bad Neutral		Delete Format	E Autobum * 27 R HE * 21 (2 Chear * Sort & I Her * 5 Editing	A find &		
1	995 • (° A)	0					0				
25	A Admin Evnoncos	B	C 2	0	£ 10	+	6	н			
85	Admin Expenses	40	70	2	10	C	42				
86	Selling Expenses	185	12	39	60	111	14				
87	VC	10,288	6,505	3,127		9632	656				
88	0	4 472	4 269	204							
89	Contr	1,4/3	1,200	204							
90	PV KATIO	0.13261	40.6972	2 10/120							
91	Contr/ DL COST		10.0072	3.19412							è
92											Ĩ
94	Contr	1.473									
95	LESS FC	656	[0					
96	operating profit	816									
97											
98	1. Which product line should	be focussed	d, if total sa	ales can be	increased	d by 20%	6 for a	ny one pro	oduct line	E .	
99	Same	Total	Product L	Product Lin	е						
-	A AND AND A								0.0		
pr 2 d									14 0.8 JUN C		

So, it is nothing, but the direct labour cost. So, you can divide it and get the direct labour cost contribution per direct labour cost directly separately for A and B. you will realize that it is very high for A. So, A continues to be favorite.

(Refer Slide Time: 21:43)

North Hone Inset PageLayout Formulas Data Roview View	Arubat	Ref. Manager (1997)	ropal Actions Salari					- 0 X	0
A Of And - (1) -	Britisp Text N Britisp Text N Britisp & Center + B preset 6	unter	Normal Format as Good matting - Table -	al Bad Neutral Styles	i inter	Delete Format Celti	E Autolum - 27 R ra - 27 G Clear - Sort & I Filter - 5 Edding	A line t	L
A	В	С	D	E	F	G	Н	1	
.09 2. Which product line should	be focusse	d, if labour	r is in short	supply					
10 The company proposes to in	crease sale	of any one	e product lin	ne by 20%	using	the Di	rect labou	r from ot	
11									
12	Total	Product L	Product Li	ne					
13		A	В						
14 Net Sales	9,328	9328							
15									
16 VC	7,806	7,806							
17									
18 Contr	1,650	1,522	128						
19 LESS FC									
20 Revised operating profit									
21									
22 direct labour original		118.691	63.9107						
23 direct labour revised		142.43	40,1724						
(Strat Seet) Seet)				() • •	
La Santa Sagansi								12 D H 2015 O	0
O hope here to search	A 🖬 🏟	🔒 🖪 🗷					8	LOLA ING	1722

So, even in second part, the question was company proposes to increase the sale of which product line?

(Refer Slide Time: 21:54)

	Home Inset Page	rLayout Formulas Da	ta Review View	koubat								
* 0 *	Cut Arial Copy = Format Fainter B Z	- 19 - 1 K K R + 10 + 1 <mark>0</mark> + <u>A</u> +	* = <mark>=</mark> +-	🗟 triagi Text 🗃 Marga & Cantar -	Ceneral Ber No 🔹	- Kanalinal Formating	Formal Acceleration Sector	Bad Neutral	inant Deine Format	E Antolum * 27 (R Hz * Sort & H Har * So	A h	
Opbo	bard 4	Fort 5	tiquna	d 6	Nanber	6	9/41		Cefti	Editing		-
	C	D	E		C	U.		1	V			
	L	U	C	r	G	п		,	N	L	IVI	
)												
1	1472.62	1268.48	204.138									
3												
	A shd be f	focussed										
)												1
c	, if labour	is in short	supply									
2 0	of any one	product li	ne hy 20%	using	the Di	rect labou	r from othe	er product	line by cut	ting down	its D lat	
2 0	of any one	product li	ne by 20%	, using	the Di	rect labou	r from othe	er product	line, by cut	tting down	its D. Ial	L
20	of any one A	e product li B	ne by 20%	, using	the Di	rect labou	r from othe	er product	line, by cut	tting down	its D. lal	╞
2 0	of any one A	e product li B	ne by 20%	, using	the Di	rect labou	r from othe	er product	line, by cut	tting down	its D. Ial	ŀ
	of any one A	e product li B	ne by 20%	, using	the Di	rect labou	r from othe	er product	line, by cut	tting down	its D. Ial	F
	of any one A	e product li B	ne by 20%	, using	the Di	o or the second se	r from othe	er product	line, by cut	tting down	its D. Ial	-
2 (3 1 5 7	of any one A	e product li B	ne by 20%	, using	the Di	o orect	r from othe	er product	line, by cu	tting down	its D. Ial	-
2 (3 , 4 5 7 8	of any one A	e product li B	ne by 20%	, using	the Di	o o	r from othe	er product	line, by cu	tting down	its D. Ial	
2 (3 1 5 7 3	of any one A	e product li B	ne by 20%	, using	the Di	o or the sected of the sected	r from othe	er product	line, by cul	tting down	its D. lal	
2 (3 1 5 7 3 9	of any one	e product li	ne by 20%	5, using	the Dir	 Current r 	r from othe	er product	line, by cu	tting down	its D. Ial	
	A Second Second	e product li B	ne by 20%	5, using	the Dir	• Current r	evenues ar	er product	line, by cut	tting down	its D. lal	-
	A	e product li B	ne by 20%	5, using	the Dir	o Current r	evenues ar	er product	line, by cu	ting down	its D. lal	

So, answer is A and it will increase the sale by 20 percent by cutting down the labour from B. So, now, you have to calculate what will be the incremental contribution of A and what happens what will be the revised contribution.

Now, in B portion what happens is first of all revise the sales of A. Your current sales of A is 7773 it will increase by 20 percent. So, you can get new sales of A. When sales increase the VC also increases in the same proportion.



(Refer Slide Time: 23:04)

Now, this increase in sales comes to A which is 20 percent of sales, it will require extra direct labour hour. So, we have worked out the original direct labor which is 118 revised direct labor will be 142, are you getting me? So, 118 was the original direct labour from our original calculation revised direct labour is to accommodate extra 20 percent of sales.

So, it will now require since it is variable it will require 20 percent more labour which is 142. Now, proportionately, since we want more direct labour to go to A, we will cut down the labour for B in the same proportion in the by the same quantum. So, the original direct labour for B was 63, you can find the difference between the two which is 23; that means, we are going to give 23 more labour to A. Now, the labour is in short supply, it cannot come for free. So, we will reduce the labour from B. So, 63.9 is the original labour for B. We will reduce it by 23 making it only 40 that leads to changed sales for B.

So, the original sale for B was 333 point 3331.46. It will substantially come down to 2098; substantially means in the same proportion as we are cutting down the labour, are you getting me? Quantum amount wise it would not be same, but proportionately it is same. So, whatever is the proportion of 40 to 63 same by the same proportion their sales

comes down that is why the revised sales of B will be 2094 and in the same proportion they would cut down their contribution. So, the original contribution from B which was if you remember our last calculation which was 208, now has come down only to 128.

Home Inset Repetayout Formulas Data Review Vi	en Acribat	or summing a	and designed in some						a.
$\begin{array}{c} \Delta \ \mbox{ of } \\ \Delta \ \mbox{ try } \\ \end{try } \\ $	- Dimp fed Ge	end -	Mon Altonal Format as Batting * Table *	nal Ba	d rutral	anart Delete Format	K Autolum - 27 R Autolum - 27 Court - Sort A. 5 Alter - So Lifere	A Ind & Ind -	
1116 • ja	4	10-01 4		ala.		CTI .	trang		
A	В	С	D	E	F	G	Н	1	
0 Revised operating profit									
1									
2 direct labour original		118.691	63.9107						
3 direct labour revised		142.43	40.1724						
4		23.7383							
5 Net Sales original			3331.46						
6 Sales revised			2094.06	2					
7				0					
8 PV RATIO	0.07352	0.16318	0.06128						
9									
0 Contr	1,522	1,522	0						
1									
Current revenues and									
2 Variable costs									
3	Total	Product L	Product L	ine		Produ	ct Line		,
Sheet] / Steet] / Steet] / 2				4					1
all an err (3 segen (es)			_				a	1 3 H 205 O	0
O type here to search	2 🗟 🖻	💼 🖪 🖾	W-				10 100	tot of the .	1723

(Refer Slide Time: 26:07)

I will show some more calculations for clarity. You can also note their PV ratios and the contribution so, 1522. Those of you want more clarification I have also this was done in a short cut way.

(Refer Slide Time: 26:44)

10 10 + 01 - 11	Ves Arybat	an inclusion of the second	house demonstration					• • • •	0
A CH IN Day - f from these Captors G TOM - G f f f f f f f f f f	 Brap tet Brap tet Brap a Center Brapnet 	neal - - % + % 23 0 Number 6	Normal anditional Format as mutting * Table * 500	Bad Neutral		Delete Format Cells	E Autolum - 20 R - 20 Chee - Sort & R Rher - Se Editry	Ad a net -	
A	В	С	D	E	F	G	Н	1	
Current revenues and 32 Variable costs									
33	Total	Product L	Product Line	е		Produ	ct Line		
134		A	В			В			
135 Net Sales	11104.9	7773.41	3331.46			2094			
36			Γ						
137 Employee Cost	260.86	118.691	63.9107		40.17	63.9	0.62857		
138 VC	10288.4	6504.93	3127.32			3127			
39									
40 Contr	816.43	1268.48	204.138			128			
41 PV RATIO	0.07352	0.16318	0,06128			0.06			
42 Contr/ DL COST		10.6872	3.19412			3.19			
43									
44 D Labour shifted		23.7383	-23.738			-24			
45-Incr contr		253.696	-75.823			-76			
a Sheril Seet Seet 2			040					¥ []	
12 1 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1							20		

If you want to see the full calculation that has also been shown; see, this was the original scenario. Now, product line B is facing a reduction in sales. So, from 3331 it becomes 2094. In the same proportion all of their variable cost will also come down. So, you can see here there is a reduction in the labour available to them from 63 to 40 which is in the ratio 0.62. So, their variable cost will also reduce in the same proportion, contribution will come down to 128 ok. You can either do it by PV ratio or by contribution to direct labour ratio.

So, what happens is direct labour shifted is 24, but the incremental contribution is minus 76; for B there is a loss of 75.82, but for A there is a gain of 253.89.

Home Inset Page Layout Formulas Data Review Vi	en Arabit							• • •	4
A CA And - (11 - x) + x) + x) = </th <th>in a strap field of a strap field of a strap field of a strap is a canter - a strap strap field of a strap s</th> <th>nal - - 5 + 51 Z (o for Number 5</th> <th>ndforal formal as Good nating * Table *</th> <th>Bad Neutral</th> <th></th> <th>Delete Format Celts</th> <th>E Autobum - 27 A</th> <th></th> <th></th>	in a strap field of a strap field of a strap field of a strap is a canter - a strap strap field of a strap s	nal - - 5 + 51 Z (o for Number 5	ndforal formal as Good nating * Table *	Bad Neutral		Delete Format Celts	E Autobum - 27 A		
8150 • A +8148+8149	_							_	-
A	В	С	D	E	F	G	н		
1 PV RATIO	0.07352	0.16318	0.06128			0.06			
2 Contr/ DL COST		10.6872	3.19412			3.19			
3									
4 D Labour shifted		23.7383	-23.738			-24			
15 Incr contr		253.696	-75.823			-76			
16									
17 Incr in oper profit		177.873							
18 original operating profit	816								le:
19 Incr in oper profit	177.873								Г
0 Revised operating profit	994.303								
1									
52			0						
53									
54									1
5500									1
1 (see 1 / See 2 / See 2 / 2			.)+			_	IN COLUMN CO		<u>í</u>
							IN LINE AND O		

(Refer Slide Time: 28:00)

So, company as a whole gains by 177.87. So, the original operating profit which was 816 will increase by 177 and the revised operating profit is now 994.303. I hope you are getting it? Now, they had asked us to compute a few things as to what will be the revised operating profit.

(Refer Slide Time: 28:27)

Mart Home Inset Rage Layout Formulas Data Review View	Arabat	ISH - Mesself Lost (lener Actuality (pant)					• • • • •	0
X Or And -[1] - K ≤ = = 0 Q Copy - X ≤ = - > - 0	B Shap Text Na R Marge & Center - R	nter -	Normal andtenal Format as matting * Table *	Bad Neutral		Delete Format	E Autolum - 20 R Autolum - 20 Clear - Sort & S Table - So Edding	A int a ind t	
8120 * (* A +8118-8119	_								
A	В	C	D	E	F	G	н	1.	
11									
12	Total	Product L	Product Line	•					
13		A	B						
14 Net Sales	9,328	9328							
15									
16 VC	7,806	7,806							
17									
18 Contr	1,650	1,522	128						
19 LESS FC	656								
20 Revised operating profit	994	1			0				
21									
22 direct labour original		118.691	63.9107						
23 direct labour revised		142.43	40,1724						
24		23,7383							
25 Net Sales original			3331.46						
San J Seet Seet 1			04					+0	
A DECEMBER OF								1 3 H 104 0	0
	0 0 0	A 18 18					A	ai A na	1725

Keep in mind, there is not going to be any change in the fixed costs. Total fixed cost will be same and revised operating profit will be 993. We could do it in two ways. Here we had done it in shortcut directly computing the revised contribution you get operating profit or do this full calculation then also you get revised operating profit as 994. I hope you are getting it?

So, in this case which is like a little detailed case we have seen how from the total you can break down the portion related to A and B; how separately applied for VC and FC and then a decision making scenario, one with the total change of sales, other with the limiting factor where labour is a limiting factor. I hope this would have been a good learning to you.

With this we will stop here [FL].