Welcome to all under the initiative of the Directorate of Higher Education titled as Distavo for Developing E Content. Today we are going to understand about Bachelors of Commerce subject code COD 110 In cost accounting. I miss Kalashri Shripad Lotlikar ,Assistant Professor in Commerce From Government College of Commerce and Economics, Borda, Margao . I will be discussing a module on sales mix, which is a part of application of marginal costing in decision making.

So first we will see the outline of this module in this module, we are going to see the meaning of sales mix and also a practical problem on sales mix.

Next is our learning outcomes.

Upon completion of this module,a student would be able to :
Explain the meaning of sales mix. Also compute practical problems on sales mix.

So now let us start with the meaning of sales mix.

Sales mix is very important for business organizations as companies are producing different products and these different products depend upon the different degree of profitability, the problem of sales mix would arise when companies are producing more than one product. Each product would be yielding a different amount of contribution and the management goal is to make profit. Keeping this in mind we have something called a sales mix.

Sales mix is a relative proportion of products or business products that are to be sold. In the sales mix We have something called an optimum sales mix. Optimum sales mix is a ratio of quantities to be sold of various products in such a manner that would give me maximum profit. So now we know what is the meaning of sales mix let us take a small example to understand this concept of sales mix. In our example, we have a company that manufactures two products product A and product B.They may sell both products in equal numbers. They could be a situation where there could be sales mainly consisting

of product A and the remaining of B. The ratio of these different products that the company is selling is known as a sales mix.

So far we have seen the meaning and an example of a sales mix now will be proceeding towards solving practical problems on sales mix. For that we need to follow a procedure .

Procedure for solving problems on sales mix which is as follows.

We have three steps.

First one is to find the amount of the contribution per unit, First we have to find out what is a contribution for units and contribution can be obtained by using a formula.sales minus variable cost gives me a contribution.

The second one. Once contribution is calculated , the product which gives me the highest contribution is given the highest priority and

The third step is out of the various sales mix. The sales mix which has the maximum profit would be selected. This is about the procedure for solving problems on sales mix.

Now let us take a practical problem to understand this concept of sales mix.

In the problem, Following information has been made available from the cost records of M/s Shivam Pvt. Ltd, Verna. where now they are basically into manufacturing and their cost records are given towards the details relating to their direct materials, direct wages,variable overheads, fixed overheads and selling price given.

Direct material with respect to product X is rupees 8 and with respect to product, Y is rupees 6.

Similarly for direct wages, they have given with respect to product X and with respect to product Y it says for Product X It is 24 hours at the rate of 25 that comes to Rs. 6 And for Y it is 16 hours at the rate of 25 paise per hour , that comes to rupees 4 so we have calculated direct wages .

Next one is your variable overheads the variable overheads. They are saying 150% of wages. We know the wage is calculated on the basis of variable overheads for product X and product Y so the variable overheads are 9 and 6 respectively.

The selling price for product X is 25 and for product Y 20. Next the question is as follows:

The directors want to be acquainted with the desirability of adopting

any one of the following alternative sales mix in the budget for the next period:

a) 250 units of X and 250 units of Y.

b)400 units of Y only.

c) 400 units of X and 100 units of Y.

d) 150 units of X and 350 units of Y.

State which of the alternatives you would recommend to the Management.

First we have to calculate Our contribution for the calculation of contribution and your marginal cost is as follows. We prepare a statement of marginal cost and contribution. A statement consisting of three columns.We have particulars, product X and product Y .

Our formula to calculate contribution is sales minus variable cost.So now selling price is already given to us, that is ₹25 for product X and ₹20 for product.then add direct materials, direct wages, variable expenses.find total cost and from that minus sales we get contribution per unit as 2 for product X and 4 for product Y.next preparation of statement of marginal.cost and contribution which is as follows

STATEMENT OF MARGINAL COST AND CONTRIBUTION

PARTICULARS	**PRODUCT X (Rs.)**	**PRODUCT Y (Rs.)**
Selling Price **(I)**	25	20

Less: **Variable costs**			
Direct material	8	6	
Direct wages	6	4	
Variable overheads (150% of direct wages)	9	6	
Total Variable costs **(II)**	23	16	
Contribution per unit	**2**	**4**	

The next step is preparation of **STATEMENT SHOWING COMPARATIVE PROFITABILITY UNDER DIFFERENT MIX.**

Sales Mix	Contribution (Rs.)	Total Contribution (Rs.)	Fixed cost (Rs.)	Profit (Rs.)
a)250 units of X at Rs.2 P.U	**500**			
250 units of Y at Rs.4 P.U	**1000**	**1500**	**750**	**750**
b) 400 units of Y at Rs.4 P.U	**1600**	**1600**	**750**	**850**
c)400 units of X at Rs.2 P.U	**800**	**1200**	**750**	**450**
100 units of Y at Rs.4 P.U	**400**			
d)150 units of X at Rs.2 P.U	**300**	**1700**	**750**	**950**
350 units of Y at Rs.4 P.U	**1400**			

First take the sales mix given multiply by contribution per unit and calculate total contribution . Then our fixed costs remain the same.In the first option the total contribution minus fixed cost is 1500 -- 750 =750. That is profit for the first option . So in the first option I have got a profit of 750. Then in the second option we have 400 units of Y and here we are just supposed to take a contribution of Y product. We get 1600. So now I have got the contribution even total contribution is going to be the same. Then your fixed cost. That is fixed, so1600 subtracted 750= profit as 850. So in the first option I got 750. In the second option I got profit as 850. Still I cannot arrive at any conclusion. Still two more options are remaining. In the third option we have 400units of X 100 units of Y.So. Transfer your contribution amount that is 400 into 2 and 100. Multiply by 4. That gives me 800 and 400 and this together after adding we get 1200 as my total contribution, then subtract this total contribution from your fixed costs. That gives me a profit of 450. Now if you can analyze and look at the Table right now we are getting option B with highest contribution and highest profit,but one option is still pending. Without that, we cannot conclude anything. So in the last option We have 150 units of X and 350units ofY .

Multiply it with the contribution amount that is 2 and 4 respectively. We get 300 and 1400 added together that comes to 1700. From this Then subtract your fixed cost that is 750 so 1700 minus your 750 = profit is 915. Now it is the time we have to arrive at the final conclusion. By comparing our total contribution and profit. So now in the first case we have a total contribution of 1500 and a profit of 750 in the second case I have a total contribution of 1600 and profit of 850. In the third case I have a contribution of 1200 and a profit of 450 and in the fourth case I have a total contribution As 1700 and a profit of 950, so now option four is giving me the highest profit and also it is giving me highest contribution.So out of the four options given to us , I would suggest to

management to use the fourth option. That is 150 units of X and 350 units of Y. So the last option gives me a profit of 950 which is the highest.

After all, the results of the problem are as follows.Alternative D is the most profitable one. It gives me the highest contribution and also the highest profit. It is the best mix from all the above alternatives. Thank you.