Managerial Accounting

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Lecture - 29
Budget and Budgetary Control

Dear students, we have completed 13 modules. Till now, I hope you would have understood different aspects of cost accounting. So, we have covered cost accumulation. Then, we have also discussed CVP and BEP analysis. In the last module, we were discussing, how to apply the cost concepts and cost data for the decision making, where we were studying about the relevant costs and decision making.

Today, we will start with budget. It is a very important area, very interesting and has a very wide coverage. It actually goes beyond cost accounting or management accounting. It is used in various spheres. It is used in almost all sorts of organizations. Immediately, when we use the word budget, what does it come to your mind? So, what do you recollect, when we use the budget.

I think most of the people would have recollected union budget or the government budget. Because, it is that time, where many times finance ministers says, I will cut down the subsidies. So, petrol prices have increased, gas prices have increased. And it affects common man. For salaried people, also that budget announcement is very important, because tax rates change. Some of the tax incentives are withdrawn, some new schemes are added.

So, union budget becomes a very important event. I hope, you all know. In India, when it is declared, are you aware, do you remember in which month, is it in March, April, May or is it in February, January, do you remember, when is it announced? Usually, it is announced on 28th of February, last day of February. And it is for the period, starting from first of April.

So, for next financial year, union finance minister typically announces the budget on 28th of April. This is about the government budget, central government budget. I think some of you, especially those who are working would also be aware of the budgets within the department. So, for any entity, they will have some sanction of the budget and within that sanction, you have to keep your expenditure.

And some of the students, I think, they may some budget on pocket money; that you can spend only this much. So, you have to maintain your cost within that. So, this is the different ways in which budget is used. I just explained it. So, that, you can relate it to your day to day life, because budget is not just a concept within managerial accounting. It is used in various spheres of life and has proved to be a very, very effective and useful technique. We will discuss today, exactly, what the technique gives. And what are it is objectives, advantages and we will also discuss a few cases or the problems.

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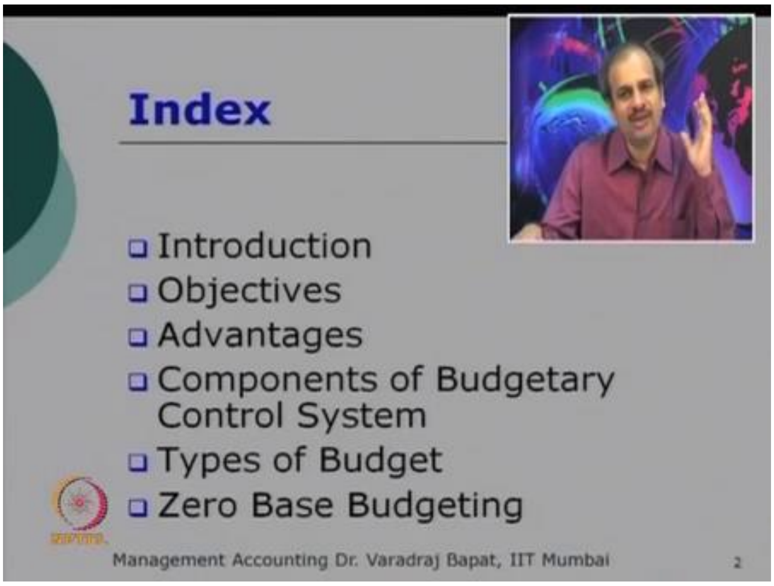

So, let us see now, what the budget is... So, this is our module 14 on the budget. We are going to cover, introduction, objectives of making the budget, the advantages. What consists of budgetary control system? That is it is components, we will also talk about the types of budgets. And there is a technique of budget, known as zero based budgeting. That also, we will like to discuss.

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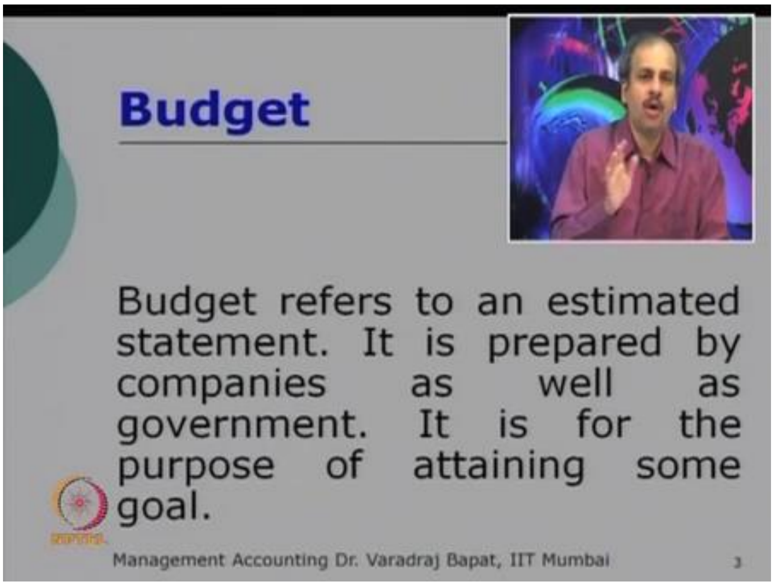

Now, let us understand, what the budget is? As you have just now seen or discussed, the union budget, it is declared by finance minister on 28th of February, for the budget period, starting in the new financial year. I hope you remember now, what is a financial year. So, financial year in India, starts from 1st of April and ends on 31st of March. So, let us say on 28th February, 2013, finance minister will announce the budget for the period starting from 1st April 2013 to 31st March 2014.

So, essentially, the budget is presented or prepared prior to starting of the period. So, it does not give you actuals. We have already learned P and L accountant balance sheet and cash flow. So, I hope you remember that, financial statements present the actual information for a particular period. But, in case of budget, what happens is, it is not actual information.

The budget is prepared prior to starting off period. So, it gives some estimates. That is why; I have said that, budget refers to an estimated statement. As we have already seen, it is prepared both by companies, government. In fact, in day to day life, even in family, the budget is prepared. Many times, it may not be prepared in writing and may not be declared as such. But, everyone must keep, how much money is available, how much money can be spent and that is the budget.

The third aspect of budget is, it is for attaining some goal. So, we set some priorities, we decide some objectives and accordingly, decide to spend the money or use the resources. And that is all reflected in the budget.

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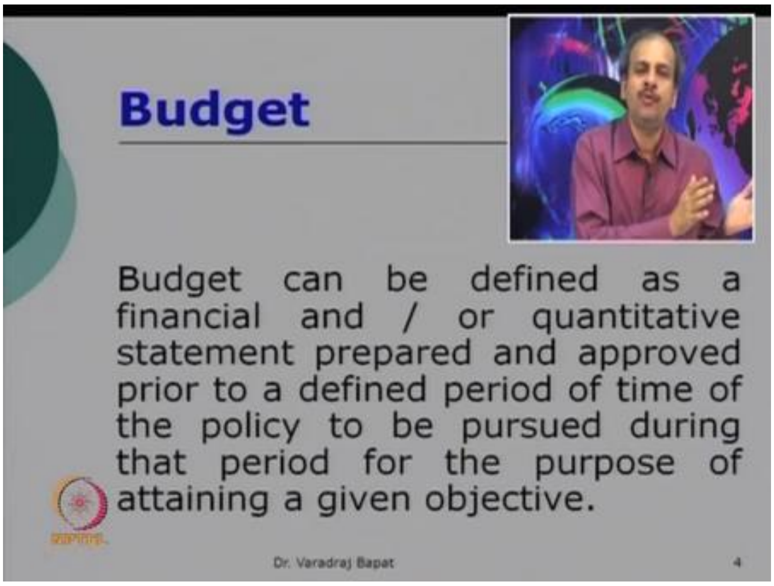

Now, let us see, the formal definition of the budget. This is a detailed definition as you can see, which says that, it can be defined. Budget is a financial or quantitative statement. It is prepared and approved, prior to a defined period of time of the policy to be pursued during that period. So, what it says is? It should be financial or quantitative. If you just say that, the next year our sales will improve or if in the family, somebody says that, from after two months my salary will increase.

Then, it is not a clear statement. What we want is, in clear terms? What is going to be received or paid? What is going to be income or expenditure, whatever it is? But, it should be in clear quantitative and or financial terms. So, if you just say that, I will study more in next month. Then, it is not a budget. If you say that, I will study for 4 hours, then you can say that, I have budgeted my studies.

Second is, it is prepared and approved prior to a defined period. So, after 1st of April, you cannot make budget. You have to make the budget before the period of starting and it needs to be properly approved. So, in a company, some higher authority, like departmental managers or CEO may approve, in government, finance minister presents it and parliament approves. So, it is prepared and approved prior to a period.

And it is of the policy to be pursued, during that period, for the purpose of attaining given objective. So, as we have seen, you will have some objective in mind. And to achieve that objective, you should set your budget. For example, if your objective is that, I have to provide for higher education, you must ensure that, you do sufficient savings for 4, 5 years before. So, that, you will be able to provide for higher education.

If you say scan, if you feel that petrol prices are going to go up. So, my transport cost is going to increase. That is why; I have to make more provision for it. Then, to meet that objective, you have to ensure that, other expenses are minimized or your income increases. So, it is prepared for the purpose of attaining some objective.

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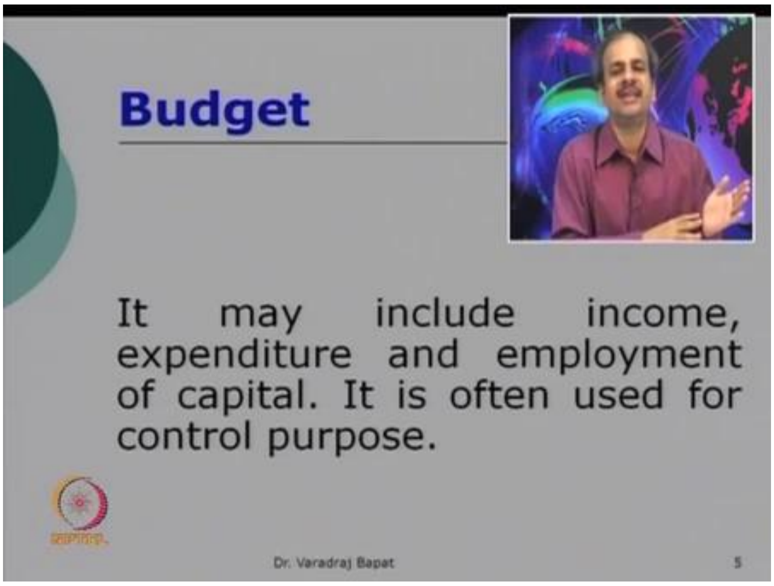

There are varieties of budgets. So, budget may include income, expenditure and employment of capital. So, in government budget, finance minister projects that, so much of tax will be received. Let us say, income for the government. Government also predicts that, we will spend so much on education. We will spend so much on social security. We will spend so much on employment. So, it includes expenditure.

Same way, in a company, there will be a sales budget, which forecasts, how much income is expended. You will also fix a expenditure for marketing, for administration, for production and so on. So, some expenditure limits are decided. It is also for employment of capital. So, it is not just income and expenditure. In a company, if you project that, the demand is increasing very fast.

So, after 3 years, I need to double my capacity. Naturally, to double your capacity, you will have to buy new machines. You will have to expand the capacity of the existing machines. You may have to acquire new space and so on. So, budgeting is also done as to, how much more capital will be required and how that capital can be raised? So, business may plan to approach the bank for a loan or they may plan for going for an IPO. So, that is the budget for employment and for raising of capital.

The main purpose of budget is, it is used for control purposes. We will see in detail, what are the other advantages? But, primarily it is a tool, where you set the target and try to ensure that, the target is achieved. So, the control purpose is a main purpose of making of budgets.

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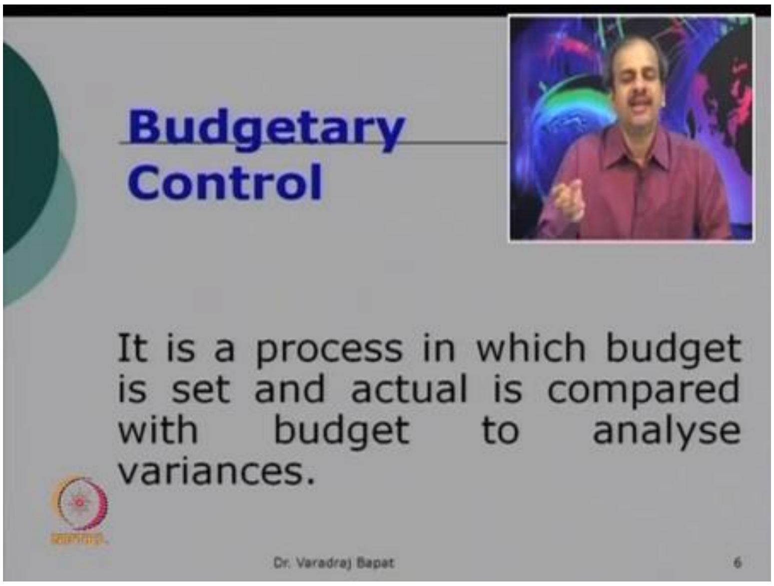

Now, from the budget, we come to a technique in management, which is known as budgetary control. So, in budgetary control, the idea is, to set the budget, then to record the actuals, compare the actual with the budget. Look at, what are the deviations or the variances. Then, analyze those variances, systematically, take the corrective action wherever possible. If corrective action is not possible, you may have to revise your budget.

So, all this gambit of activities are done within the tool, which is known as budgetary control. So, as I have put it here, it is a process in which budget is set actuals are compared. And then we analyze the variances. We will see in detail, how it is defined?

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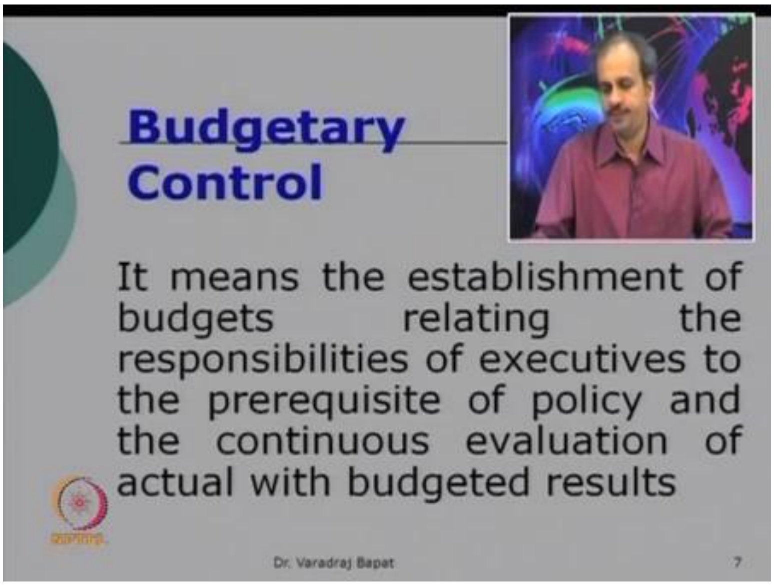

So, what it means is, the establishment of budgets, relating the responsibilities of executives, to the prerequisites of policies. And the continuous evaluation of actual with budgeted results. So, what is expected in budget is? you have goals in mind. So, for achieving certain goals, you have to decide objectives, you have to decide the actions which need to be taken. Not only, you decide the action, you also fix up the responsibility of the executives.

To ensure, that the policy is achieved. And then so that is a budget establishment. And then you record the actuals as and where in the data is available. It could be done weekly, monthly, etcetera. And then the actuals are compared with the budget. So, that, you know that, what was planned and what is been achieved?

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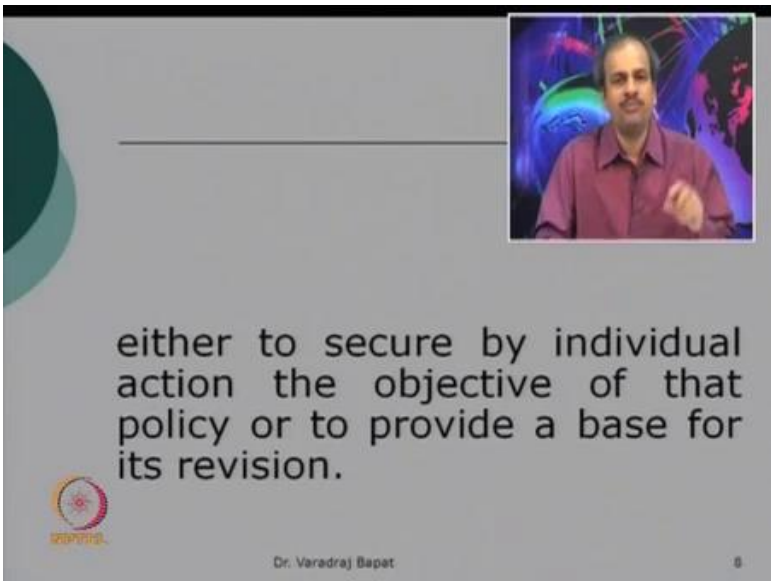

So, we are continuing here. So, it says that, the continuous evaluation of actual with budgeted results, either to secure by individual action the objective of that policy or to provide the base for it is revision. So, when you compare actuals with the budgets, you will come to know, whether actuals are in line with budget, very often, they are not. So, you have to secure some corrective action.

So, that the budget is achieved or if you feel that, because of changes in the outside scenario, the budget cannot be achieved. Then, we have to take some revision of budget. So, this comparison or the analysis also provides the basis for revision of budget, not only that, for the coming period. For the future period, when the budget is fixed, again this feedback will be useful, all this is covered into a tool, which is known as budgetary control. Most of the companies do have budgetary control system, which is properly set and is aligned with the other managerial processes.

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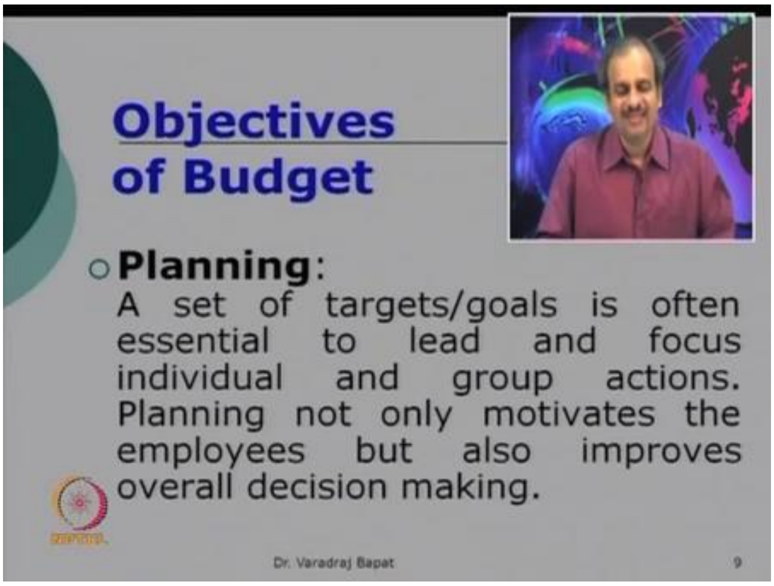

Now, let us see, what are the objectives of the budget? One of the objectives of budget is, planning. As we know that, budget is an estimated statement. It is prepared prior to the period, essentially, to ensure that, your activities are well planned. So, budget acts as a vey systemic, properly prepared quantitative plan. So, you can see here, it is a set of targets or goal is often achieved to lead and focus individual and group actions.

Planning not only motivates, but also improves overall decision making. So, planning is the first achievement of the budget. You do a proper plan and it is communicative to employees; well in time. So, it acts as a motivator, because they have some target, which is very clear now. And it is to be achieved and it also improves decision making, because you are seeing the whole picture and doing a proper planning.

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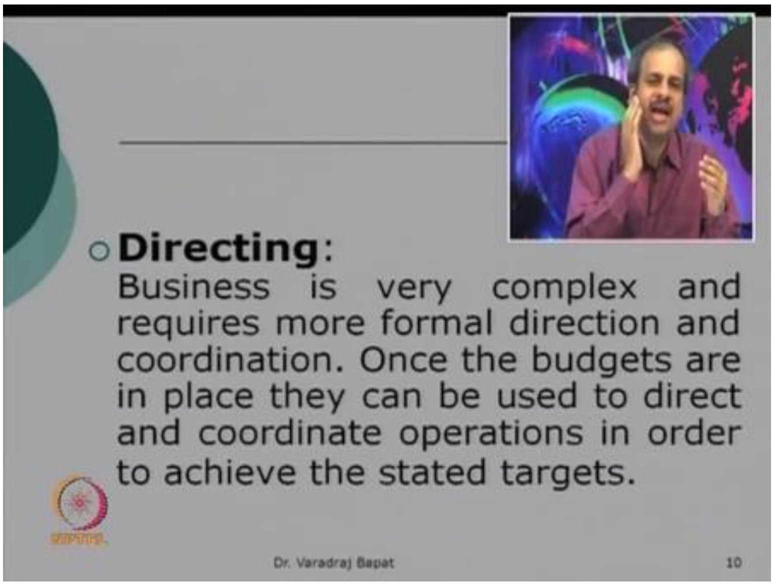

Next is directing. So, when the budget is done, the objective of planning is achieved. When, you actually implement, then you are able to direct your activities properly, because you have goal at one end. And you are able to go towards the goal, if there is any deviation. You can again reset your activities or you can also change the goal, if necessary.

So, business is very complex. It requires more formal direction and coordination. So, what happens is a family or an informal scenario, you may not require that formal direction. It may come out of love and affection. But, in business, it is a very complex activity, it requires formal direction and coordination. Once, the budget are in place, they can be used to direct and coordinate the operations, in order to achieve the target. So, target is properly known. So, all the efforts and energies are properly channelized through budgeting process.

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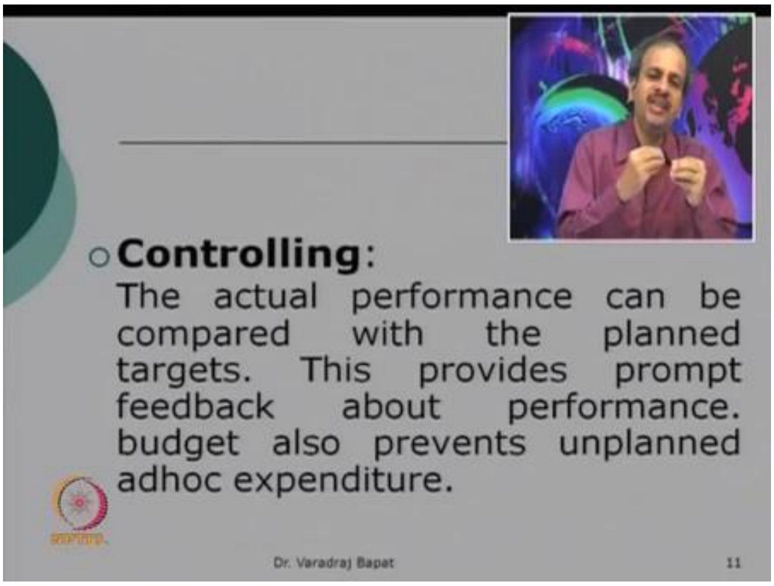

Next is controlling. Now, the actual performance can be compared with the planned target. This provides prompt feedback about the performance. So, that is a first advantage from the controlling point. That as the period is progressing, it will not come suddenly as a surprise to you [FL] I am not able to achieve the result. If you are missing the targets within a week or within a month, you will come to know.

So, it provides a prompt feedback, because you are able to compare with the budget, where actual performance. And immediately, you know, whether, you are achieving or not achieving. Secondly, it also prevents unplanned adhoc expenditure. So, suddenly, some expenditure requirement has come. So, in hurry, it gets approved and huge money spent without proper thinking.

That is avoided, because, when the budget is sent, properly set, at that stage. You have thought of all expenditures, you have also thought of various contingencies and how to take care of them. So, that unwanted, unplanned adhoc expenditures are avoided. All your resources are channelized in a proper manner. And that can be controlled more systematically.

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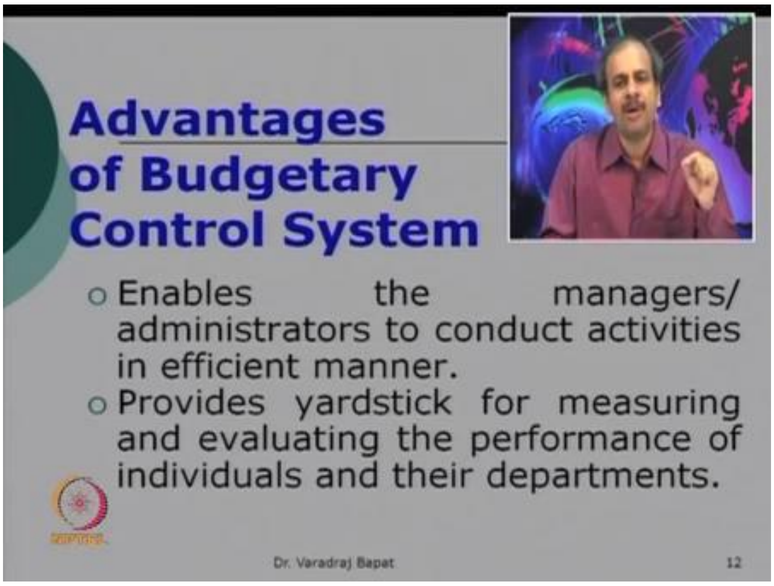

So, these were the advantages of the objectives of the budgeting system, that you have proper planning, directing and controlling. Now, let us look at the advantages of having a good budgetary control system. First one is, enables the managers and administrators to conduct the activities in efficient manner. So, all your business activities now can be conducted very efficiently.

Because, you know the target, you know, where the efforts to are to be put and managers or administrators. Whether, in corporate or in government, they can conduct the activities efficiently. Second, it provides yardstick for measuring and evaluating the performance of individuals and their departments. In absence of budgets, employees feel de motivated, because they do not have any set goal.

So, whatever, they achieve, it is likely that supervisors are unhappy. In budget, what happens is, it gives a clear yardstick. So, that, one can measure and evaluate the performance. This is applicable both to the individuals as well as to the departments or SB use. So, that, the performance is properly evaluated measured.

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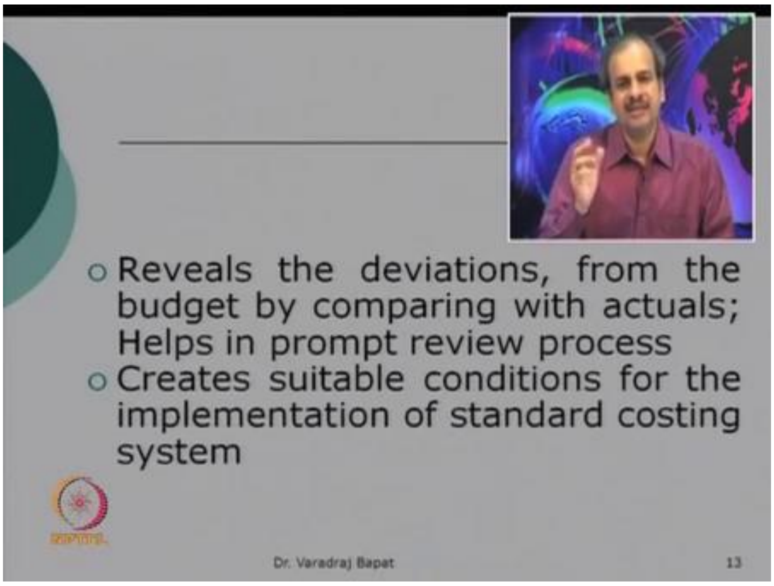

Next is, it reveals the deviations from the budget by comparing with the actuals and it helps in prompt review process. So, as we were just discussing, it does not happen that, after very long time, you come to know that, you are not achieving the goal. Since, the budget can be broken down, week wise or month wise, there is a timely feedback mechanism. So, that, you can review, if you are going wrong and take corrective actions.

The next one is, it creates suitable conditions for implementing standard costing systems. In our next module, we are going to discuss standard costing system in detail. But, in short, what is done is, in standard costing system, you set the standard for an individual as well as an activity. Now, in budget, it becomes a starting point for implementation of standard costing system. Because, it helps us to estimate and setups some target or some benchmark. That can later be converted into standard and standard costing system also contributes and acts as a very important control technique.

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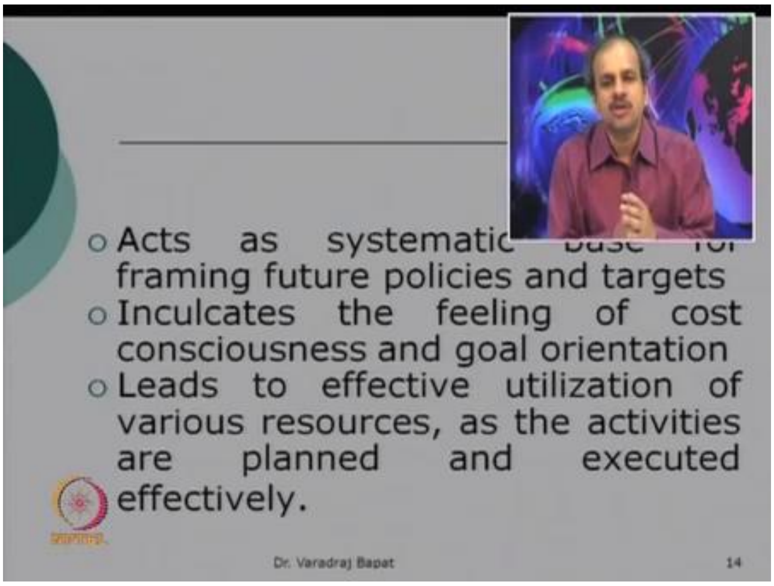

Next is, it acts as a systematic base for framing future policies and targets. So, this year's budget can be used as a base for next year's budget. We know that, for achieving this particular goal. So, much of resources were allocated and this is how the actual performance was done. So, for the future periods, when we are fixing up our policies and targets, budget becomes a very systematic base. It inculcates a feeling of cost consciousness and goal orientations. That is very important.

So, what happens is, because of budget, employees at various stages. Whether, at a CEO or a top level or down to a very subordinate level or all employees know, what is a goal and there is a feeling of goal orientation. So, that, energies are properly channelized and there is also cost consciousness. So, people try to avoid unwanted expenditure and focus on doing, what is very important, what is critical. It leads to effective utilization of various resources at the activities are planned and executed effectively.

So, you know that, within the available resources, resources could be money, it could be time; it could be availability of machines, whatever. But, whatever is your available resource, they are used effectively, they are coordinated well. So, it does not happen that, you have setup installed a huge machinery, created lot of production facilities. But, you have not created proper marketing mechanism.

Then, what will happen, you do have lot of production facility, but you have not done enough to push your sales. So, you may not have enough demand, because of lack of demand, your production facilities will remain ideal. In budget, the effort is done to see that, there is proper coordination. So, whenever you take a decision to install new machineries and increase your production capacity, simultaneously you also focus on marketing. So, that, you create more demand.

Now, what will happen is, you have more production facility, you also have spent enough to generate more demand. So, selling is well done, but the delivery is not taken care. So, you are getting demand, but you are able to serve, because maybe your delivery mechanism is not done. Again, there will be idle resources. So, in budget, all functions are properly coordinated. So, that the resources utilization is effective and you are able to channelize your energies properly.

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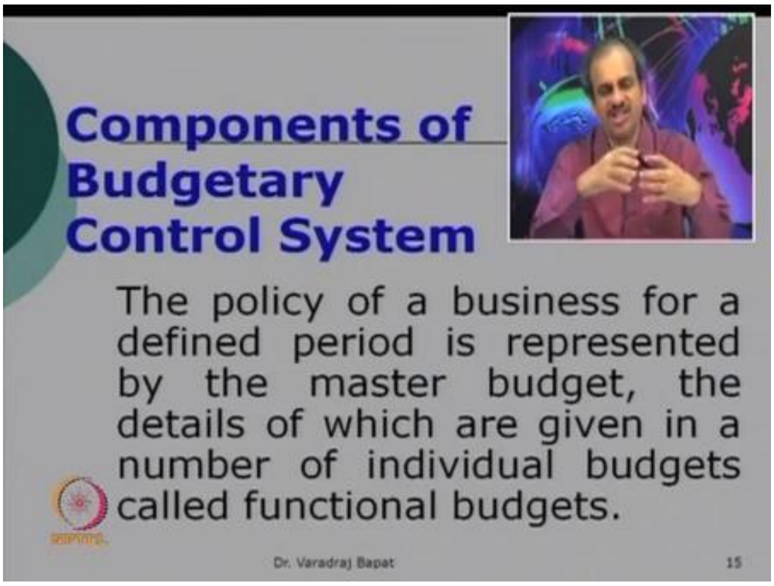

Now, let us look at the components of budgetary control system. Now, policy of a business for a defined period of time is represented by the master budget. So, master budget is a key component, starting point for the budgetary control system. That gives overall idea has to what should be done. Then, the details are in the individual budgets. Of course, it is a circular process; you have first, your master budget from which, you will do some allocations to individual or functional budgets. Again, from the feedback of functional budgets, the master budget maybe reshaped and so on.

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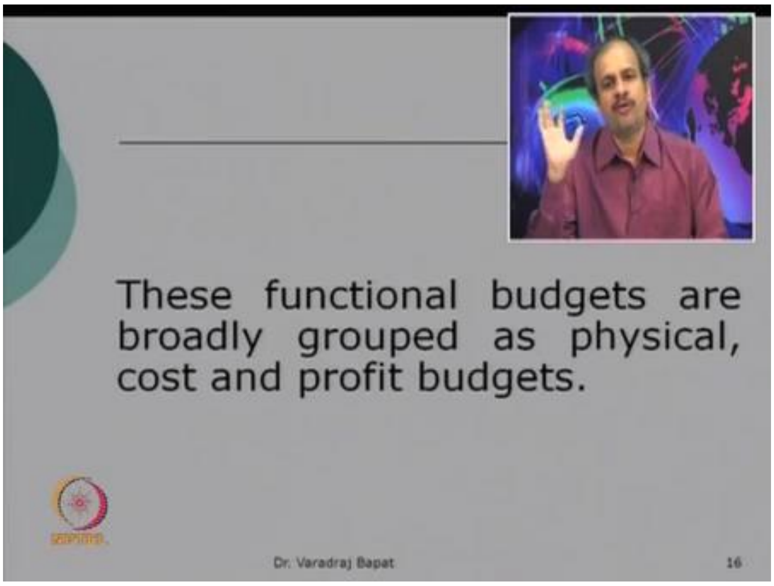

Now, what are these functional budgets, they can be grouped into physical cost and profit budgets. We will see, what are they, but broadly, these are the three types.

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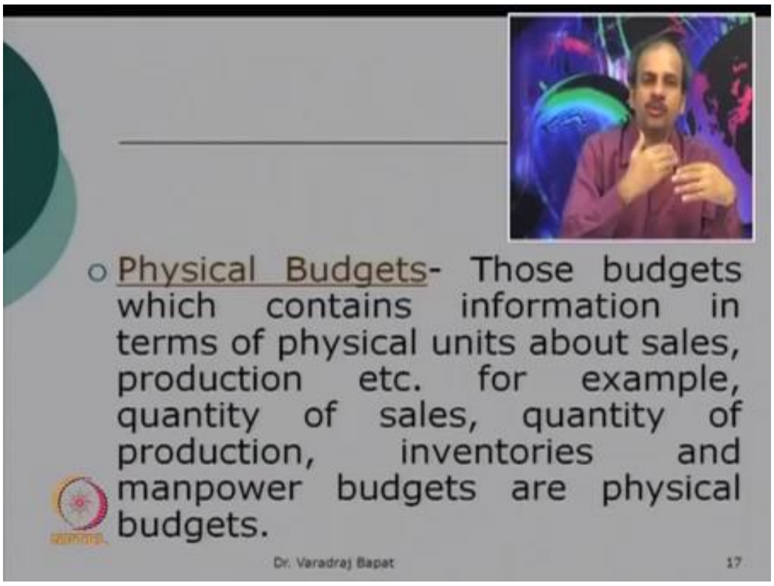

Now, let us look at, what are the physical budgets. These are those budgets, which contain information in terms of physical units. So, they do not get involved into monetary aspect. They look at the physical units of sales or production. So, examples are quantity of sales, quantity of production, inventory, manpower budget. So, here, you project, how much units will be sold.

So, if you have to sell, so many units, naturally, you have to produced that much. So, how much should be your production, what will remain in stock, how much is your opening inventory. If you have to produce so many units, how many man hours are required? To produce, these many unit, how much of power will be required. Do you have enough capacity to receive or generate that power? All these budgets look at physical terms, we are not looking at cost or the financial aspect here. In terms of physical units, this physical budget is prepared.

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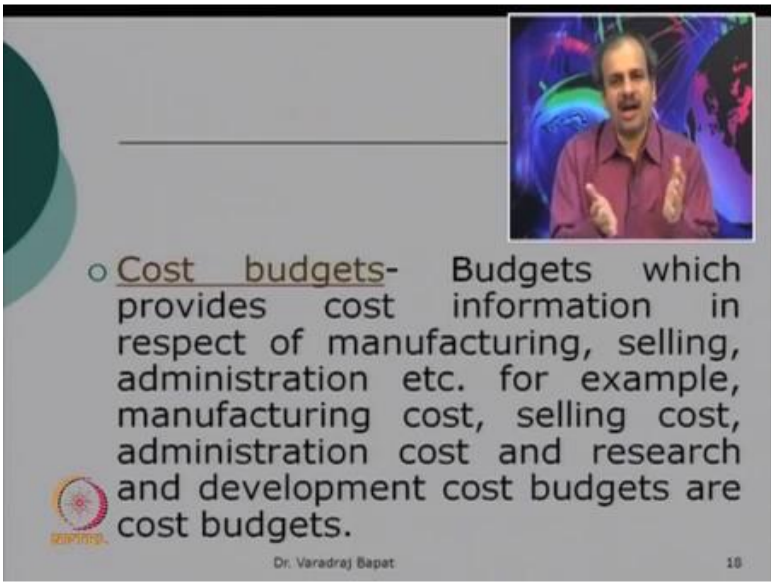

Next are cost budgets. The budget, which provides cost information, is called as cost budgets. So, here, you are manufacturing selling admin budgets, which project manufacturing cost, selling cost, admin cost, R and D cost. Now, the budgets, which we were talking earlier, the physical budgets. They act as a base. Based on physical budgets, you look at the cost per unit and try to calculate cost budgets. So, all the costs required for manufacturing, admin and various functions are properly summed up and you get various cost budget.

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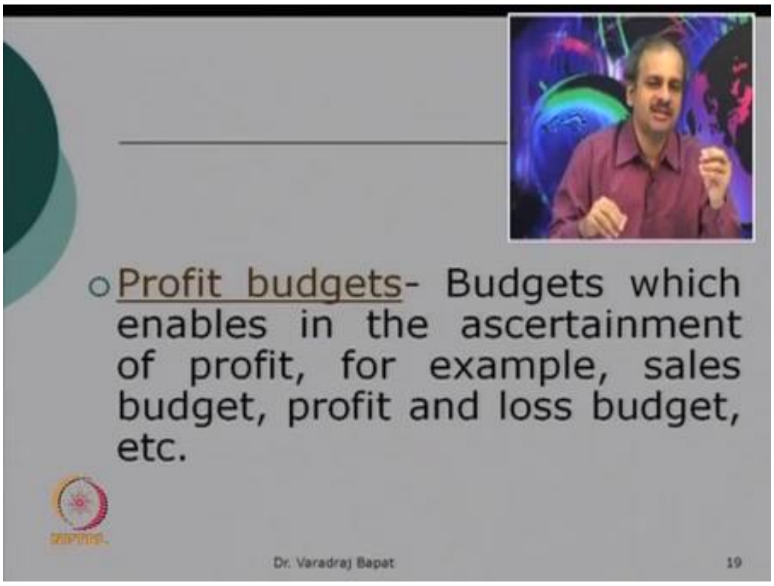

The third types of budgets are profit budgets. So, from physical budgets, you have developed cost budgets, from cost develop budgets, you can develop profit budget. So, they enable in the ascertainment of profit. So, you can make your sale forecast in terms of rupees of sales and compare with your costs. So, sales minus cost will give you profit. That is a sales budgets, P and L budgets are an example of profit budgets.

So, these are the three different types of budgets. In fact, 4 if you include master budgets. So, you have started with master budget. Then, in individual functional budgets, you have physical budgets. From physical budgets, you have cost budgets, from cost budgets, you get profit budget. And then of course, with this input the master budget is again revised. So, this process goes in cycle. After 2, 3 cycles, maybe, you will be able to estimate your budgets, final budgets before the starting of the period.

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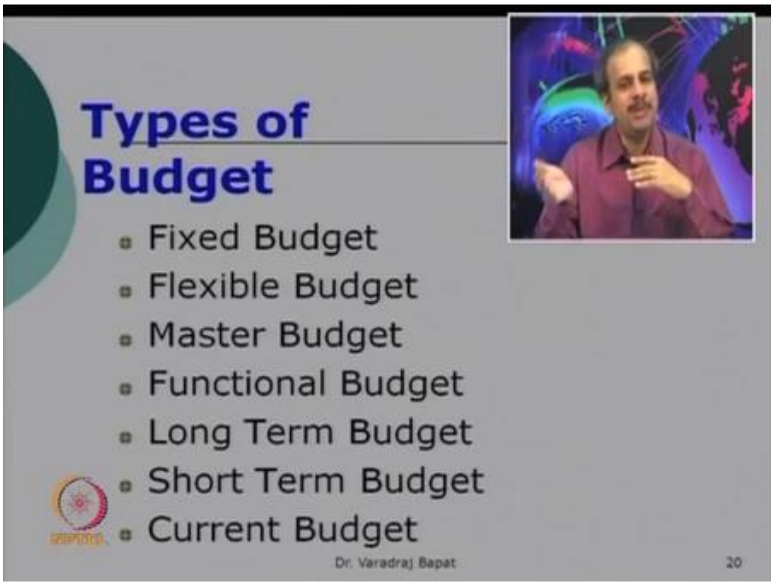

Now, let us look at the types of budgets. Now, budget can be categorized into different types, I have tried to enlist a few types. So, one of the ways of classifying is fixed versus flexible. We have just now seen master versus functional. When, you have long term versus short term and current. So, these are various types of budgets. Of course, apart from this also, there are more budgets like zero based budgets, PPS. But, we will look at it later. So, some of the important types of budgets, I have tried to note.

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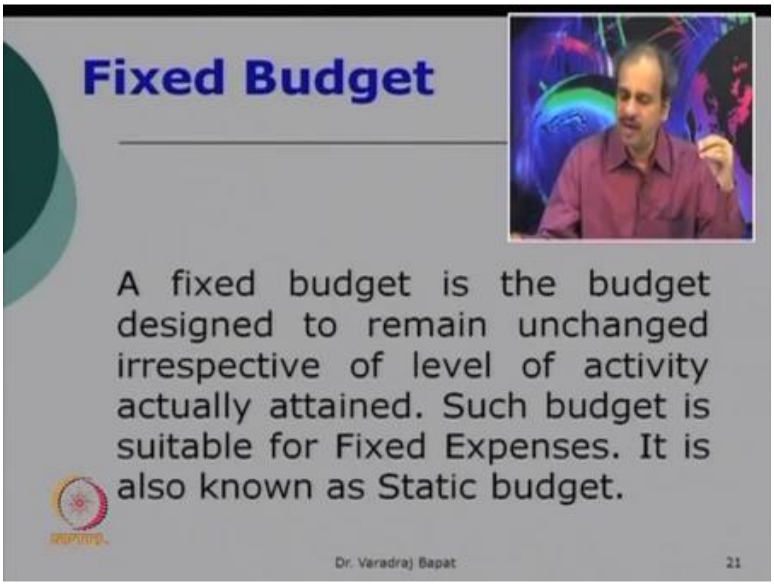

Now, first is fixed budget. As the name suggests, it is fixed in nature. So, it is not programmed or arranged in such a way, that it can be change with the level of activity. It is an estimate of certain level of activity and cost for that level of activity or quantitative requirements for that level of activity. Such a budget is suitable for fixed expenses. It is also known as a static budget.

Can you think of an example of any fixed expense for which you can make a fixed budget. Just think over, we have discussed about fixed and variable costs, if you remember. So, can you think of some fixed budget, yes, I think most of you would be getting, rent is a good example, depreciation can be an example. So, for estimating such cost, you make the fix budget. Because, even if production changes, even if say demand for forecast goes wrong and you have to produce more or less. Fixed budget is not going to change. So, fixed or the static budget is usually preferred for fixed overheads or fixed expenses.

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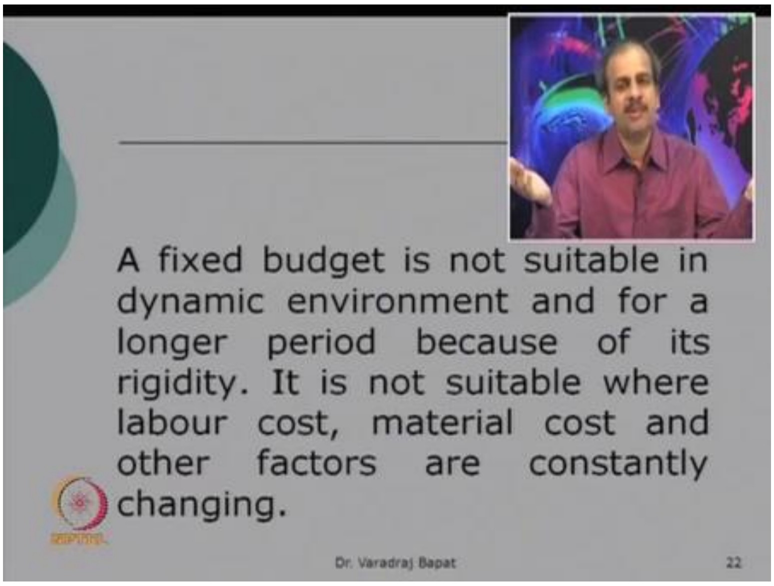

Now, this is not very suitable in a dynamic environment and it also cannot be used for a very long period of time. So, if your environment is changing dramatically, even your fixed expenses tend to change. Similarly, say the rent is fixed for next 3 years, but after 3 years, it is bound to change. So, for a longer period of time, you cannot use very rigid budgets.

And anywhere, for variable costs, you cannot apply fixed budgets. So, costs like, direct labor, direct material or power cost, the fixed budgets are not going to be of any use.

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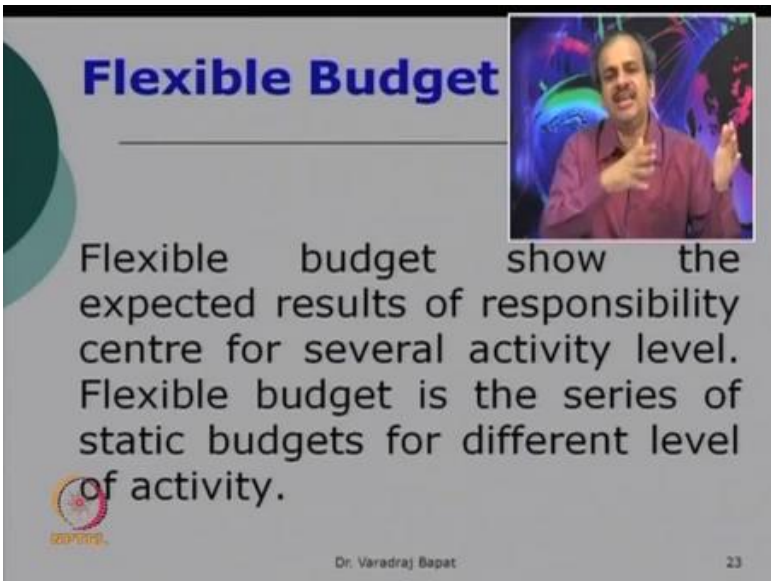

Now, let us look at flexible budgets. Now, flexible budgets show, the expected results of responsibility centre for several activity levels. So, what happens is, instead of fixing the budget, let say for 1000 units. I am estimating 1000 units. So, I have estimated production cost of 1 lakh. But, in flexible budget, instead of 1000, actually, it may become 1200, number of units may increase. So, for 1200 units, also I should know what will be the manufacturing cost.

Similarly, there is a possibility that number of units, may fall. Let say units, may fall down to 700. So, what will be my estimated costs? So, in flexible budget, a series of static budgets are made. So, instead of just estimating at say 1000, you estimate for 500, 600, 700, 800, 900 units. And also, if 1100, 1200, 1300, 1400 like that. So, for range of different levels of activities, series of budgets are made. And that is a structure of flexible budget.

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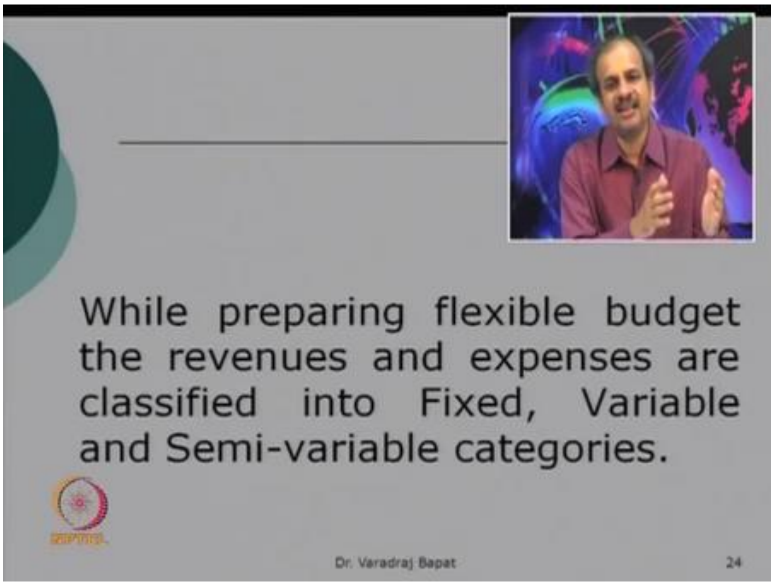

So, naturally, when the flexible budgets are set, all the costs should be properly categorized into fixed variable and semi variable. Because, if costs are properly categorized. Then, that will from as a good base for flexible budgeting. Fixed cost may not change much; variable cost will change with level of activities. Semi variable costs will not change. They may change step wise or they may partially change.

All this variability will be very much useful for fixing up of flexible budgets. Can you think of examples of each of this category? Again, we have done it earlier. Can you name, two fixed expenses, just think over? Suppose, you are operating a fleet of cars, you are into transport business. You own fleet of cars and give them on rent. Please, tell me, fixed expenses variable expenses and semi variable expenses.

I hope, most of you are getting, fixed would be depreciation of the car. It could be insurance of the car. Depreciation of the car, these are fixed. What are variable, generally, petrol will be variable, any other. If you are pay incurring, some costs as and when you travel. Then, that will be variable say, like driver allowances.

What could be semi variable, mostly driver salaries will be semi variable. They will have fixed component plus they may have some incentive maintenance will be semi variable and so on. I think, we have started earlier, but I am just repeating, because that, analysis or thus categorization will be very much useful to setup good flexible budget.

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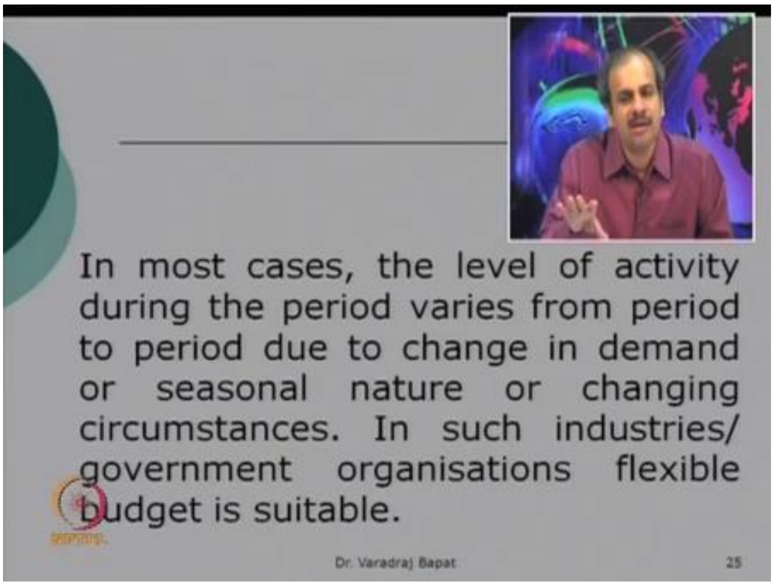

In most cases, the level of activity varies, either because the demand changes or because of seasonal nature or because of some circumstantial changes. In all such cases, flexible budget is very much suitable, both for industries as well as in government organizations.

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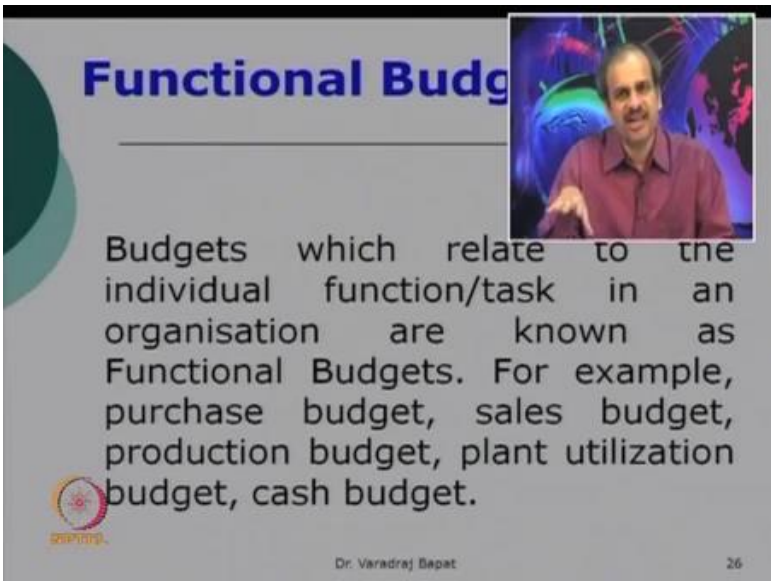

Now, let us look at other categorization, which we have already discussed. That is master versus functional. Now, functional budgets are those, which relate individual functions or tasks and look at them in detail. So, you have production budget, sales budget, you may have purchase budget, plant utilization budget, cash budget. All these are examples of functional budgets; they look in detail at a particular function.

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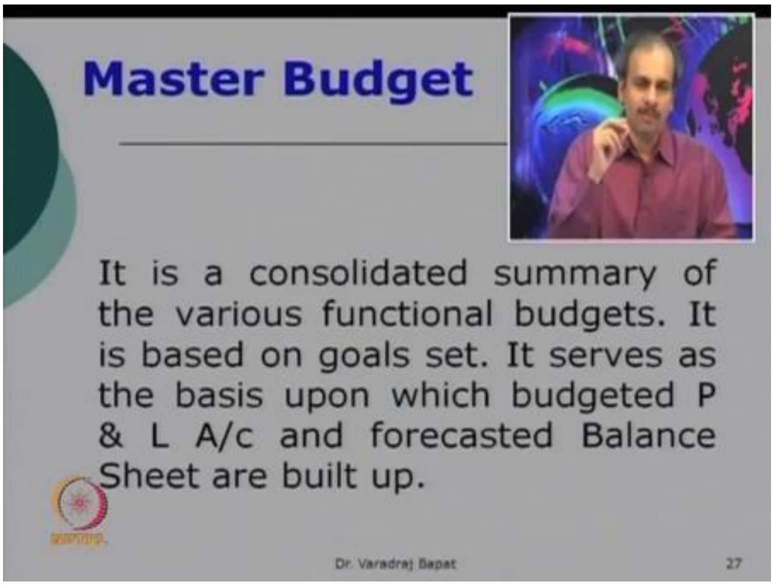

A consolidated summary of all these budgets is a master budget. It is based on the overall goal set for the organization. So, based on the managerial policy, you have a master budget. It may be divided into functional budget. Again, from the feedback of functional budgets in all the functional budgets are coordinated. You come out with a consolidated summary. And usually, the master budgets are in the form of budgeted P and L account or forecasted balance sheet.

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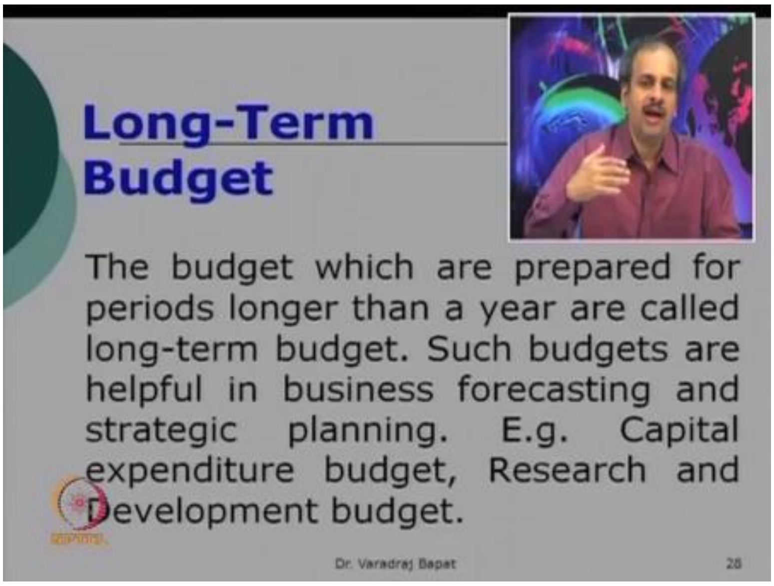

Budgets can also be categorized as long term and short term. So, naturally, when the budget is prepared for more than 1 year, usually, we call it a long term budget. It is very much useful for strategic planning. Examples of long term budget could be R and D budget, capital expenditure budget. So, suppose, we want to let us say acquire a due company in next 3 years.

So, we may have to start much in advance look at the target companies, due diligence, start negotiations. Then, look at how the company can be acquired, how it can be assimilated with our existing operations and so on. So, I just give you one example of capital expenditure budget. It could also be starting up new plants, it could be constructing of new infrastructure and so on. Same way, R and D budget often has to be allocated for a longer period of time. So, experimentation and R and D will have to be done for a pretty long time. Then, you will be able to develop a technology or get patent and so on.

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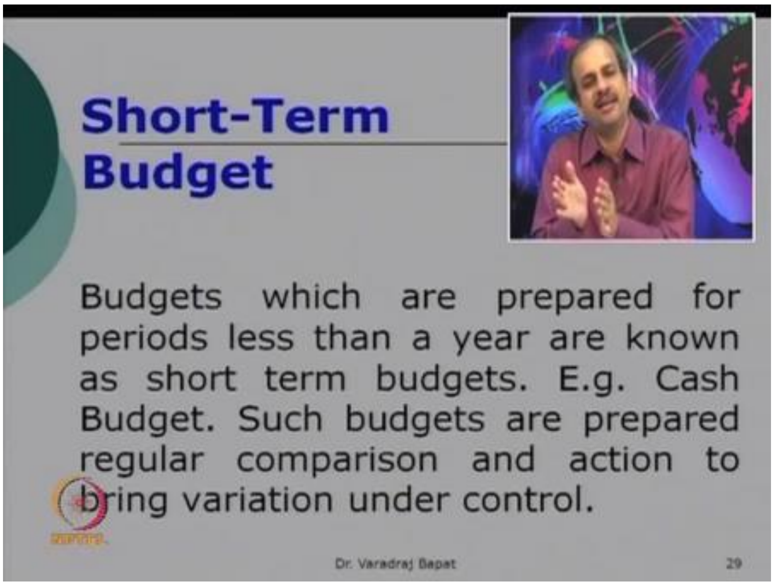

The next is short term budgets. Now, when the budgets are prepared for a relatively short term period of time, could be for a month or a quarter. It is a short term budget. Cash budget is a good example. So, in cash budget, we have to estimate the availability of cash for every month or every 15 days. So, that, we know that, for the expected expenditure, we have enough money.

There is a shortage; you have to arrange for the money. If there is excess we have to look at suitable investing. Now, such budgets are very much useful for control purposes. Because, you want to develop a budget compare with actuals and take proper corrective action at the earliest.

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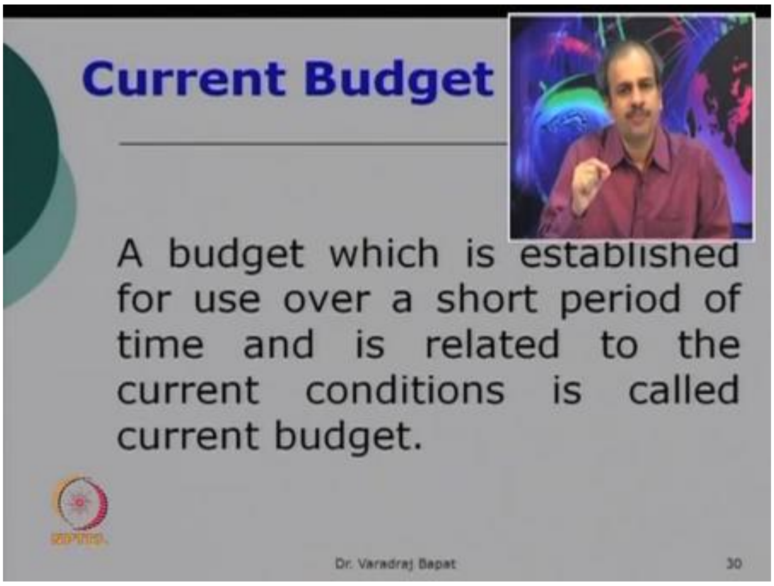

Similar to short term budgets, you also have current budget. These are also for a used for a short term. And they are only prepared considering the current scenario.

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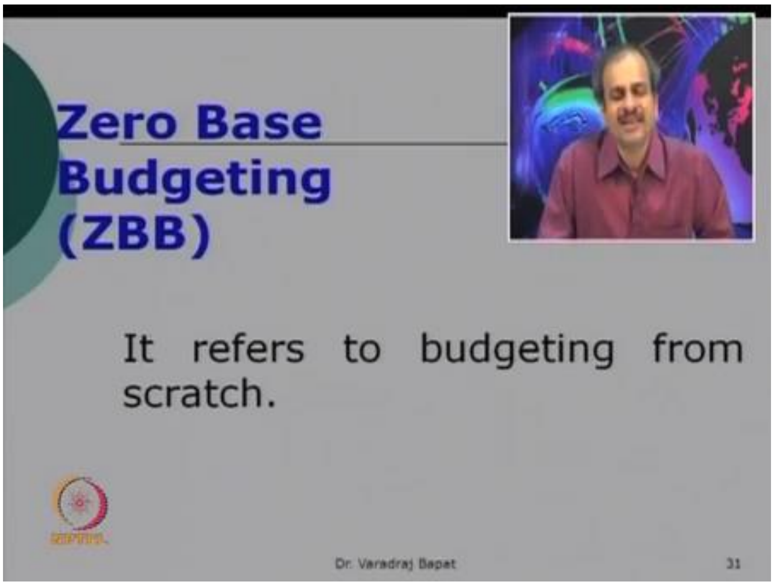

There is one more interesting concept, known as zero based budgeting. But, before going to zero based budget, I think we will look at few cases on whatever we have discussed. Let us look at the cases to make the things more clear.

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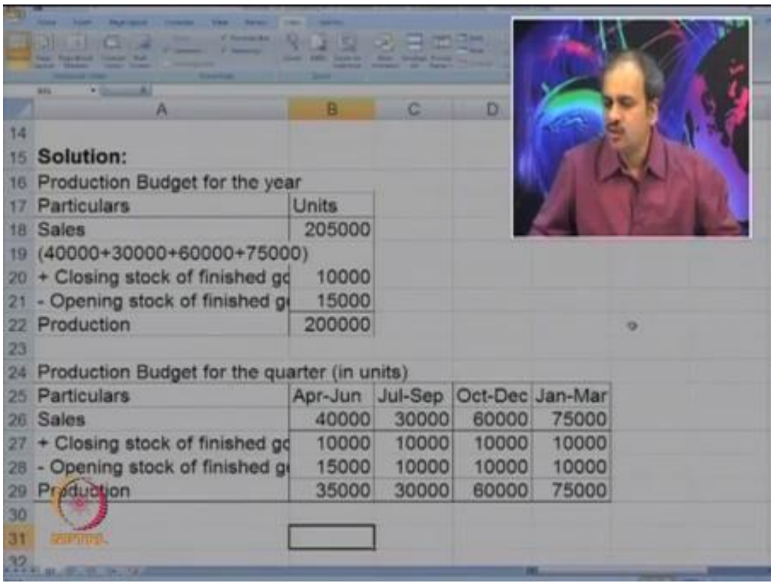

Look at the case now. So, we have a single product company, which has estimated the sales for next year, quarter wise. I hope, you can see the data from April to June. It is 40,000 units. July to September, 30,000, then 60, 75, the opening stock is 15,000. So, what you have got is a demand forecast in terms of sales. Now, company wants to maintain 10,000 as a quarter ending inventory.

So, you have to calculate the production budget, quarterly as well as yearly. So, how will you do, a very simple budget. But, just this will give you a clear understanding to what a functional budget is, think over, how you solve it. So, you know the sales, you know opening stock, you also know the closing stock. So, you can easily calculate the production. I hope, you know that sale is a quantity.

You must sell plus you have to keep the closing stock minus the stock, which you have in hand. Opening stock, that gives you your requirement of production. Let us look at the production budget. So, first, it is prepared on yearly basis. I hope, it is very clear to you, very simple. First, we have calculated the total sales for all the 4 quarters, which comes to 2,05,000. Add the closing stock, because only 10,000 stocks is enough. But, the opening stock is 15,000.

So, it means that, we have to make production of 2 lakhs units, during the year. But, of course, this is a very, very overall picture. It is an annual picture, we would like to know, what you have to produce every quarter. So, this production budget, which is yearly, can be broken down into quarterly production budget. So, how will you make it, just think over, let us look at quarterly production budget.

Now, instead of one column, we have made it column for each quarter. But, otherwise the structure is same. The sales for each quarter, has taken. So, they were estimated to be 40, 30, 60 and 75. So, that is your starting point, sales add to this, the closing stock. You know that, at the end of the quarter, 10,000 closing stock is enough? Less opening stock, at the beginning, we have opening stock of 15,000 and in subsequent quarters. Now, the opening stock will be equivalent only 10,000.

So, production is 35, 30, 60 and 75. Now, this is an example of a functional budget. Now, what type of budget it is, it is quantitative budget, cost budget or profit budget, which type it will fall in. I hope, all of you are able to answer. This is an example of a quantitative budget. You can see we have not one into cost aspect right now. We do not know how much cost is spent to make these units or we do not know, how much money needs to be allocated, how much profit is generated. But, this is a starting point. Here we have just calculated, what will be the requirement of units to be produced.

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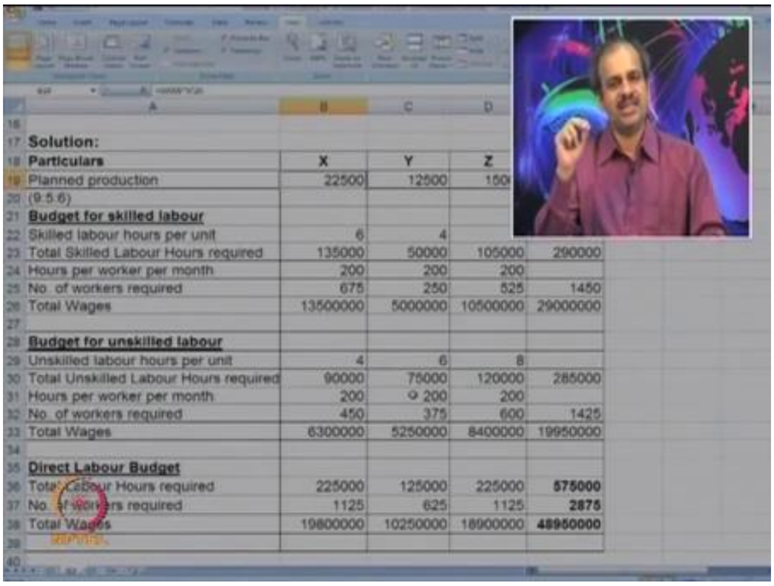

Now, let us got to the next case, is it visible. So, company produces three products. Now, the requirement of skilled, unskilled is clearly given. So, your three products X, Y and Z. Every product requires certain number of labor hours. So, skilled labor hours required are 6, 4 and 7 per unit of X, Y, Z and semi skilled is 4, 6 and 8. The wage rates are 100 and 70 and the production ratio is 9 is to 5 is to 6 with a total production of 50,000 for a particular period.

You are required to make direct labor budget, giving both number of workers needed as well as the wage cost. So, how will you go about, can you think over, how will you able to know the wage cost, I think, you are able to guess well. We will look at the total production first, which is 50,000. The ratio is given 9 is to 5 is to 6. So, we can calculate the requirement of each product X, Y, Z.

Now, based on that requirement, look at the number of workers as well as the cost, which is required to be incurred for direct wages. So, let us look at the solution now. We start with the production of 50,000 broken in the ratio of 9 is to 5 is to 6. So, we get 22,500 of X, 12500 of y and 15,000 of Z. Now, the skilled labor is first we are budgeting. So, budget for skilled labor skilled labor hours per unit are 6, 4 and 7.

So, 22,500 into 6, we get to know the total skilled labor hours required, which is 1,35,000, 50,000 and 1,05,000. So, if you sum it up, you get 2,90,000 of hours required. Now, number of hours per worker per month, you can calculate, because it is given that each worker works for 8 hours and for 25 working days in a month, so 25 into 8. So, hours per worker per month come to 200. So, if you divide 135 by 200, you will get the number of workers required, which is 675 for X, 250 for y and 525 for Z. So, total is 1450.

In other words, we need 1450 workers for the coming month. The total wages, now the wage rate is given, which is 100 rupees for skilled labor. So, number of hours, which is 1,35,000 into 100, gives total wage cost of 13500000 for product X. Same way, for product Y, it is 50 lakhs and for product Z, it is 10500000. Now, all these three are total. So, you totally get 29000000 is it correct, any doubt. So, this was for skilled labor requirement.

Now, on the same lines, we will estimate the requirement for unskilled labor, both in terms of number of workers as well as the cost. Now, think over, can you make it yourself. Just as you have budget now for skilled labor, try to make budget for unskilled labor. Try to use your calculators or computers. Calculate the figure and then we will compare we are doing budgeting.

So, we should look at do something and then compare and see whether we are right or wrong. I hope, you are able to proceed properly. So, we will start with the unskilled labor hour requirement per unit, which is 4, 6 and 8. This was given to us earlier 4, 6, 8. So, based on 4, 6, 8; we calculate the total skilled labor hours, which are 90,000, 75,000 and 1,20,000 divided by 200. So, you get 450, 375 and 600.

So, number of unskilled labor required is 1425 almost similar to the number of skilled labor required that was 1450. Now, we can look at the wage cost, which as you can see is, 63,00,000, 52,50,000 and 84,00,000. So, totally, it is 19950000. This is also called as unskilled labor wage budget. Now, take the total for skilled plus unskilled, we have been asked to estimate the quantity as well as cost.

So, total labor hours required, number of workers required and wage cost are total. So, the figures are respectively 5,75,000. You need workers 2875 workers and the total cost will be 4,89,50,000. Have a look at budget once again. Now, I hope, you are able to fully see a direct labor budget or direct wage cost budget. Now, what type of budget it is, is it a physical budget cost budget or a profit budget, as the name suggests, this can be categorized as a cost budget.

You will see the starting point was a physical budget. That is the production budget, which was known. From that, physical budget we have multiplied by the number of hours required, wage cost and so on to get the total wages. That is the cost budget.

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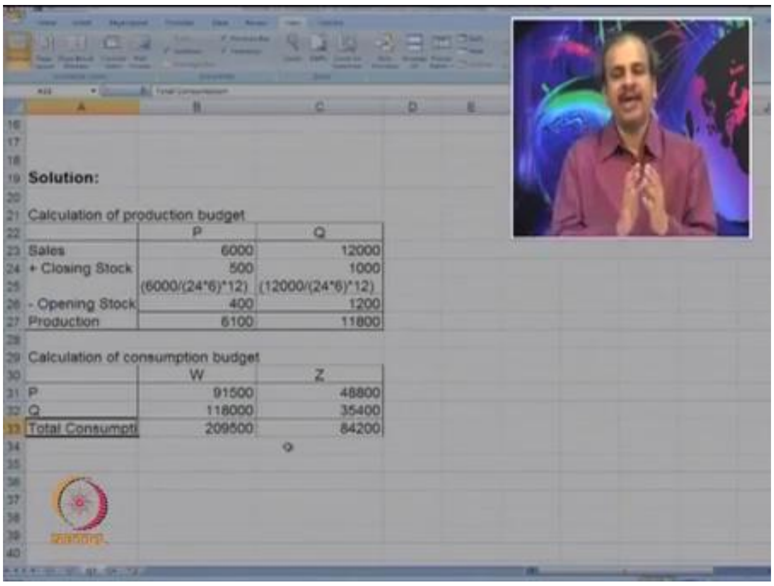

Now, let us go to one more case, read it carefully. So, here we have been asked to estimate the raw material consumption. So, it is known as raw material consumption budget, company manufactures two products P and Q, use to two materials, which is W and Z. Product P requires 15 units of W and 8 units of Z, product Q requires 10 units of W and 3 units of Z. The sales manager has estimated sales of product A to be 6000 and B to be 12,000.

Now, there are 24, 6 days week each in a budget. Opening stock is given as 400 and 1200. Now, the targeted closing stock is 12 days of sales for both the products. So, you have to prepare raw material consumption budget. So, how will you go about, I think, your guess is right. The starting point is, we should know how much production is to be done. We are given sales.

So, from sales, estimate the production, from production of P and Q, try to look at the requirement of W and Z, which is the raw materials and then multiply by cost. So, sales are 6000 and 1200 of P and Q. Then, we have estimated the closing stock, taking 12 days sales. The closing stock comes to 500 and 1000 units. Opening stock was given 400 and 12,100. So, production becomes 6100 and 11,800.

Now, look at the consumption, which is we know that, it requires 15 units of W to make one unit of P, you can just go up and check. So, now, you have 6100 units of P. So, for W, requirement of W, we have multiplied B 27 into 15. So, 19,100 units of W and 48,800 units of Z are required for P. In the same way for Q, we have looked at the production of Q, which is 11,800 and multiplied it by 10 and 3 to get the requirement for Q.

Now, you can take the total requirement of W, which comes to 2,09,000 and 84,200. This is the total consumption of raw material. You can call it as a raw material consumption budget, I hope, it is clear to you. Now, this falls in which type, you are right, this is also a quantity budget. We have not gone into cost, we have just looked at how many kg’s or how many units of raw material are required.

So, today, what we have discussed, we have discussed, what the budget is. Then, we have seen, what is budgetary control? We have discussed the objectives of budgetary control. Advantages, very, very nutshell, we can say that, this is a technique of cost control, but goes beyond the realm of cost. It is used as a planning tool. You plan well, channelize your energies properly and try to achieve the goals. That is the objective of the budgetary mechanism. It is used in government as well as industries.

Now, budgetary control improves our planning, directing and coordinating. We have also looked at some of the cases, were we have calculated, production budget, raw material consumption budget. In one of the case, we have also calculated the direct wage cost budget. So, in next session, we will do, one or two more cases. And we will also look at some of the techniques like zero based budgeting.

Thank you so much.