Management Accounting Professor. Anil K. Sharma Department of Management Studies

Indian Institute of Technology Roorkee
Lecture-60

**Implementation of Management Control System 2** 

Welcome all so now we are meeting here for the last lecture of this course and we are discussing the concept of management control system and in the previous classes I discussed with you several certain important techniques of say introducing or implementing the MCS Management Control System in any business organization.

So carrying the discussion forward now I will talk to you some other techniques that how we can use some other techniques to improve the overall performance of the organization and next technique in the series of quality control.

Quality control is a very very important aspect of improving the operating performance of the organization your product must be a very very say you can call it as good quality product which we are going to manufacture your service must be of a very good quality service which you are going to render to the people.

Only then the people will stay with you otherwise because after globalization supply side has improved like anything even in a country like India also so you cannot say that today the people or through customers who are supporting the company X they will continue to means doing so unlimitedly because means they have no other alternative.

Today there series of alternatives available and people the moment they get the option they immediately shift to the new products or the new services and since we are a say you can call it as say price sensitive economy, India is a price sensitive economy income level of the people is not very high.

We have the reasonable amount of the income sometimes maybe for the want of quality or reasonable quality prices is also important for us. So we have to maintain balance between the quality and price because peoples income being limited sometimes the quality is acceptable not very excellent but If the price is quite less people for those kind of the products also.

So it means we have to strike a balance between the product quality then it's price and if you want to talk about the quality. Quality control is a very very important technique of insuring

the better performance and keeping the affairs of the organization under control for example if you talk about the electronics industry or even the 2 wheelers industry.

Today in India who is supplying us the or providing us the 2 wheelers largely they are the multinational companies. Honda is a company which has the I think the largest market share in the scooters market right.

So why the Honda is successful why their say the product like Activa and others are very successful because of the very good quality and very good performance of the product. The Indian companies who are there in the market before liberalization before this Honda and other companies enter the market they are now where in existence now.

You can understand that which company was supplying us the scooter before Honda came to India and today where that company is. So we have only scooters coming from the multinational companies so Indian company say hero motor corps is also miss into that segment still the largest market share is with the Honda and Activa is the most preferred brand.

So it means in that case one important reason for the product success is the good quality product. So quality control is a very important another technique of ensuring MCS and quality control is the effort to ensure that product that product and services perform the customer satisfaction that quality control is effort to ensure that product and services perform to the satisfaction of customer or to the customer satisfaction.

So if the customer is satisfied in terms of quality and in terms of the price so you can think that the future of the company is good and they can expect a good growth if the customer is not supporting than you can understand that what will happen to that organization right.

See there was a company in the market product with the product Onida there was a time was a time when the Onida was a leader in the market right and they used to have a punch line that neighbors envy owners pride but because of certain reasons. Now means the product Onida which was preferred by the customer is too much a few years back.

Today means they are looking for the market they are striving for the market because the better quality product has come up in the market from the Samsung LG and Sony. So it means a product which is best in the market at one point of time that does not stay best because somebody else may come out with the best options.

So always think of improving the quality of production and then sustaining in the market for long so what we can do we can prepare a quality report means periodically.

(Refer Slide Time: 05:09)



We can prepare a quality report and in a cost of quality report the financial impact of the quality is displayed in a cost of quality report the financial impact of the quality is displayed where we can take different measures prevention means no defect should be there in the product you manufacture a product in such a way that it does not create any problem.

Even during manufacturing even after manufacturing or even when it reaches to the customers and then we can talk about the internal failures we will have to take care of a internal failures so that within the organization there is a as low as failure organization as possible and continuous appraisal is also required and external failure of the product is also time be avoided.

We have to make sure that prevent any kind of defects coming up in the product prevent any kind of internal failure prevent any type of the external failure of the product and then always continuously appraising the quality of the product what we are doing in which direction we are doing and what is the quality or the value of that product which we are delivering to the customer. So quality control and preparing the quality reports continuous quality reports it is a very very important component

(Refer Slide Time: 06:22)



Quickly prevention cause are the cause incurred to prevent the production of defective products or defective products or delivery of substandard services do not do that if you want to means maximize the quality of the product you prevent any kind of the defects in the products.

Appraisal costs are the costs incurred to identify defective products or services right. So it means if you go for regular appraisal then you can minimize the products defects and appraisal itself make sure that we are very very careful about the overall performance of the product within the organization and even when it reaches to the customer.

(Refer Slide Time: 07:00)



Internal failure costs are the cost of defective components and final products and services that are scrapped or reworked within the organization. An external failure costs are the costs caused by the delivery of defective products, such as field repairs, returns and warranty expenses. So it means all these 4 you can call it as demerits of the products or important components of ensuring the quality we should be careful that we will prevent that nothing wrong happens with the product we will take care of means what best can be done with the help of the appraisal.

We will avoid all internal failures during the manufacturing the manufacturing process and we will like to minimize the external failures may be then the product has reached up to the customers. So if you are doing all these things it means you are a quality conscious organization and you are careful about the customer's needs.

So we can prepare the regular quality control charts, quality control charts keep on helping us to understand that out of the total products manufactured by us during that one operating cycle or for the given amount of time how many products are means up to the mark up to the quality how many defective products are there are we able to minimize the defects in the products over a period of time or not it is a matter of control right.

(Refer Slide Time: 08:29)

## **Quality-Control Chart**

- The quality-control chart is a statistical plot of measures of various product dimensions or attributes.
- This plot helps detect process deviations before the process generates defects.



So the quality control chart is a statistical plot of measures of the various products dimensions or attributes this plot helps detect process deviations before the process generates defects.

(Refer Slide Time: 08:38)



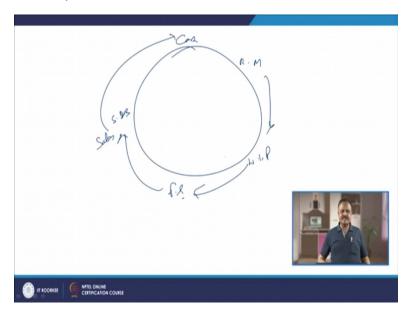
So it means this is your quality control chart quality control chart will help you to understand that the say this is the you can say that we have given there the quality control chart and we are trying to say here that goal of that defects is on the one side this yellow line says that one is the goal that it should be around say 0.6 percent not more than that means even not 1 percent of the manufacture product should be defective or develop any kind of the defects and then you try to find out that what actually we have seen while going for the performance.

This red line is showing that our defects have been sometimes for a very few say weeks it has been less than the target of 0.6 percent but many times the defects has been more than the targets so it is serious concern is a cause of concern that we should be very careful why the defects are even sometime touching 2 percent against the standard target of the 0.6 percent.

So we have to be very careful this type of the quality charts can help us to understand in which direction we are going and whether we are ensuring the quality of the product or not right. Then we talk about the cycle time, cycle time is very very important another tool to improve the quality of the product it is not only question or may be the requirement that you have to improve the quality of the product.

You have to keep the cycle time also within the control for example our operating cycle is normally of 10 days and operating cycle is means how can you decide the operating cycle the operating cycle is something like that this is the operating cycle right.

(Refer Slide Time: 10:13)



In this operating cycle we have a cash here we convert that into the raw material that means when we purchase raw material then we go for the issuing the this material and then we create it the WIP work in process and then from the work in process we create convert that into the finest goods and from this we go for the sales and when you go from the sales part of the sales are cash which becomes a cashier and sometimes we create the sundry debtors which we sell on credit.

So it means we started with the cash initially we had a cash in our hands we convert their cash in raw material, raw material into work in process, work in process into finest goods, finest good to sells and sells are means in 2 categories one is the cash sales immediately after the sales in the market we could get the partially we could get the cash back and part of the sales which are made on credit those sales will come to us at the latest stage.

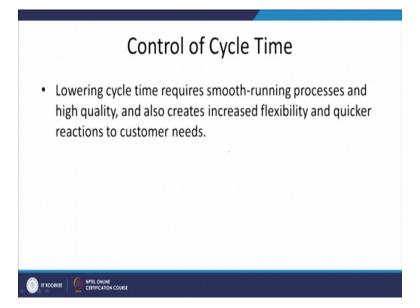
(Refer Slide Time: 11:17)



So total investing cash and getting the total cash back is called as the operating cycle or you can call it as the length of the operating cycle and we have to keep it as low as possible quality is important but the cycle time is also important cycle time or for example it is written here, cycle time here or throughput time is a time taken to complete a product or service or any of the components of the products or service.

One key to improving quality is to reduce a cycle time you have to because if you increase the cycle time or all your input costs will go up and if the input costs goes up your productivity will be affected. So you have to achieve a twin objective manufacture the quality products and then to within the minimum possible time. So that your operating structure is walking efficiently and your financial structure is going to reflect that performance.

(Refer Slide Time: 12:04)



Then controlling of the cycle time lowering cycle time requires smooth running processes and high quality and also creates increases flexibility and quicker reaction to customer needs right. Lowering cycle time requires smooth running processes and high quality and also creates increased flexibility and quicker reaction to customer needs so controlling the cycle time is also equally important.

Now we will talk about something which is called as the productivity because as I was talking to you cycle time they are connected techniques they are connected techniques. When you go for the quality control you prepare the quality charts you minimize the affects you create a quality products and after that we talk about that say reducing the cycle time again manufacturing the good quality products within the minimum possible time.

Improving upon the cost effectiveness and then if you are able to that if you are able to minimize the cycle time certainly your productivity is going to improve and what is ultimate objective of the firm that we should improve the productivity, productivity is basically the ratio of the input output or you can call it as the output to input.

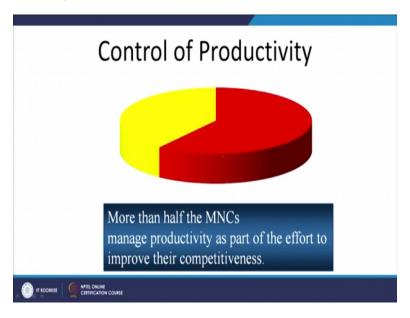
How much input we are giving to get the desired amount of output that is called as the productivity and increasing the productivity is a sum total of many efforts quality for raw material availability of the different other factor of the reproduction, efficiency of the labor availability of the power at the good quality plot building machinery everything.

So our overall operating manufacturing processes are efficient certainly your within the minimum input or by giving the minimum input you can enhance the productivity you can

enhance the output and that is ultimate objective management. control system why we are talking about is we want to maximize the performance of the organization to a level where it is called as the best performance. So we are talking about the different techniques and both the techniques in terms of an operating improving the operating results and in terms of improving the financial results.

So if your operations improves financials will automatically improve so productive is another important area that we can say make sure that with the minimum input say the output is best or you can call it as not best at least it should be optimum and when it is optimum when there is no wastage. We are preventing the defects we are making the best utilization of our inputs then the say your productivity goes up.

(Refer Slide Time: 14:51)

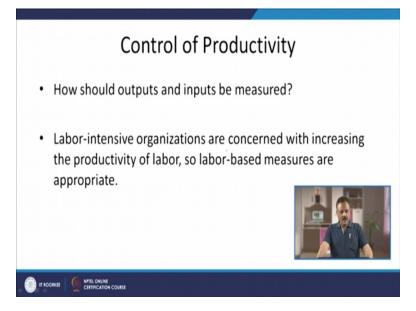


So for example you can show this side of the chart that what is the our productivity more than half of their MNCs mange productivity as part of the efforts to improve their competitiveness. It means productivity means in terms of this type of the pie charts that in say how many total segments of the market in how many segments we are adjusting and the larger the market share the firm has it is indication that because of many factors including the better productivity because when the productivity will improve with the minimal input you will come out with the maximum output so what will happen cost per unit of the production will come down.

And when the cost come down certainly a prices will be very very less or very very competitive and when that all happens then certainly this kind of the market share pictures

can be created that means more than half of the market we are adjusting right. So it means the control or productivity improve into the productivity leads to the overall better results and then the better performance.

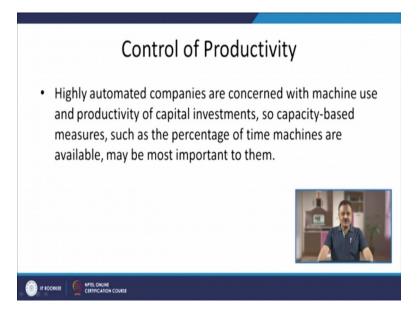
(Refer Slide Time: 15:55)



So control of productivity means how should outputs and inputs be measured? How should outputs and inputs be measured as well as managed? Right labor intensive organizations are concerned with increasing the productivity of labor, so labor based measures are appropriate.

How to keep you labor motivated how to find the labor which is more efficient how to means labor committed and create their sense of goal congruence in the mind of the labor in your organization different ways and means can be found out. So ultimately if we are able to do that we are able to achieve the increased performance increased productivity and it is a result of many organizational say control techniques.

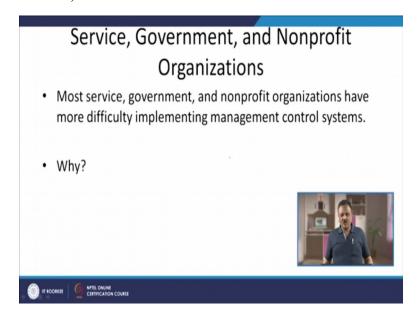
(Refer Slide Time: 16:38)



Then is control of productivity highly automated companies are concerned with machines use and productivity of capital investments, so capacity based measures, such as the percentage of time machines are available may be most important to them. So highly automatic companies are concerned with the machine use and productivity of capital investment so capacity based measures such as the percentage of time machines are available and may be most important for them right.

So it means we have to say make sure that all the factors of the production that is a men material machine everything is moving or we are using or utilizing it to the best possible extent best possible level so that overall output goes up maximum becomes maximum as compared to the input given and within the minimum cost of production you are able to come out with the finest units final production and you can rule the market by controlling the prices.

(Refer Slide Time: 17:45)

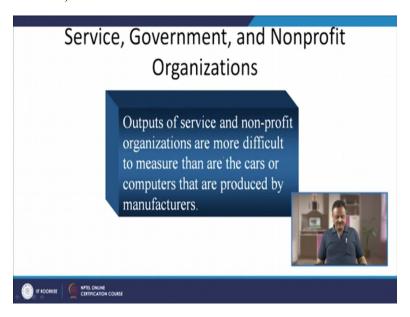


Now quickly we will talk about other things that is the say services, government and nonprofit organizations is there any possibility of the management control system in the say non-profit organization also or only we can talk about in terms of the business organization also or non-government organizations also or may be the profit organization also.

So we say when we talk about the MCS management control system is equally important in all the organizations whether they are government nongovernment manufacturing or service organizations everywhere you need the right quality of the products the best delivery the best customer satisfaction because everybody generating services all organizations they are generating services they are creating products and when they are generating services and creating products ultimate purpose is delivering the best value to it is customers.

Whether we are doing it for the profit motive or we are doing it without the profit motive that is not the case the important thing is that what we are producing why we are into adjutancy and are we able to achieve or deliver the best or not that is important so most service organizations service government and nonprofit organizations have more difficulty implementing management controls system because the you can call it as measures of exercising control in the known profit organizations are not very very standardized they are not very very standardized they are maybe some times less then standardized or because people do not take them seriously so there some problem comes but management control system is equally important in the government organization also and the nonprofit organization also.

(Refer Slide Time: 19:26)



Output of services and nonprofit organizations are more difficult to measure than are the cars or computers that are produced by the manufacturers in services efficiency sometimes for example let us talk about the mobile telephony this is service based organization is a service important service we are using it so mobile telephony now sometimes we are in a fix that which company in India is giving the better internet services which calling services right.

So ones we use the service of one organization sometimes we remain less satisfied and we switch over to the other organization and the other organization in other form also if we will the same kind of the situations prevailing. So it means we are not able to find out what are the important parameters we are not able to measure it that what is a effectiveness of the service of the other companies.

So it means some standard measures happens have to be found out right. So because if you are manufacturing a car you are manufacturing a computer you can easily find out that in my segment of the car how much price I can pay for that car what kind of the efficiency from the product I can expect is much more easier and better to measure the performance of a product as compared to the performance of a service.

Similarly in the nonprofit organization because profit is a very very important measure of measuring the performance of any organization you fix up the target that this much of the profit we want to earn in the say coming one quarter of the year or in the next 3 months and if that is not a achieved you can find out that there is something wrong happening in the organization.

But in nonprofit organization when we are nonprofit organizations when we are not focusing upon the profit it means ultimate purposes that we have to maximize maximum we have to achieve is that your form must be operating your organization must be operating at the break even that your say the price of your services or the products must be equal to the cost.

So it means are we able to reduce the costs so that the means the price also can be minimized and the benefit can be passed on to the final user because if you are saying that whatever we manufacture whatever the cost we incur for manufacturing their product we are not to enter the say into the profit sort of things.

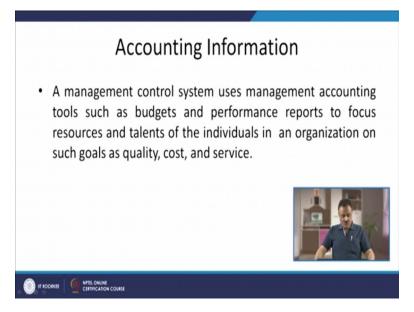
So it means what we are going to do is we are going to recover only the cost price so it means if we are able to pass on their product on a price which is basically based upon the cost. So whether that is the effective price or not we could have tried to reduce the costs further so that we don't have the profit in mind but we could have further reduced the price to the final user.

So since there is no proper quantitative parameter for measuring the performance of the nonprofit organization similarly the even the services organization so some time the difficulties come but is not impossible to introduce the MCS, MCS is equally important in the service organizations in the say government organizations also and in the nonprofit organization also.

In the government services we always complain of say lower quality of the services delayed services troubled services and that only one important reason could be there is no effective management control system because means we have not divide such measure that when we go to the electricity office to pay our electricity bill how much time means we are supposed to be there and the person should be taking for us to stand in the queue and then pay the bill to that person sitting on the window how much time should there, there is no standard measures for that.

So the person sitting there is also working with his own speed people are standing in the queue they are getting frustrated they are getting demoralized. So it means if some standard time is given by that organization that with in half and hour you have to collect the bills from the minimum 15 people it means per person the collection time should be not more than 2 minutes. He will also be careful and customer will also be very happy but that kind of standards are not there so MCS is little difficult to implement but it is equally important equally desirable.

(Refer Slide Time: 23:43)



Then we talk about the your say Accounting information a management control system uses management accounting tools such as budgets and performance reports to focus resources and talents of the individuals in an organization on such goals as quality cost and service right. A management control system uses management accounting tools such as budgets and performance reports to focus resources and talents of the individuals in an organization on such goals as quality, cost and service.

We are going for we have learned all these 4 5 techniques during this discussion and in this past say about say 30 hours of the discussion we learned we started with the basic understanding of the say management accounting as a discipline then we started moving with the costs sheet then.

We further banked with the budgets with the standard costing with the marginal costing and then activity based costing what all those techniques where all those are the sort of accounting measures cost accounting and financial accounting used hand in hand and then we try to find out that if you prepare the budget for the organization as a whole you prepare the budgeted income statement you prepare the budget related balance sheet and if the budget income statement is in our hands than what is their budgeted profit or losses known to us in advance we can means fluctuate little bit.

We can deviate from the desired results but if we deviate that deviation is also pre decided and the reason for that deviation are also pre identified or pre decided. So it means accounting information is most important and that is why I am saying in the business organization because we talk about the say financial information and in the accounting.

We can use only that information only that component of the information which can be measured in the monetary or the the financial terms so it means exercising implementing the management control system is much easier better and helpful in the business organization because everything has to be measured in terms of the money or the monetary terms.

So accounting information is very very important I told you in the beginning the discussion beginning of the discussion that management accounting itself is not at all disciplined it is a disciplined based upon the 2 branches other adjusting branches accounting financial accounting and cost accounting.

These 2 branches of accounting go hand in hand and we should have the prerequisite as a knowledge of these 2 means branches of accounting if you are having the sufficient knowledge of financial accounting and the cost accounting then only you can understand and you can make sure that how to take the important decisions in the organizations by the management at any level because everything has to be converted in the financial or the monetary terms right.

So that is the prerequisite financial accounting cost accounting and converting everything into the monetary terms and then measuring performance into the say your profit objectives cost objectives investment objectives. So you can say since everything is measurable in monetary terms in the financial terms is much better and easier to implement management control system in the business organizations as compared to the nonbusiness or the nonprofit organizations.

(Refer Slide Time: 27:12)



Now we talk about the futures of the management control system a changing environment must often means that organizations must set different sub goals or critical success factors and second thing is difference of goals create different targets and different benchmarks for evaluating performance right.

So it means this slide is most important when you talk about the management control system this slide is most important that future of management control system if you want to achieve the performance you have to implement your desired and targeted results that happens not in a business organization that happens in a human life also every human being.

We set the target for ourselves and we move in a control manner in a desired manner in a predecided manner on a pre-decided root or map I think we end up means achieving those objectives and we remain more satisfied. In the business organizations because it is a some total of many stake holders.

We have the say external stake holders we have internal stake holders and satisfaction of both the stake holders is important. your external stake holders are your customers most important you supplier second most important your investor another important and satisfaction of everybody is very much required.

If your customer stops supporting you your very purpose of existence is defeated. If your suppliers are means start creating the problems then again the firm will be in trouble your distributers if they are not supporting your distributing channels are not supporting because in

case of the distribution channels what happens distribution channels are largely the agents of the customers around the rather than the agents of the sellers or the organizations.

So if you want to make them loyal towards your organization you have to shift their loyalty from being in the agents of the customers to the agents of the organization and when it can be possible when it is not difficult for that channel of distribution or that say you are a wholesaler or retailer that when he has every reason to tell to the customer that if you by the product of this company use the service of this company you stand benefited right.

In both ways he is not telling a lie company is taking care of a distributer or that dealer and dealer is taking care of both company and the customer so it means all 3 are in win win situation right. So it means all external stake holders are important for the company. Similarly all your internal stake holders are important for the company have to set the target for employees but at the same time you have to keep them motivated.

You have to set the target for your manufacturing processes but you have at the same time keep them updated and in a best say performing situation and if you are able to do that then certainly you are able to create a organization which is excellent in every respect. when you talk about the difference in the multinational companies why the multinational companies are more successful as compared to the company performing with in the Four walls of economy because they know what is importance of the customer for them, what is importance of supplier for them what is a importance of their say investors for them, what is a, even the importance even the government agency for them their more disciplined they are more responsive organizations.

So as compared to some local organizations because the no they create the culture of customer satisfaction employee satisfaction supplier satisfaction your say the internal manufacturing improved manufacturing processes they use the best inputs they use the best manufacturing processes and they create the best quality of the products.

So if means the success of means when they are moving from the one country to the another country they are operating for example in 20 countries in the world what is a secret their people except their products because they know that how to create the best product bet quality of the services and then how to keep their customer satisfied and that does not happen without ensuring or implementing of better control system or better quality control price control distribution control and overall kind of the controlled business performance right.

So finally I could say here that future or management control system what it says a changing environment often means that organizations must set different sub goals or critical success factors. They should keep on evaluating themselves very regularly and try to find out how the environment is changing how the environment requirements are changing and how they have to fit into those requirements if they do not do that they are going to be out of the market you have seen already seen that many Indian companies who were leaders in the market before liberalization of Indian economy today they have gone out of the market people have means stopped buying their products and those companies are dead companies right.

So finally different sub goals create different targets and different benchmarks for evaluating the performance so all base evaluate the environment evaluate their selves and fix up the targets sub targets goal and sub goals and keep on achieving those targets and goals and all the times means ensuring that a continuous improvement takes place in our business processes and organization as a whole preforms as the best form in the market.

With this I will stop here and certain important things which I could discuss with you in this topic of management control system there we talked about some techniques which are important in improving the operating performance improving the financial performance and when both the performances of any business organization or may be even the nonbusiness organization improved certainly the improved operating performance leads to the improved financial results and we are able to improve the say overall financial performance of the organization and maximize the value of the firm for stake holders then certainly we can say we have achieved the business objectives for which we have come into existence.

I stopped the discussion on this means subject of management accounting and all these techniques I hope will be very very helpful to you to learn about that how the management decision making can be ensured in the companies in the practical situations and how these techniques are helpful for the management in their day to day decision making thank you very much.