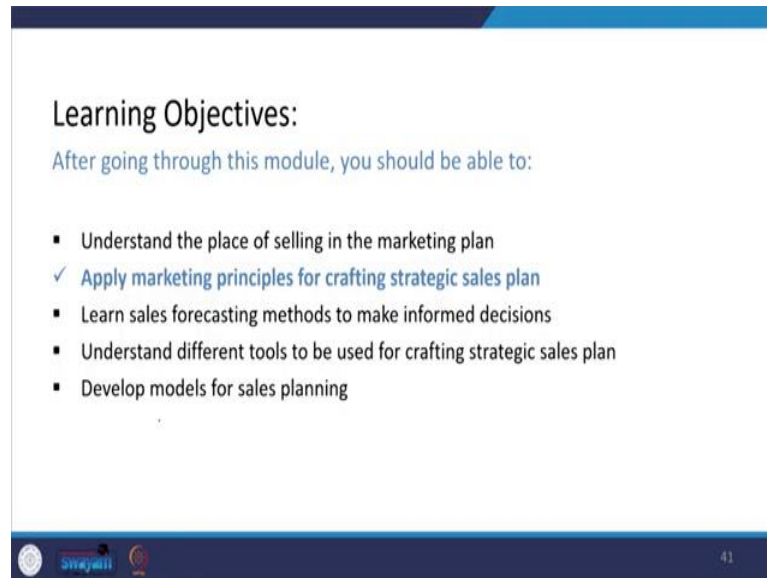**Strategic Sales Management**
Prof. Kalpak Kulkarni
Department of Management Studies
Indian Institute of Technology, Roorkee

Lecture - 09
Sales Forecasting Methods for Informed Decision - Making

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Now, as we know about how to incorporate this marketing principles in creation or crafting of the strategic sales plan let us move on to the next objective of this week that is to know what do you understand or what do we understand by Informed Decisions are and how sales forecasting methods can help us making these decisions that are very much informed by data and information.

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So, what is the importance of informed decision? Most companies rely on their real time historical data to guide them in their decision making process, right. However, making strategic decisions from these static reports is easier said than done for most executives and key stakeholders. Why? Because there are many micro and macro decisions that are made every day in large companies with complex data interrelationships that no one can visualize.

So, this leads to poor uninformed decisions that cost companies billions of dollars.

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Going ahead, often or not, these reports and plans are hard to decipher. They are not easy to understand, right. So, they are no longer accurate or even sometime they are not feasible as well. So, decision makers find themselves in limbo unable to decide what to do resulting in last minute, uninformed decisioning that happens in every company.

So, the result of this decision making gap is that plans and business decisions are not driven by data or information for say. So, they are not aligned with KPIs, the key performance indicators and the business goals as well – often leading to below par productivity, performance and profitability for the businesses.

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Now, look at these some examples from the past. In 2000, the Blockbuster a famous video renting company in US decline the offer to buy Netflix and see the results today where the Netflix is and where the Blockbuster is, right.

Again, two years just behind this deal in 1998 Yahoo declined the offer to buy the algorithm from Google and it the Google was kind of you know offering the algorithm for just 1 million dollars. And, now look at today's market, where is Yahoo and where is Google. Google almost you know drives 98 percentage of search traffic across the internet. So, that is the power of that algorithm that you know find beneficial for Google as a company, but Yahoo you know it lags way behind in the competition.

So, business leaders sometimes base their decisions on their instincts and experiences which is not good at all for the businesses for their future.
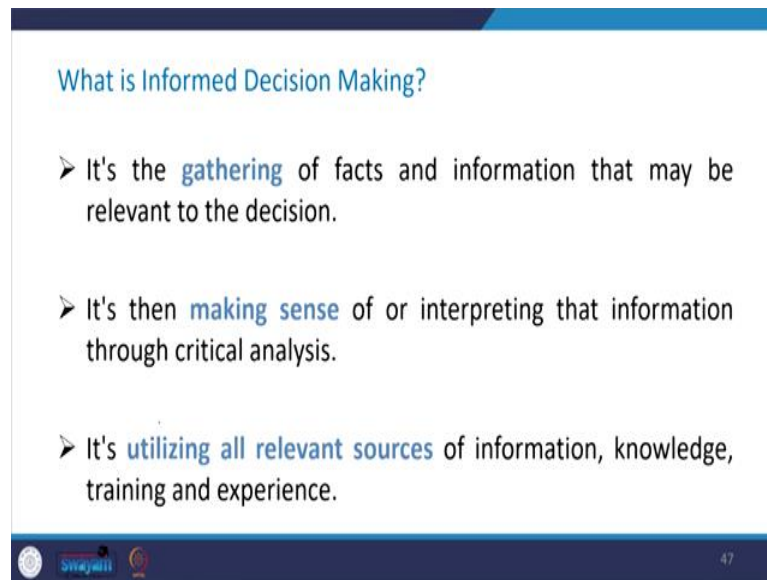
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So, smarter decision making means making decisions that are most likely to help companies move toward their goals. So, traditionally the driving force behind decision making has been the experience and instincts of its business leaders or CEOs for that sake, but 90 percent of small businesses and startups failed only because of this reason only.

Now, again there is another statistics – businesses that base decisions on data and not instincts or experiences of their CEOs or leadership are 19 times more likely to be profitable.

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So, what is this data suggest us. So, what is informed decision making is all about? So, it is the gathering of facts and information that may be relevant to the decision. So, the gathering of the facts the collection of the information is the first step. Then, making sense out of that particular information, right, interpreting that information through critical analysis. And, then it is utilizing all relevant resources or sources of information, knowledge and training and experience to make a calculated call.
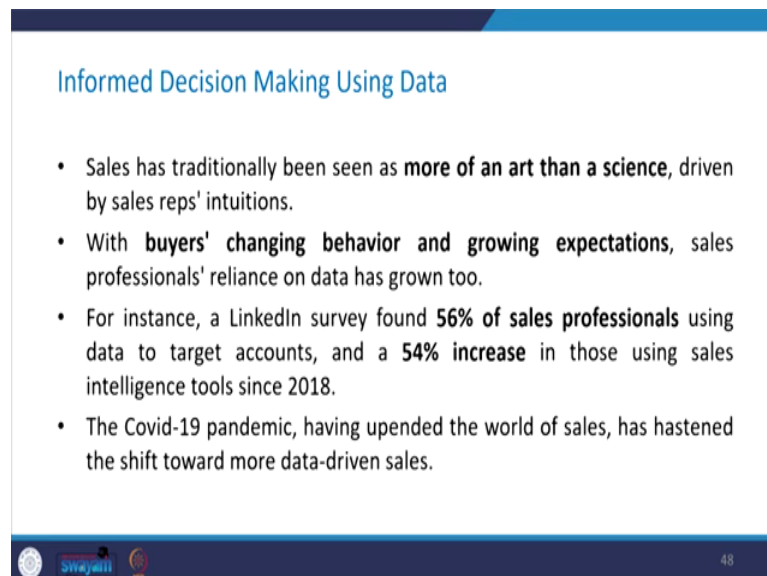
So, that is all about the informed decision making is all about.

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So, how informed decision making can be done using data? So, sales has traditionally been seen as a more of an art than a science driven by sales reps intuitions. With buyers' changing behavior and growing expectations, sales professionals' are nowadays relying more on data as the time is being passing.

So, for instance a LinkedIn survey found that 56 percent of sales professionals are using data to target accounts and a 54 percent increase is in those using sales intelligence tools since 2018. So, large number of companies are nowadays utilizing this sales intelligence and analytics to make their calculated calls about businesses and customers as well.

The Covid pandemic again has you know kind of appended the world of sales has hastened the shift towards more data driven sales.

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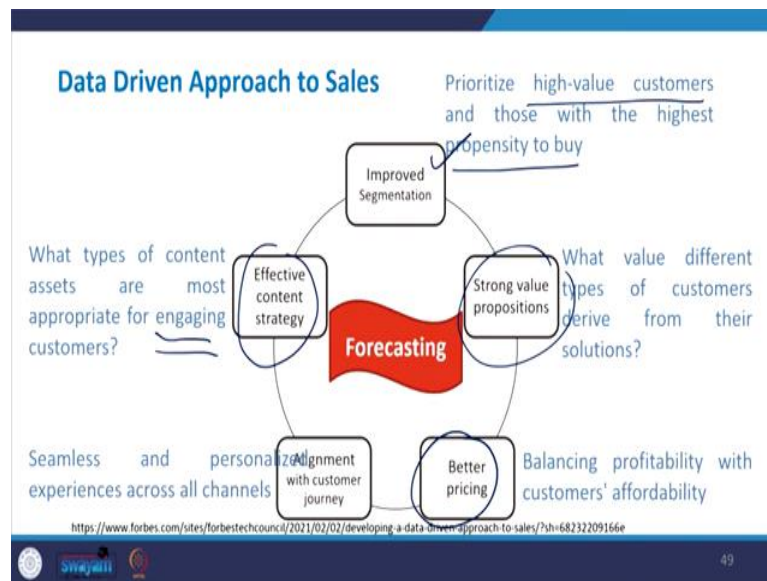
So, how data driven approaches to sales takes place? So, we have. So, it may benefit companies in five different ways, right. It may gives a improved segmentation capability to companies, right. So, they can prioritize high value customers and those with the highest propensity to buy.

So, the first step in marketing as we say, like you know segmenting like identifying your target segments. So, even the data collected from sales operations or sales teams can actually benefit companies to improve their segmentation strategies as well.

Second benefit of data driven approach to sales, that it gives strong value propositions for the company, right. So, what value different types of customers derive from their kind of solutions or products? So, that kind of insight can be collected through this data driven approach.

Better pricing of the product – it is another benefit that can be offered through this approach. So, it is fair somewhere that is you know you are balancing profitability with customers affordability. So, that is an important kind of you know sweet spot that a customer between a customer and a company has to identify.

Coming to the next the this data driven approach also provides alignment with customer journeys so that you can have seamless and personalized experience across all channels that you are going to provide to your customers whether you are into a business of products or services as well.

And, then finally, it also gives an effective content strategy to the company. So, what types of content assets are most appropriate for engaging your customers? So, customer engagement is a buzzword today, right and to engage your customers across the funnel that is traveling right from lead and converting him like identifying the prospect, coming to the lead stage and then again customer stage, across the funnel companies are using different types of content different types of channels to reach out to their customers.

And, in a way if these strategies are based on data and information that is collected through the sales funnels and everywhere it gives to an effective content strategy to pull your customers to your products and services.

Then how to do that how can we go ahead with data driven approach. That is where before that we need to understand something we need to go back and there we can plan for how we are going to use data and for that we have to look at the concept called as forecasting. Let us look at what forecasting is and how it is you know coming into the picture of sales management that is sales forecasting.

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So, forecasting we usually in a day to day life we encounter lot of forecast, even if one watching TV we know that there is a news anchor who will giving forecast for this weekend whether it will rain, whether it will be hot day tomorrow or something like that. Similarly, sales people also get into these kind of business.

The business involvement in sales is complex and dynamic. There are number of forecasting methods available and which one to choose then, right. So, there is a confusion and often forecast are incorrect. So, you have to be repeating again the same and same kind of process again so as to increase your predictability, right.

So, nevertheless, sales manager must continue to forecast and to work on improving their forecasting procedures. Even if they are failing again and again, they are missing their targets, but it is something which is a continuous process a sales manager has to do.

Forecasting refers to the practice of predicting what will happen in the future by taking into consideration events in the past and present. So, you have something in your past and present, that is you have some data related to your sales, right sales data and then you are predicting something like you know what will happen in the future, what kind of sales I can predict like what kind of dollar revenue I can predict for my businesses or my product across different sectors.

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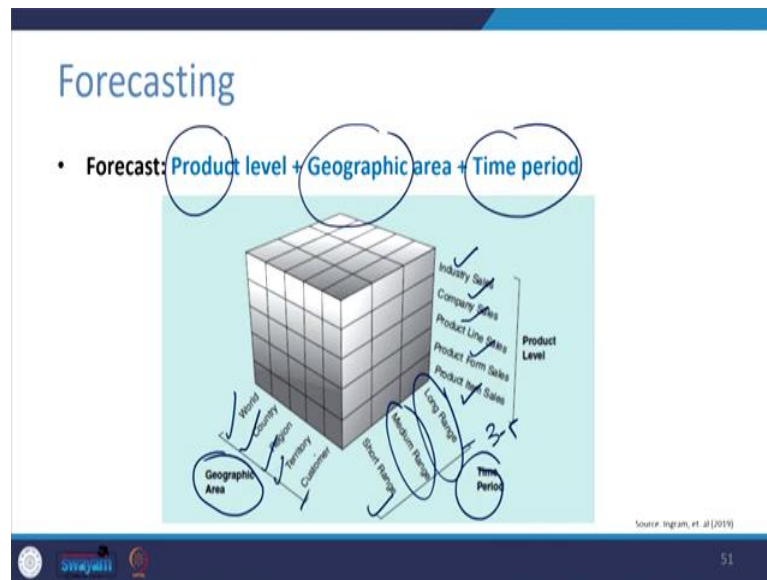
Forecast it involves three types of levels to be considered. First – you are forecasting for a particular product, you need to consider a particular geographic region and you have to forecast for particular time period. So, these are the three factors that define a particular forecast, right.

So, if you look at this example that is there on the screen there are three different factors again broken down into multiple kind of you know sub factors. So, for product level you can forecast sales for industry, for company level, product line level, product form and even product item as well.

For time period you can forecast for short range like you know maybe you are just forecasting for the next quarter that is 3 months; medium range where you are mostly forecasting for another next 1 year ahead and long range which is around 3 to 5 years, right. So, that is different time periods that you are considering to forecast for your product industry or whatever kind of you know level you want to.

And, then you are considering a particular geographic area. Do you want to forecast the sales of let us say car for a particular country or across the world or particular region a particular territory or even particular customers as well, right. The customers who are buying hatchbacks versus the customers who are buying let us say SUVs you have to forecast the customer is different. So, you have to do different forecasting processes or kind of you know calculations for both of these two different customers.

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So, what is being forecast is most important. So, there are different forecast one can do with. So, there are two factors to decide what you are exactly doing, right.

So, first is are you doing something at industry level or firm level that is the one factor and are you going to forecast for best possible results or expected results for given strategy. So, this first option that is the best possible results is for across all strategies combined and expected results for given strategy.

Let us say for example, a particular sales promotion that you are running in a particular territory or region or for a particular product category. So, for that particular strategy of sales promotion what sales you know what kind of forecast you are making. So, if you are doing kind of you know let us say expected results for given strategy across industry, we call it as a market forecast and if you are doing it for a particular firm level that is your company something like that then it belongs to a sales forecast. So, we call it as a sales forecast.

Let us look at the definitions of these four kind of you know forecast. So, market potential is the best possible level of industry sales in a given geographic area for a specific period. So, you are not talking about any specific strategy here market forecast it is the expected level of industry sales given a specific industry strategy in a given geographic area for a specific time period.

Then coming to sales potential – the best possible level of firm sales in a given geographic area for a specific period, right and then coming to the what we are actually interested in is sales forecast which is nothing, but the expected level of firm sales given a specific sales strategy given in a geographical area for a specific time of period.

So, that is so, they are very close, but they are different kind of you know kind of concepts in forecast.

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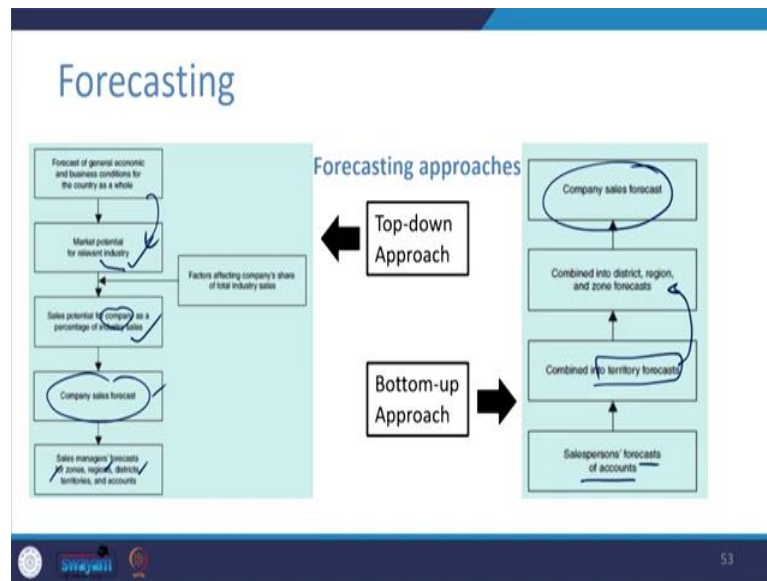
So, forecasting approaches – there are two types of forecasting approaches. First is called as a top down approach.

So, what starts here is you forecast at a company level or a country level or something like that; you then again go down to one level below, you go for industry level; then you go into a sales potential for a company in that particular industry and then you go for a company sales forecast, and then you again divide it again at the level of zones, regions, districts, territories and even accounts.

So, we are starting from the large kind of you know at the large macro scenario and you are broken down yourselves forecasting that how much particular country we will sell, in this country how I am going to sell, in this particular state in this particular state I am going to how I am going to sell across these 2, 3, tier 1 cities. In tier 1, 2, 3 cities how I
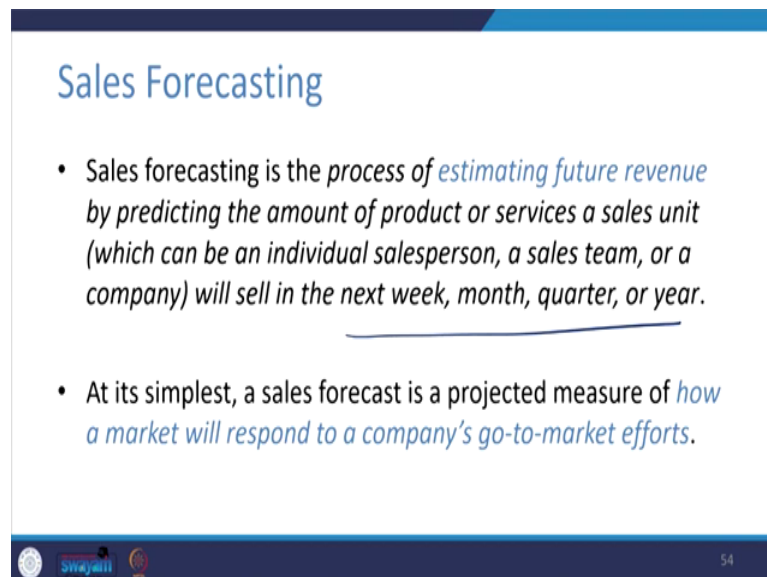
am going to target or what kind of sales I can expect from this kind of particular customers X versus customer Y who is interested in the same product.

So, this is which called as a top down approach where there is a different exactly opposite of this is bottom up approach. Here you ask your sale persons to forecast accounts. So, let us say for a medical representative of pharmaceutical company, he will come up with a forecast for his particular drug that he is selling in the particular region or territory.

Then he will all the medical reps along with you know their reports they will report to a territory manager, and then the territory forecasts are made. Then these forecasts are then again feed into the system and again at the zonal or kind of you know regional level the forecast are combined to aggregate or make up one final a regional level kind of a forecast.

And, then across all regions all the forecast regional forecast were collected and then they are kind of you know combined to form a company sales forecast. So, here we are going from bottom to up that is why it is called as a bottom up approach for forecasting.

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Coming to sales forecasting, so, now, we know what is forecast is and what are the two different approaches. Now, what is mean by sale forecasting sale forecasting is process of estimating future revenue by predicting the amount of product or service a sales unit

that is a sales unit can be a salesman a sales team or even a company that particular sales unit will sell in the next week, month, quarter or a year.

So, it is nothing, but the time period that we are talking about and this is about the unit that is making the sales or at level which you are talking about the particular forecasting. So, are you forecasting at salesman level, salesperson level or you are forecasting for a particular sales team that is handling a different kind of product portfolio or are you talking about a sales forecasting for entire company considering all kinds of you know categories of products and services that it is operating into.

So, at it is simplest a sales forecast is a projected measure of how a market will respond to a company's go to market efforts. So, how my particular market whether it can be a region, whether it can be a particular territory or whether it is a country itself how it will react or how it will response to my company's go to market effects and that is what nothing, but sales forecasting is all about.

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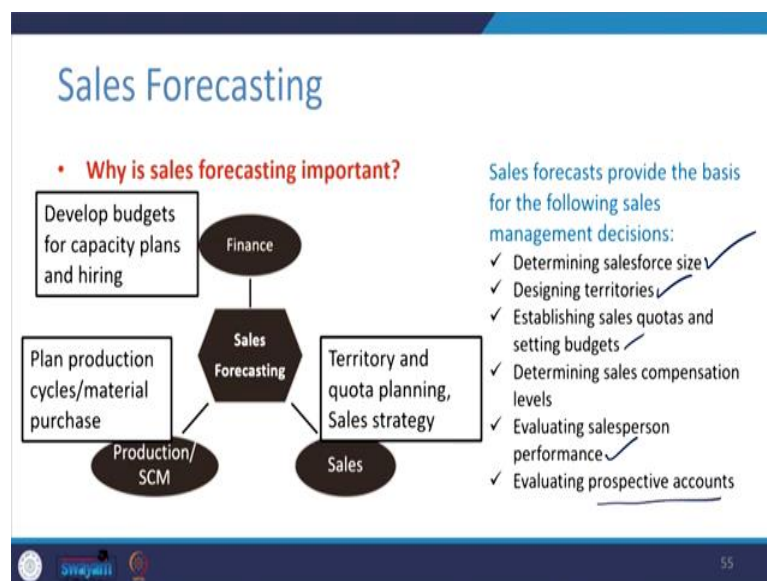
So, why is sales forecasting important. So, before delving into what are the different types of or techniques of sales forecasting methods, let us understand why it is important, why this sales forecasting process is important for a business. So, self forecasting can help across all the kind of you know functions or department that are there in the company.

So, for example, it will help finance to develop budgets for capacity plans and hiring, right because how much you are going to sell will guide what kinds of funds you will be required, right. Then coming to the production or supply chain management department, the sales forecasting figures will help them or the manager of that particular department to plan their production cycle well in advance.

Like you know, they can have the material purchased at it place right before like you know they do not want to go out of shortage for that, when there is high demand it is not kind of you know way to go ahead without having a you know adequate stock with the company.

And, then for sales itself the sales forecasting will go ahead helping them in terms of territory and quota planning and then even deciding the sales strategy as well what kind of sales strategy you are going to use based on the sales forecasting figures that you want to achieve.

Sales forecast provide the basis of the following sales management decisions. So, again within sales management also there are different decisions that are that can be influenced by sales forecasting, right. So, what kind of sales forecast is there and what kind of projected sales the company wants to achieve.

So, like for example, determining sales force size. So, if you want to have you know kind of you know increase your product or increase your sales by volume in terms of let us say 150 percent, 200 percent you will require that kind of sales force to work on the field. So, the determining the accurate size of the sales force is a crucial decision to achieve any sales forecast target, right.

So, designing territories again that is a another different objective or distance that is guided by the sales figures. Establishing sales quotas and budgets we already covered that and determining sales compensation level as well. Evaluating sales performance, sales person, sale performances and evaluating prospective accounts as well.

Many of the companies use different categories to basket their customers like if there is a Pareto's rule that talks about 80-20, right. So, 20 percent of customers will give you 80 percent of business in value, right and then the rest of the 80 percent of customers might just generate just 20 percent of revenue for you.

So, as a company you will need to identify which customer you will put in which basket whether a particular custom is kind of you know high account like you know giving high revenues to you, you have to follow up with him regularly, you need to have a sales force and you need to have maintain a good relationship with him or that particular business for the sake.

So, evaluating prospective accounts is also something which is guided by sales forecasting or the figures that are coming out of this sales forecasting exercise.

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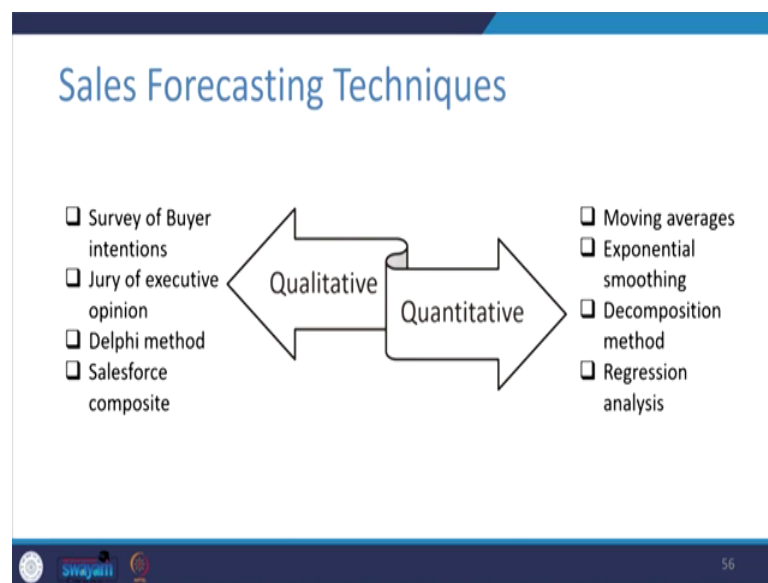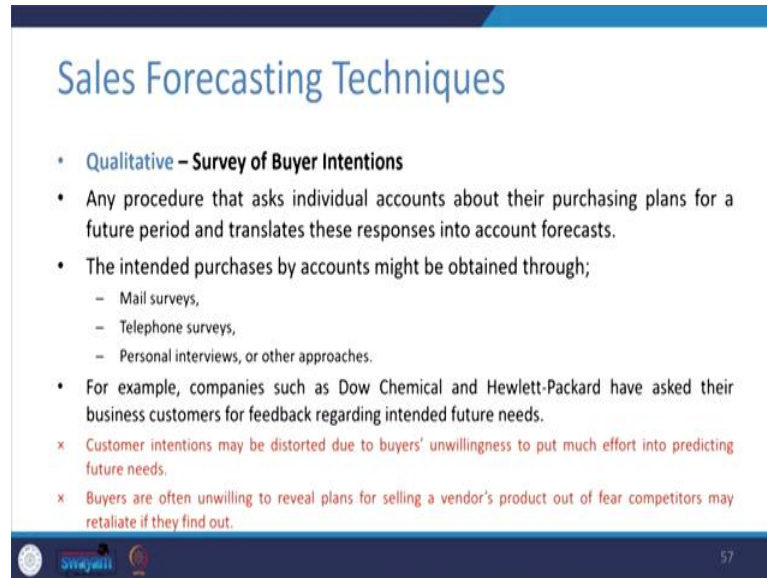
Now, coming to the sales forecasting techniques – broadly there are two: types qualitative and quantitative and there are again different techniques or tools that can be used under each of this.

So, there is a difference is that the quantity we are usually looked at as a most more objective, more mathematical kind of techniques whereas, qualitative we are relying mostly on the experts opinions experts opinions as well as juries and all and even in some case we are directly contacting customers to get their feedback about kind of you know what kind of sales or what kind of purchases they are going to take or buy from the particular company and based on that we are estimating or we are forecasting sales figures for us.

So, qualitative methods includes survey of buyer intentions, jury of executive opinion, a Delphi method and salesforce composite method. So, these are the four methods, we will discuss those in detail.

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And, there is something called as under quantitative there are four different techniques. One is first is moving averages; second one is exponential smoothing; then decomposition method and the finally, we will look at regression analysis as well. So, let us deep dive and look each of this in detail.

So, first in qualitative is survey of buyer intentions. So, any procedure that asks individual accounts about their purchasing plans for a future period and translate these figures or responses into account forecast.

So, the intended purchases by accounts can be obtained through various means like you know you can have the mail survey, then you can have telephone surveys, you can have personal interviews with your customers and you will ask them about you know how much you are going to buy from us in the next year something like that.
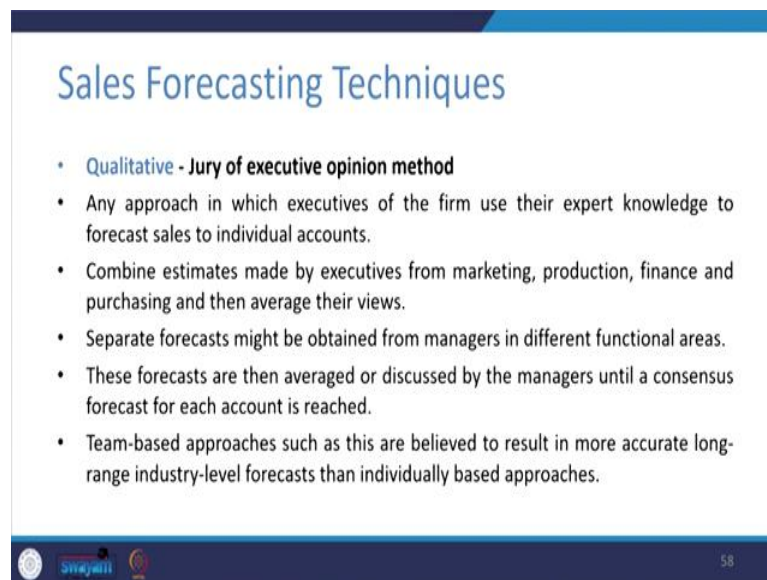
So, for example, companies such as Dow Chemical and HP which is Hewlett-Packard have asked their business customers for feedback regarding intended future needs. But, there is a catch customer intentions may be distorted due to buyers' unwillingness to put

much effort into predicting future needs. Customer sometimes not sure you know what kind of quantity they are going to buy from you, right.

And, buyers are often unwilling to reveal plans of selling a vendor's product out of fear competitors may retaliate if they find out. So, again there is a competition pressure as well like you know no one wants to disclose what they are going to buy for the next one year something like that.

And, again looking at the macro environmental conditions which are again out of control for any kind of a business it is very hard to put in the right number of figures into the system, right.

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Sales Forecasting Techniques

- Qualitative - **Jury of executive opinion method**
- Any approach in which executives of the firm use their expert knowledge to forecast sales to individual accounts.
- Combine estimates made by executives from marketing, production, finance and purchasing and then average their views.
- Separate forecasts might be obtained from managers in different functional areas.
- These forecasts are then averaged or discussed by the managers until a consensus forecast for each account is reached.
- Team-based approaches such as this are believed to result in more accurate long-range industry-level forecasts than individually based approaches.

Coming to the second one that is qualitative method is a jury of executive opinion method. Any approach in which executives of the firm use their expert knowledge to forecast sales to individual accounts. So, combine estimates made by executives from marketing, finance, production and all department including purchasing then they average their views and calculate the final kind of you know number that is expected out of this particular product or services.

Separate forecast might be obtained from managers in different functional areas as well. These forecast are then averaged or discussed by the managers until a consensus forecast for each account is reached. So, here in the simplest way this is a kind of you know

opinion executive opinion method, where we ask experts in particular domain to sit together and kind of you know forecast for each business account that how much future business can be expected from that particular buyer or customer.

So, team-based approaches such as these are believed to result in more accurate long range industry level forecast than individually based approaches. So, because there is a team coming together giving different kind of you know information into the system as we said we have to have a data backed decision making, right.

So, when the team comes into a picture as compared to a single CEO or CXO for that say taking all the calls, it will be beneficial for the company to go ahead and have a have the more accurate numbers in terms of sales.

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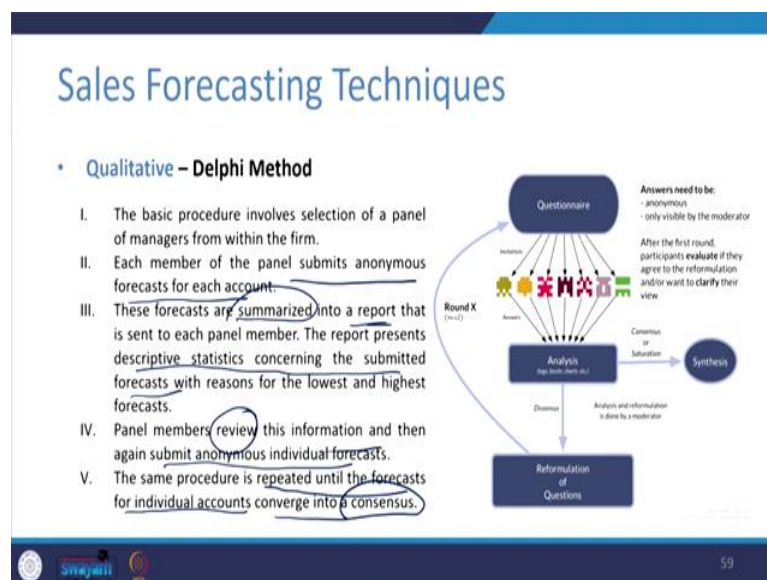
Coming to the next qualitative method, that is a Delphi method. So, here it out here this is how it looks. So, there is a questionnaire there is a structured questioner we have and answers need to be given anonymously and the answers are only visible by one to the one of the moderator. So, we will circulate this questionnaire to all the experts, right? They after the first round participant evaluate if they agree to the reformulation and what.

So, once the questioner gets to the expert he will quote some figure on that based on his own kind of you know experts expertise and opinion, he or she will put some figure. Then again all the figures that combine, then coming back to the average of something

like that figures. Again, the next set of questionnaire with a kind of you know refined figures, are again given back to the same kind of experts and they are again analyzed. So, the iteration happens again and again until and unless there is a consensus or saturation of responses.

So, the basic procedure involves selection of a panel managers panel of managers from within the firm. Each member panel submits anonymous forecast for each account. Then these forecasts are summarized into a report that is sent to each panel member again. The report present descriptive statistic concerning the submitted forecast with reasons for the lowest and highest forecast.

Panel members then review this information and then again submit anonymous individual forecast. So, it is iterating again and again. So, it is happening again and again and this procedure is repeated until the forecast for individual accounts converge into a consensus. So, once you finally, achieve a final common figure from all the respondents or experts, you stop there and you go ahead with that particular kind of an sales figure.

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The last one is the sales force composite method under qualitative sales forecasting technique. This method involves each sales person making a product by product forecast right for their particular sales territory. Individual forecast are built up to produce a company forecast and this is sometimes termed as a grass-root approach as well.

Then each salesperson's forecast must be agreed with their manager and divisional manager where the appropriate, and eventually the sales manager agrees the final composite forecast. So, in roughly it is called as detecting differences in figures as well. So, how it happens it is again a format of a bottom up approach.

Well, let us say you ask all the kind of medical representatives working in a particular pharmaceutical company to make some forecast in their own region or the territory or the area that they are working in. Then the all the 4 – 5 medical representatives or marketing representatives or sales representatives for that say, they agree they kind of converge their data and even the territory manager or area manager to whom they are reporting, he will have his own forecast for the area and then they sit together and come to a common figure right.

So, they kind of you know detect the differences in figures and they settle down in one figure. Then all the area managers working under a particular regional manager we will kind of you know collate their all area reports and then the regional manager, he will he or she will have his own or her own kind of you know regional report or forecast.

And, then the again the regional manager sits with all the area managers, and they kind of you know again detect the differences in the figures and come to a kind of you know commonly agreed term or figure for the sales.

And, then again all the regional managers again repeat the process and they sit with the national sales manager who already has his own kind of national sales forecast, and they again detect the differences in the figures and come to a final figure. And, then in a way that you know it is a more like a bottom up approach where each and every individual in the line, in the sales management department works together to build up the common kind of you know final figure that they expect across country in this process.

So, now let us look at what are the different techniques we have under quantitative basket. So, in quantitative sales forecasting technique the first one is moving averages. Here we develop a company forecast by calculating the average company sale for the previous years. So, now, in quantitative techniques we are mostly using the previous sales data to come at a conclusion that what we are expecting in this year, right.

So, the company sales forecast for next year is the average of actual company sales for the past three years, past six years or some other number of years as well. Let us look at this example. So, there are some actual sales happening from 2012 to 2020, and here is the formula that we are going to use. So, sales forecast for the next year let us say for 2020 is equal to actual sales for past two or four years.

So, now it again at the discretion of sales manager or someone who is forecasting for this particular product or sales category is that what number of years he or she wants to take. So, let us say actual sales for two-years. So, here we will take the actual sales for last two-years right it is 18 and 2018 and 2019 and then we divide by number 2. It is a simple kind of you know average that we are taking for the last two years.

Some companies if there is a large variation between the data or the sales figures, they may go ahead by taking more number of years into the calculation. Let us say for four years, then you will you will sum all the sales values right from 17 16, 17, 18, 19 and

then you sum it and divide it by 4. And, then you arrive at a particular value here for example, let us say 9 thousand 9,867,000.

So, that is how this is a very simple average method, but there is a catch, right. So, this method weights actual company sales for previous years equally in generating the forecast for the next year, but that is not the case in a normal situation, right. So, most of the times like for example, we had Covid pandemic and all, last year's data may not give an accurate picture that what you are going to sell in this year.

So, it is important to give some weightage to the sales that are happened in the last few years and that is why that makes us to come into or comes to the next kind of you know modified nature of that particular moving average method which is called as a exponential smoothing.

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A type it is a type of moving average method only again except that the company sales in the most recent year are weighted differently from company sales in the past. So, you assign some weightage to a particular sales that you have done or accomplished in the last year as not as against equal that you are doing that we were doing in terms of moving average method.

Again look at this example. So, here I am giving an actual the weightage assigned to the last year sales is 20 percent that is 0.2. So, whatever I am expecting in 2020 will be

calculated like alpha which is I am I am taking 0.2 or 20 percent. So, I am forecasting that my sales forecast for next year is equal to alpha into actual sales this year right in 2019 right plus 1 minus alpha that leaves us like 1 minus 0.2 that is 0.8 in this case into this year sales forecast.

So, what we forecasted earlier for that particular this particular year, right. So, that is how this formula works and it is it actually takes into account any dynamic changes that are expected in the market, right.

So, critical aspect of this method involves determining the appropriate weight alpha. As I said for this method a manager or a sales manager has to take a decision what kind of alpha he wants to take. If you look in the same example there are three different alphas taken right. So, at first it is a 20 percent, then next year I am giving 50 percent weightage to this year sales right the. So, I am taking alpha at 0.5 and in the last option I am giving 80 percent weightage to the you know actual sales that are happened this year that is taking the alpha to 0.8.

And, in each case you will find differences in the values that are forecasted, right. So, there are differences based on what kind of alpha a particular manager is choosing whether he is taking 20 percent, 50 percent or even 80 percent for sale. And, that is what make it more kind of you know again going back to the intuition and expertise of manager.

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Coming to the next method is a decomposition method; it involves different procedures that break down previous company sales data into four major components – trend, cycle, seasonal and erratic events. These components are then reincorporated to produce the sales forecast. Let us go ahead with an example it will make us it will make it easy for us to understand. So, assume that various analysis have decomposed previous sales data into the following components.

Let us say a particular company for a particular company, a 5 percent growth is sales is predicted. So, they are predicting a 5 percent growth right 5 percent growth is predicted which is called as a trend component. So, this is the first component that is coming into the picture that is the trend like you know the industry or the particular product category is increasing let us say 5 percent that is what increase in the sales can be expected.

But, again there is a 10 percent decrease in sales is expected due to a business recession which is again we are talking about cycle component. So, businesses goes through recession and all, right. So, these cycles should be accommodated into your forecast. So, here now we are again talking about 10 percent reduction minus in the sales figures coming from so, first one is from trend, this is from your cycle component.

Then increased tensions in the Middle East are expected to reduce sales by an additional 5 percent again your kind of you know taking care of those reduction in sales by 5 percent owing to erratic events like that are happening which is beyond your country or which is beyond your control. And, then sales results are reasonably consistent throughout the year except the for the fourth quarter, where the sales are expected to be 25 percent the higher than the other quarters.

So, this is a seasonal kind of a component maybe because there is a let us say for India we have festivals in November, December right so, Diwali and all. So, we may expect some more sales in those last kind of you know 3 months or quarter in the particular year. So, you may expect 25 percentage higher sales in that particular kind of you know quarter.

So, you are accommodating now a seasonal component and you are expecting 25 percent increase or plus in sales only in one of the 4 quarters, right. So, here you are targeting or you are actually kind of accommodating the seasonal component. And, now once you

have a figure last year figure you can work on this. So, whatever figure you have like last year you have achieved x number of or x number of sales.

So, here we are taking that in 2009 we were able to have this amount of figure in sales like the trend component suggest that 2020 sales will be 5 percent more. So, we are kind of you know x into 1.05 that will give you a new figure that is y again for that y we are again expecting a 10 percent decrease, right. So, y which is a new figure into 0.90 which is reduction in the figure, so, you get new figure z after accommodating this cycle component.

Now, you with z you are again expecting 5 percent decrease because of the erratic events. So, you said z into let us say 9 point sorry 0.95, right 5 percent decrease we are getting let us say z alpha something like that a new figure and then again now you have this figure which is broken down across four quarters. So, you have z alpha 1 to z alpha 4 and you are expecting that this z alpha 4 will be 25 percent higher as compared to other.

And, then you add some weightage of across you know average of this 25 percent to z alpha 4 and then you take a calculated call that you know across summing up all z alpha 1 to z alpha 4 what should be a ideal figure that a company wants to achieve. So, this is how decomposition method works. These components that is what we are seeing here is trend, cycle, erratic and seasonal are usually accommodated or reincorporated into the figures to produce the sales forecast.

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And, then coming to the final method of quantitative sales forecasting technique which is about regression analysis. Here if you look at there are multiple factors that affects particular sales or operations or maybe a particular business or even a particular product category.

So, how sales are getting affected? First, may be an environmental factor like you know control unit, attractiveness, the position of the business in the market whether like you there is a tough competition coming into the picture you might be pushed back to the number 2 or number 3 as well.

So, this is something which is environmental factors which is beyond your control, but you have some figures like you know how the past how in the past a particular competitor has performed. There are certain organizational factors that again affect your current sales like your marketing effort, your sales management effort and all. And, then beyond that the sales person factors plays crucial role here.

It involves characteristics like role perceptions, aptitudes, skill level of particular sales person and even the motivation as well. These characteristics will ultimately get converted or reflected in the effort and the quality they show on the field and ultimately what kind of you know figures you are looking at.

So, how to accommodate these environmental factors, organizational factors and salesperson factors? So, here we have some figures for the from the last or past two – three years across each of these kind of you know variables or factors and then you create a regression equation, right.

So, you said alpha is a constant and you have these three regression coefficients that actually conveys how let us say for example, how environmental factor is going to affect, then again how organizational factor is going to affect yourselves and how salesperson effects are going to kind of you know affect yourselves.

So, there are again two disadvantages of this method. It incorporates only the independent effects like you know see these factors are considered separately right, but there is again an interaction between how environmental factors and organizational factors work together. There might be an interaction between again how kind of you know salesperson factor interacts with organizational factors, right.

So, if there is a less marketing effort salesperson will need to have put more efforts on the field, right and they have to put more efforts. If he is not putting more efforts. Again, there is going to be a kind of you know missing on some sales opportunities again how these three factors together interact with each other you know combining more factors together.

So, these factors are not independent to each other they in a way in a practical sense are very much related or inter related to each other. This is where a regression analysis does not take care and this type of equation is linear yet the determinant variable relationships are probably non-linear.
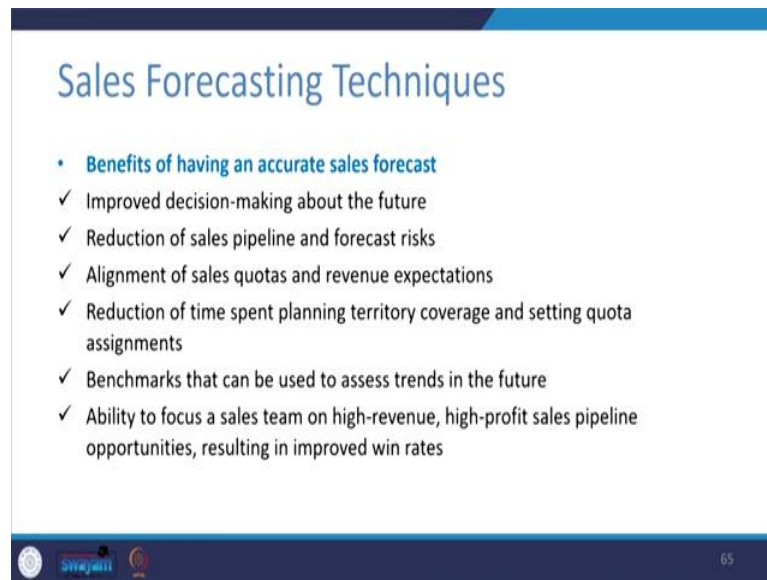
So, maybe we may need to look at some power functions where right you know. So, environmental factor will have some power of alpha the way it affects your decisions plus organizational factors will again have some power equations. So, power through which it affects your functions let us say beta, and then we have salesperson factors which might influence the kind of you know sales efforts in terms of gamma.

So, there is a in complex interrelationship between all these factors and there are again other factors beyond that which we are going to cover in the next session, where we are going to talk about environmental factors like how political, economic, socio-cultural factors can also influence your sales forecast.

So, summing up we have already kind of you know looked at what are the different sales forecasting technique and they are important because they help us to make informed decision like you know where we are going to go ahead, what is the vision of the company in terms of achieving those sales forecast.

And, after having these techniques it is important to see why they are beneficial for any company.

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So, benefits of having an accurate sales forecast are multiple first improved decision making about the feature. As I said or as we discuss even it the sales forecast will again help your finance department, your supply chain, your production department or even your HR department as well. Reduction of sales pipeline and forecast risk, right. So, that is another benefit.

Alignment of sales quotas and revenue expectations across those territories. Reduction of time spent on planning territory coverage and setting quotas assignments. There is a benchmarks that can be used to assess trends in the future. So, as you are doing this exercise again and again even if you are missing the targets, it gives you some confidence into the system that whatever figures you are kind of you know predicting there mostly you are taking care of all the trends, seasonality's, events and everything.

Ability to it gives ability to focus a sales team on high-revenue, high-profit sales pipeline opportunities, resulting in improved win rates. So, it actually helps your sales people to go in the field with the more confidence, knowing more about the customer, its past behavior, its likelihood of placing a particular order and something like that.

So, that sums up this objective of this session, where we learn about how sales forecasting methods helps us to make informed decisions. Going ahead, we will look at how we are going to use different tools again apart from the sales forecasting tools that can be used to craft strategic sales plan.

Thank you.