Lecture – 30
Demand Forecasting – II

So, there are two methods of demand forecasting; one that is subjective methods of demand forecasting and second there is a quantitative method of demand forecasting.

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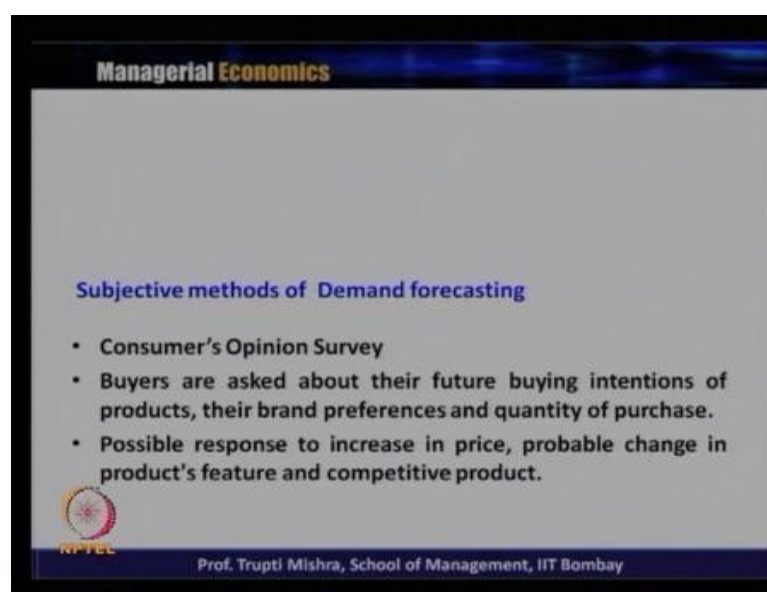
This subjective method of demand forecasting also known as the qualitative methods of demand forecasting and this basically deals with two question, what do people say and what do they do? So, this qualitative method of demand forecasting generally depends on two question or deals with two question what do people say and what do they do? And this is generally this subjective method or the qualitative method of demand forecasting is useful in forecasting the new product new market for which there is no past, past data available or no information available.

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Under this subjective method of forecasting the first method is consumer's opinion survey. Now, what is this consumer's opinion survey? As the name suggests buyers ask about their future buying intention of products there are brand preferences and the quantity of purchase. So, generally here a survey is conducted and the survey is conducted among the buyers or among the potential buyers. Now, what is the question being asked to them what whether they are going to buy this product in the future or you can say that what is buying intention of this product in the future. If they are buying this product, which brand they will prefer and what is the quantity they are going to purchase? So, the first question is whether they are going to buy this product second is if they are buying this product which brand they are going to buy? And second if there is after identifying their brand, what is the amount they are going to buy? And also additional apart from this three question, buyers are also asked about some additional information like if the price of this typical brand is going to increase are you still going to buy the product? Or your shift to buying some other product or are you still going to buy the same quantity or you are going to buy a different quantity? So, the possible response to increase in the price with respect to the quantity, with respect to the brand, probable change in the product picture like here the question comes as you like the product or you want any feature to get changed with this product? So the or the other question can be if the company is changing

the feature of the product are you still buying this product or you are shifting it to a other brand or you are changing your quantity if the product feature is getting changed?

And what is their response with respect to the competitive product whether you feel any product is better this then this product, what you like about that product? So, in this case of consumer opinion survey the first question is being asked first three question is what is the whether they are going to buy this, if they are going to buy this which brand they will buy and what is the quantity they are buying? And apart from this also there is some additional

information they ask in the consumer opinion survey about the possible response to increase in the price, probable change in the product features and also the competitive product. So, this consumer opinion survey is done in 2 methods; typically the survey is done in two methods. One is census method and the other is the sample method.

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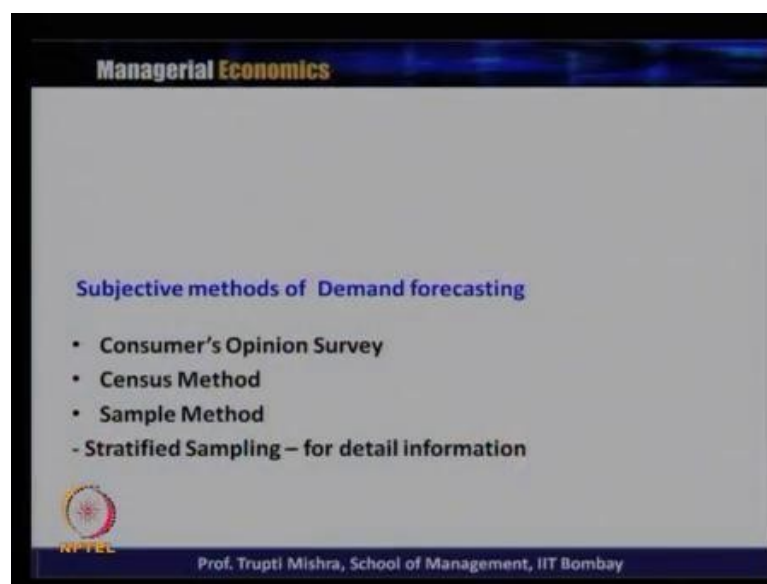
As the name suggests in case of census method, the entire population is being considered. So, if you feel that the consumer group is 100 people here the information will be collected and the survey will be conducted with all this 100 people. But in case of sample method, a representative of this 100 will be taken the entire 100 people will not be taken, the entire 100 consumers will not be survey rather out of this may be 20 percent 25 percent of people from this represented sample will be chosen. And they will be taken under the survey will be taken on them and on the basis the estimation will be done. So, census method is one where the entire consumer group is taken in to the survey and sample method is one where the representative sample of the entire group will be taken for the survey.

So, consumer opinion survey used if it is the small group generally they use the census method, but which is time consuming and also costly. Otherwise, they take a sample method which is generally deals with the representative sample and here the challenge is to

identifying the representative, proper representative sample will give the insight about the entire consumer group. Stratified sampling is being followed if there is some detail information required about the product, otherwise the census method and sample method is generally used in case of the consumer opinion survey. Now, what is the merits of this consumer opinion survey?
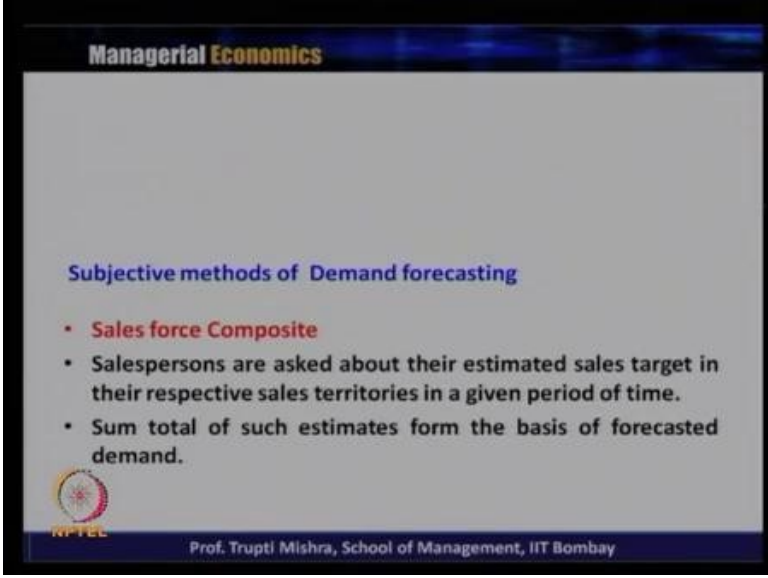
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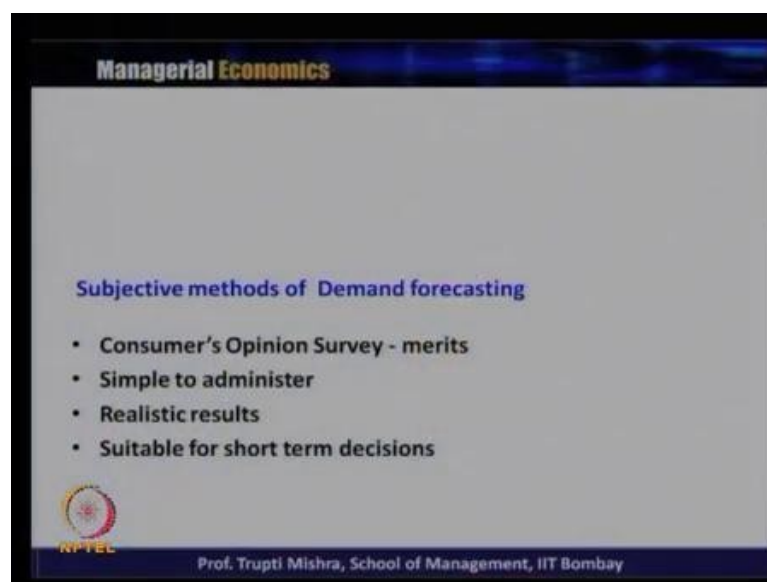
It is simple to administer just prepare the questionnaire based on whatever the information require. On that basis, the question can be framed and you have to go meet the consumer to know the answers or to know the response. It gives realistic results, because you are meeting the person who is actually buying the going to buy the product and generally suitable for the short term decisions. And what may be the demerits here in case of the consumer opinion survey? If you are going to follow the census method, generally it is costly, it is time consuming. And when it comes to the consumer opinion survey the one more demerits also the way they are responding to the question also at time period and when they are buying.

There may be the change in the thought there may be the change in the way they are buying it or their buying behaviour. And in the case the consumer opinion survey will not help in the

forecasting the demand. If the behaviour has to be same during responding the question. And also when they are actually buying it then only it will be it will be helpful for demand forecasting otherwise it will not be helpful. Then we will talk about other method of subjective demand forecasting that is generally the sales force composite.

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And what is sales force composite? Here the sales person are asked about their estimated sales target in their respective sales territory during a given period of time. And sum total of such estimate from the basis of the forecasted demand. So, here it is the next level rather than the consumer here rather than going to each consumer in this method generally the sales person will be asked, what is their sales target? Because when the sales person is identifying this sales target, that is on the basis of the consumer demand.

So, if you take the sales target that is nothing but the consumer demand in the specific time period in a specific reason. So, the sales person are asked to about their estimated sales target in their respective sales territory in a given period of time and that will be taken together to estimate the form of the basis of the forecasted demand. So, here suppose there are 10 sales

person they will ask what is your estimate of sales target in this year for the given period of time in this particular year in this particular segment. If that gives this, that is the total consumer demand and we can say that this is the forecasted demand, but what are the again challenges over here? May be it is easy because we are not targeting each and every consumer who is using or going to buy this product, rather we are, we are targeting the sales person who, sales person itself represent may be the 1000 consumer or the 2000 consumer. And they give a better picture when it comes to that what will be the consumer demand. So, it is simple to administer because you are not going to one to one, it is also cost effective, because the number gets reduced.

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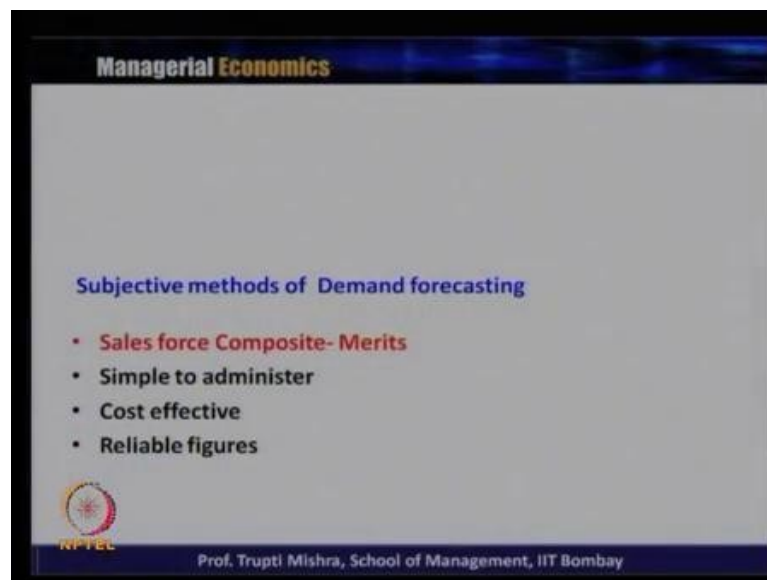
So, the survey when the survey is being done the number comes down and the cost effective. And it gives more reliable figure because since the person who is getting the interview is the sales man, and sales man they have more information about the buying behaviour. How the consumer when they are responding to something whether this is actually; this is their buying behaviour whether there is a biasness or what. And what are the demerits of sales force composite?
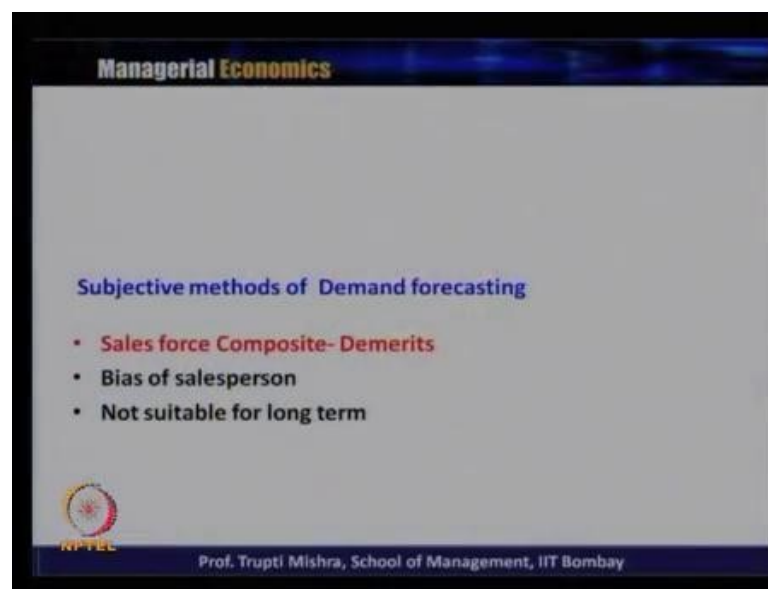
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Because since this is the one person who is representing the entire consumer group whether it is 1000 consumer or 100 consumer or group of consumer. If the sales person is biased, the entire consumer group is biased, and in that way it will not be the true representation of the consumer demand. And that is why the demand forecast is not going to be proper. so if the sales person is optimistic the consumer demand will be optimistic, but it may not happen when it goes to the individual consumer is not optimistic. So, as you know if the sales person is optimistic we need to assume that there are 1000 consumer, all of them they are optimistic

And similarly, if the sales person is pessimistic, we have to assume that the entire 100 100 consumer group or 1000 consumer group they are also pessimistic and in that way the estimate of the consumer group changes and demand forecasted changes. So, if it is optimistic generally we will lead into a situation of high forecast and if it is pessimistic we will lead to a situation of a low forecast. This is not suitable for the long term and also this is not suitable for the, when you do the aggregate for all the region, because sales person is in term of that typical territory. So, taking their estimates, we need to understand this may not be the total consumer demand. So the careful identification of the sales person representing all the territory that will only give the true picture of the consumer demand or the forecasted demand. Otherwise it may be the regional based demand, it cannot be the macro sense it cannot be the demand for across all this territory. Then there is one more method known as the expert opinion method.

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Managerial Economics

Subjective methods of Demand forecasting

- **Expert opinion methods**
- Group Discussion – experts meet by brainstorming session or structured discussion
- Osborn 1953

Prof. Trupti Mishra, School of Management, IIT Bombay

And what is expert opinion method? Here generally the expert is being chosen they are called they have called for the group discussion. And in the group discussion either it is by a brain storming session or for a structured discussion. And through that their opinion will be being asked for specific, whatever the objective whether it is about the, about the demand forecasting or about the segmentation identification of the new segmentation identification of the new market demand for the existing product or may be the demand for new product. Whatever the objective on that basis the group discussion will be moderated. And the group discussion will be either in the form of brain storming session or in the form of the structured discussion.

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Managerial Economics

Subjective methods of Demand forecasting

- **Expert opinion methods**
- Delphi Technique
- Rand corporation – To forecast the impact of technology on warfare
- Getting opinion of experts without face to face interaction

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This expert opinion method is developed by Osbrone in 1953 and it has actually, if you look at it has 2 techniques, the expert opinion method one is group discussion where the experts meet where they do the brainstorming session or the discussion and their opinion will be taken to forecast the demand. And second is the Delphi technique and the Delphi technique is

developed by RAND corporation. And here this rand corporation they developed this technique post cold war to forecast the impact of technology on the warfare

And here Delphi technique how it is different from the group discussion? Getting the opinion of expert without face to face interaction, basically the expert will be chosen and there will be and it is not that they have to meet in a group, individually they can give their opinion not on the basis of face to face interaction and on the basis of their opinion the demand will be forecasted. So, in case of expert opinion method again it has subdivided in to 2 methods; one is group discussion whether the expert meets do a brain storming session and give their opinion and on that basis of opinion the demand forecasting is done. And second is the Delphi technique and in case of Delphi technique the opinion is getting, the opinion is received not through the face to face interaction. And once they get the expert opinion or the basis of the expert opinion they do the estimate of the demand forecasting.

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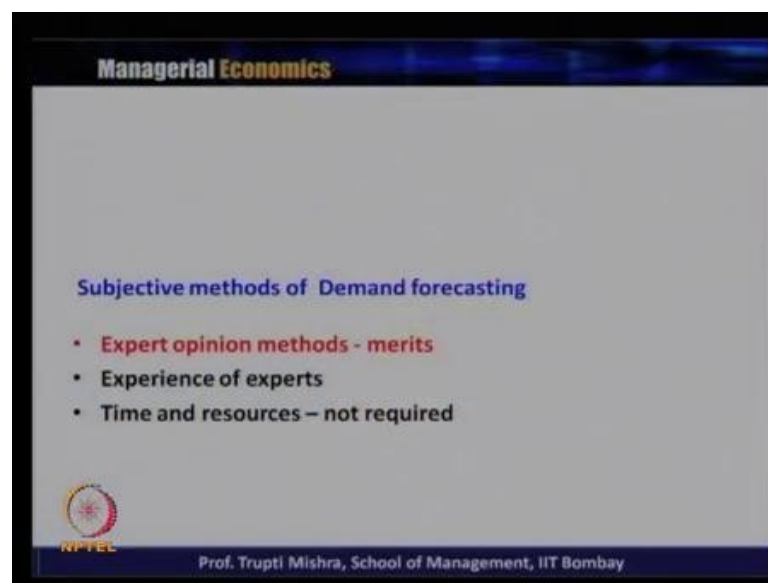
What is the merits of the expert opinion method? The experience of the expert generally helps in getting the realistic figure. And there is always and there is always a the whatever the requirement of time and resources that is not valid here, because when you do a survey unit time or also you need resources. But in case of this is just a matter of one when you do the group discussion you call the expert and you have a session, or if it is just the expert opinion, you go meet the person get the opinion and come back. So, in this case the time and resources is not required and also the experience of expert helps in getting a more realistic figure.

What are the demerits? Here the challenge is to again identify the rational or the, may be the proper expert to understand the objective of the firm, or the objective of the typical producer why they are doing the demand forecasting. If, if the expert is biased, then the demand forecasting goes for a toss because the entire demand forecasting will be biased. And the second demerits over here is that there is a risk of loss of the confidential information to the rival farms. Because if it is going to the expert, you are sharing some information and if you are sharing some information in the public domain, the possibility is that there is loss of this confidential information of this typical farm to the rivals which is not supposed to be in the public domain or which is not supposed to be revealed.

Then the other kind of subjective method of demand forecasting is market simulation. And in case of market simulation it is like laboratories testing of the consumer behaviour. Here the artificial market will be developed and people artificial market will be developed. And there will be simulation on the basis of the, how the buyers they are going to behave or they recruit the consumer behaviour in a specific time period. They will be given the money to do the buying, do the purchases, and on that basis they will do the record the buying behaviour and they try to make it a artificial market. So, this typical simulation is developed by Grabber Granger in test at 1960 and this is a popular technique of the market simulation. And here if you look at how it works.

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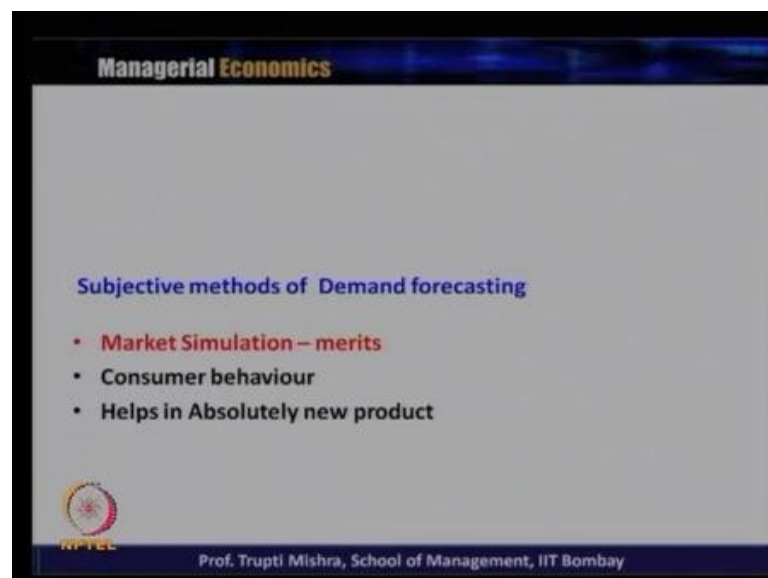
Generally, the artificial market is created and the buyers will do their purchases. And on the basis of when they are doing the purchases their buying behaviour their consumer behaviour will be recorded and that will help in the market simulation. What are the merits? The merits is that, this is the first kind of method where the consumer behaviour is being captured in the situation where they are doing the buying. And generally, it helps in, helps in doing a forecasting for the absolutely new product, because consumer get acquainted with this, and when they see the product on the basis when buying behaviour changes and that is a good way to do the demand forecasting.

Demerits; there is a requirement of the considerable amount of time and money. And it may happen that the way when the artificial market the way they are behaving they are not behaving in the same way they are going to the real world scenario or the market scenario. So, the possibility is that the buyer's behaviour differently and in that case the entire demand forecasting is on a different direction not in the proper direction either it go on a high direction or go on a low direction

Then there is subjective method of demand forecasting that is test marketing. This is one step ahead of the market simulation and here actually the rather than creating a artificial market, it is in the real market generally the buyers do the purchases without and their behaviour gets recorded. And here the purchase behaviour and here the buyer does not know that their behaviour is getting recorded.
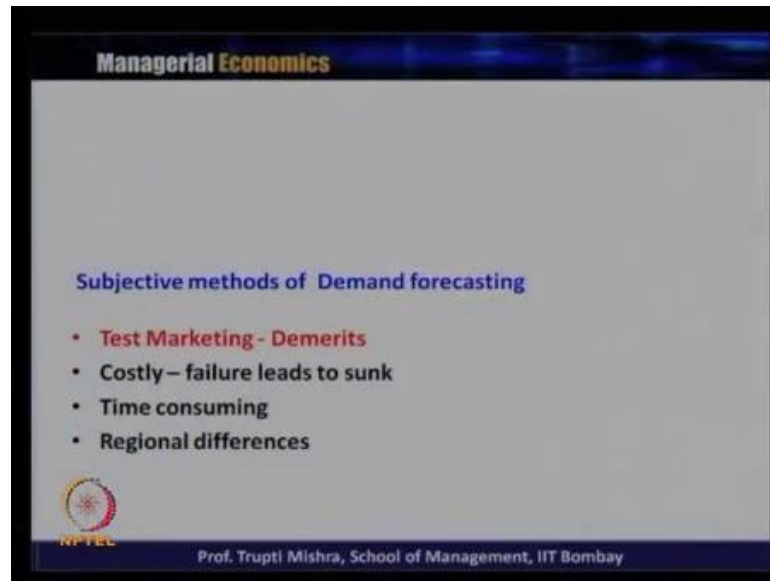
So, this is step ahead of the market simulation where we took the case of a artificial market, but here it is not the artificial market rather it is the real market. Product is actually sold in certain sector of the market, which is known as the test market. And where the consumer do the purchases consumer buy without knowing that they are being observed. So, in this case typically in the test marketing, the test market is developed consumer they do the purchases and the consumer behavior or the buying behavior is recorded. And when they are doing the purchases they are not aware of the fact that they are being observed or they are being recorded.

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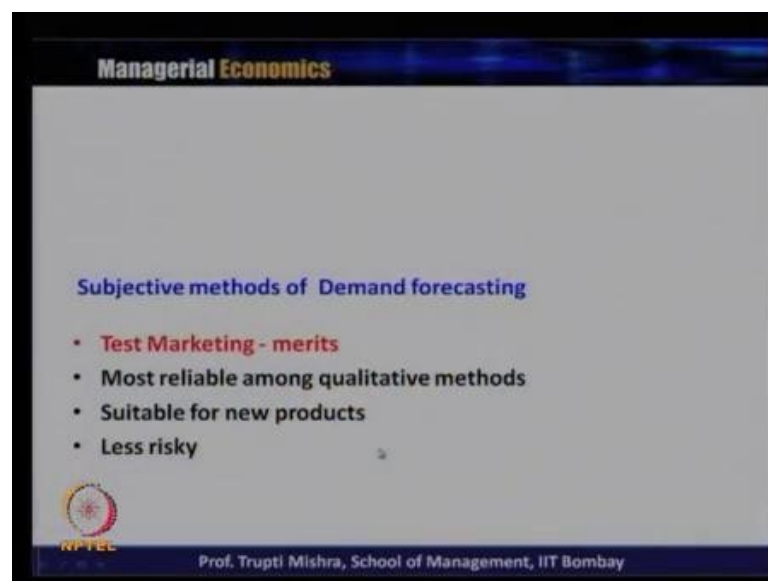
So, this is a real market and this is generally called as the test marketing and this is more reliable among the qualitative methods, because it is a kind of real world scenario where the buyers are doing the purchases. And also they have no information that their purchased behaviour is going to get studied or their purchased behaviour is going get observed. And that is why this is more reliable than the qualitative methods and suitable for generally a new product. And there is a less amount of risk, because the buyers is the behavior of the buyers is actually in the market not in the artificial market, it is costly.

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So, if when they are launching a new product they are test marketing, the entire procedure is very costly. And if the product is not doing well the failure of the product generally leads to the sunk cost. So, it is very expensive and they have to plan carefully if they are doing test marketing at least some level of RND is required to know that whether the product is going to have some potential in the market or not. Because otherwise planning a product, producing a product, doing a test marketing and if it goes in the negative direction, the failure of the product leads to the sunk. It is time consuming and when we do the test marketing, we do it in a particular location, the purchase behaviour is also recorded in the particular location.

So, there may be a regional difference which cannot be generalized into the entire market, because the behaviour of the consumer in one segment of the market may be different from the another region of the market so this cannot be generalized. So, we will continue our discussion on this demand forecasting, typically on the quantitative methods of forecasting in the next session.