Financial Accounting
Dr. Puran Singh
School of Humanities and Social Sciences
Indian Institute of Technology, Mandi

Lecture – 108
8.2 Understanding the nature of costs

Let us get started with the first discussion on types of cost. In the previous video, I said that there are different components to the cost. And we have had discussions on the cost or the expenses of the business and we know about direct costs, indirect costs and we also know about operating and non-operating costs or expenses. However, in this discussion we have a new categorization that we are going to look at.

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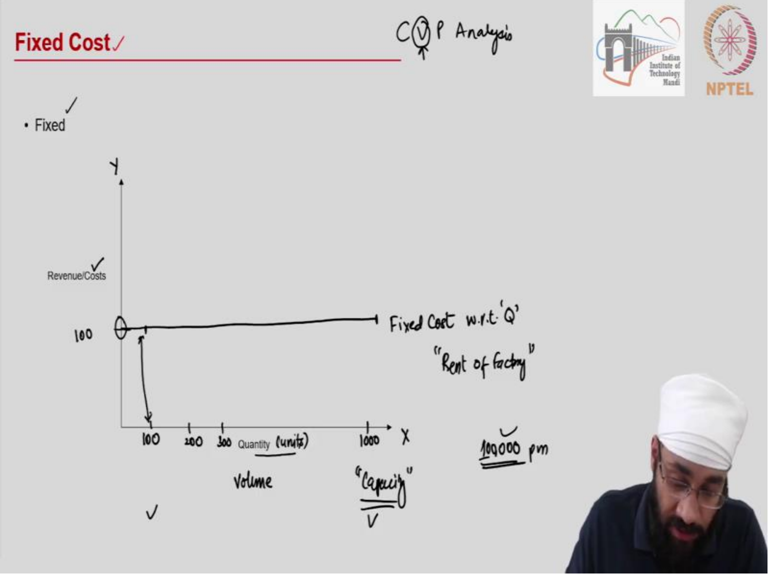

So, the first type of cost is called fixed cost. Since the discussion is on cost, volume, and profit so, cost, volume and profit analysis is the other name for break even analysis and the volume as I said in the previous video is the driver of the cost. So, the volume is something which we are going to use as the basis for the analysis. Volume in terms of number of units that you want to produce or sell. The more units you produce, the more you will be able to earn and accordingly you have to bear more cost as well. So, let us look at the first of the two types of costs which is called fixed cost. Fixed cost with respect to what? Well, with respect to the quantity of production. The quantity of the sales does not matter, how many units you are producing, this cost is not going to change.

So, on the X axis we have the units and on the Y axis you have your costs. Here I am not depicting the revenues right now. So, let us say that this is 100,000 for example, you can produce 100 units you can produce 200, 300 and so on. Let us say you can produce up to 1000 units and your cost is going to be fixed, does not matter how many units you produce your cost remains the same. This is called the fixed cost.

Fixed cost with respect to the quantity of production right, this is the first type of cost. An example of this is the rent of factory. For example, now the factory has a total capacity of 1000 units. You have taken the factory on rent and you pay some rent on it let us say 1,00,000 per month. Now, you can produce 100 units or you can produce 1000 units, the landlord is not worried about how many units you produce, he is only worried about 1,00,000 per month should come to my bank account. In most cases they ask in advance and they book it for entire year; you have to sign an agreement saying that you will keep occupying this space this factory for next 1 year. In some cases, the leases are longer as well and you will continue to pay and the payments can be 6 months in advance. So, every 6 months you pay for the next 6 months and you cannot vacate the building before the stipulated time period. So, these costs become the fixed cost and even if you are operating at zero level you close down the factory you are still bearing this cost, this is the first type of the cost.

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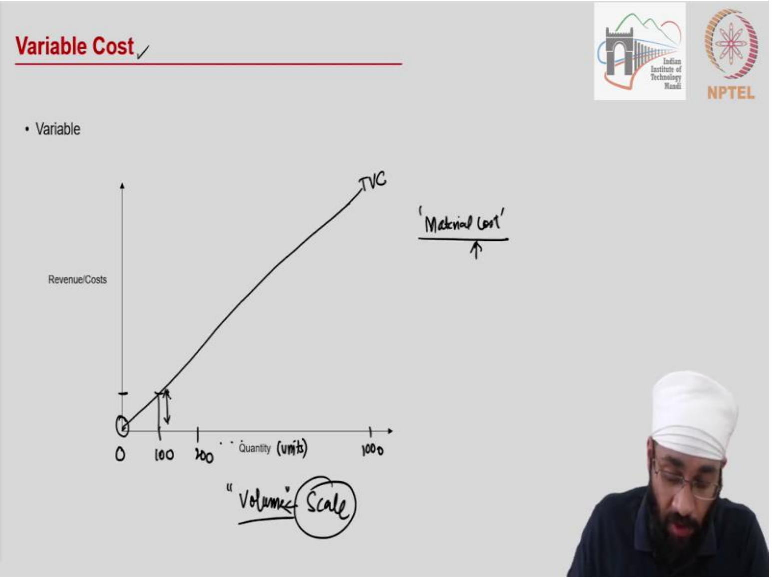

Now let us look at the second type of cost which is called variable cost, it varies with the number of units, that is how it is called variable cost. If you produce 0 units, the factory is closed then you are not spending any money. If you are producing 100, 200 and so on 1000 units this cost is going to go up, this is the variable total variable cost TVC: Total Variable Cost of the business. Now, here we are assuming a linear variable cost because we are assuming the per unit cost is going to stay the same. Actually, there are discussions in economics where we say the cost curve actually slopes and so on, but we are going to keep this simple. If you have information on how the cost changes, you will use that information, but we start with a basic model. So, what is the example of this variable cost? The cost of the material that goes into one unit. For example, to produce every one unit of pen you would require a certain amount of plastic to be used in the production process. So, if you want to produce more, you need more material; if you do not produce you do not need the material, so that is a variable cost. Again, what is the basis? The basis is the volume, the volume of production, how many units, at what scale do you want to operate. So, scale is another word for the volume, how many units are we talking about and accordingly this cost is going to change or not change. Very important, again I am emphasizing volume is the key here. You see whether the cost is moving with the volume of production and do not take a per month basis. For example, if the rent is being paid every month it is variable cost- no. That is an incorrect way of explaining it, the basis is the volume, the quantity of production.

Now, you could argue that material is not bought per pen basis, you buy material in the bulk and then you store it and then you keep using it. Yes, but you can directly attribute the cost, the specific quantity of material to a given product that is being made, pen in this case.

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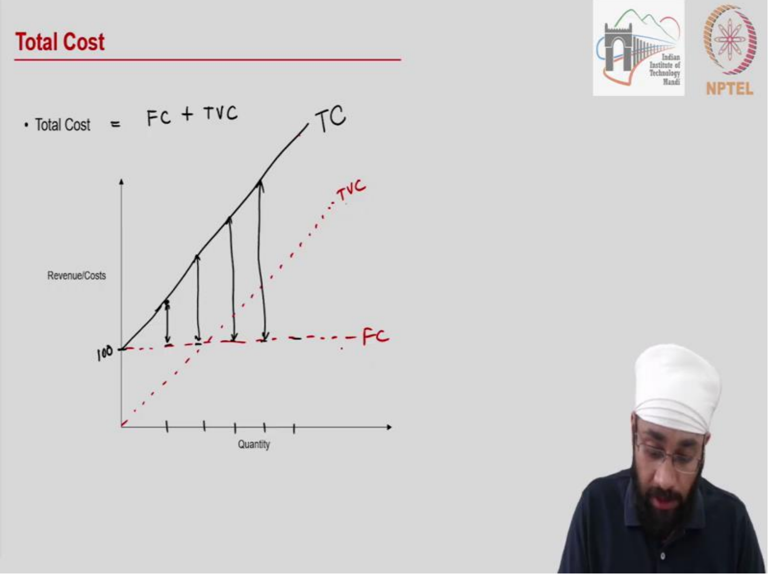

And, the fixed cost and the variable cost together make up the total cost of the product. So, the total cost in this case is going to be equal to the fixed cost plus the total variable cost. Now, looking at these previous two graphs, we know if we have to come up with the total fixed cost, we will add up the two. So, 100 plus 0 so, if you are producing 0 units the total cost is 100 because there is a fixed cost involved and if you want to produce 100 units then you have some more cost, but the fixed cost is still 100. So, this much cost and you have to add to it this variable cost which will give me this minimum and some variable.

So, this is the cost and then it is changing for every new level of production, fixed cost is always going to be the same and the variable cost is going to depend upon the level of production that you want to be at. Therefore, the total cost of the business is going to look like this. Let me take this color. So, this is the fixed cost and this is the variable cost and variable cost curve, total variable cost.

This is going to be parallel to the total cost curve because the changes in the total cost totally depend upon the total variable cost, and not fixed because it is fixed. So, this is how these three types of cost behave and this is how they are going to change with the quantity, the volume, which is the main thing. So, now, we know about the cost, let us go to the next video and learn more.