**W3 V4 Individual Supply**

0:10  
So in this video, we're going to do the same thing that we did for demand.

0:13  
Talk about how to derive a demand curve, graph it and what it means.

0:18  
And for everything, we're going to relate it to marginal cost.

0:20  
Why?

0:21  
Because all the economic intuition comes from there.

0:24  
So focus on that.

0:25  
And then we don't want to memorize anything.

0:27  
Become a better economist.

0:29  
OK, so again, price takers.

0:32  
This is especially hard for students when they think about firms because they instinctively think about firms setting prices in a perfectly competitive market, which is what we are working with right now.

0:42  
Firms do not set prices, They react to prices.

0:45  
They look at that flashing red sign price and then their only choice is a quantity choice of how much to bring to the market, OK.

0:52  
And once they bring to the market, they can sell as many units as they want.

0:56  
The price is not going to go up or down because they are so small relative to the market.

1:00  
Please keep that in mind and this module will be a lot easier for you.

1:05  
OK, logic, exactly the same as before, except it's going to look slightly different, but it's not really different.

1:11  
We said you keep buying the extra unit as long as the benefit for the extra unit marginal benefit is at least as high as the marginal cost.

1:18  
But sellers, when you bring an extra unit to the market, what's your benefit?

1:21  
It's just the market price, right?

1:22  
So much simpler than what we did for consumers because it's literally just the price.

1:28  
When you take it to the good, you sell an extra good, you get the price, sell 2 extra goods, you get more price, right?

1:34  
What is more complicated for phones, on the other hand, is the opportunity cost of production.

1:39  
It's not just the amount that we pay to all our inputs.

1:41  
We have to always think about the opportunity cost and sometimes that's a little bit more complicated.

1:47  
So pay attention to that.

1:48  
In here, all costs are opportunity costs.

1:50  
Now we're going to start being a little bit LAX and justice say cost, but really we always mean opportunity cost, OK.

1:57  
So the only choice of firm has is when you look at the flashing red sign, it's to say how many units do I want to make bring to the market in here relative to before, the marginal benefit is exactly the same, which is the market price.

2:13  
OK.

2:14  
And marginal cost now is what determines whether you bring to the market.

2:18  
So if I put a marginal cost that looks like that, then what we've got is a firm saying, if I bring this unit to the market, this is what it cost me, This is what I get for it.

2:28  
What I get is higher than it cost me.

2:30  
Bring the unit to the market.

2:31  
Keep going, right, Keep going for every unit for which the cost is lower than the market, a price here I'm indifferent.

2:39  
We assume when you're indifferent, you stop and you buy, or you sell in this case but don't go further because it's for the unit, the cost is higher than the benefit, right?

2:49  
So if I have this nice kind of increasing marginal cost curve, then I've got a prediction when I face a market price of exactly how many units the firm will bring.

3:01  
And notice also I have a really nice kind of way to relate quantity choice to market price to marginal cost.

3:10  
OK, so they're going to, sorry, let me write that out here.

3:15  
They're going to bring every unit for which the marginal benefit, which is the price, is at least as high as the marginal cost for the last unit.

3:27  
The unit which they stop at the price will be exactly equal to the marginal cost.

3:31  
So I'm going to use that information to say when the price is whatever it is.

3:36  
Let's say you know, I don't know $25.

3:38  
If they stop at the 10th unit, it means that the marginal cost for the 10th unit was exactly 25.

3:45  
Before and after may be different, but the fact that I stopped at exactly 10 units means that the marginal cost of that last bit, that last 10th unit, was exactly 25.

3:56  
Otherwise I would move ahead or I would move back.

4:00  
OK, now how do we draw a supply curve exactly the same way we did for the demand curve.

4:05  
Pick a price.

4:06  
I don't choose price.

4:07  
Pick a price, look at your marginal cost versus market price calculation, figure out how many units pass the bar and then choose your quantity that you're going to bring to the market.

4:16  
Change the price.

4:17  
Repeat until you've got your entire supply curve.

4:20  
This is what it's going to look like, right?

4:22  
Same logic that we did for the for the demand side.

4:28  
Please remember your cost information may be presented in different ways.

4:32  
You can get discrete data as we have here.

4:34  
We'll get continuous data on the other video, but also sometimes you'll have this variation between given marginal cost and total cost.

4:40  
Scan for that because anytime you're given total cost, your first thing should be calculate the marginal cost and drop this column.

4:51  
We don't care about that anymore.

4:52  
The only reason to have that would be to calculate marginal cost if I don't have marginal cost.

4:56  
And now you do exactly the same thing that you did for the demand curve.

5:00  
Pick a price.

5:01  
If the price is $1.00 then I'm not giving you anything until the price is exactly $1.00.

5:07  
When the price is exactly $1.00, only one unit passes the price at least as high as marginal cost threshold, So only when the price becomes $1.00 do I give you one extra unit, and that's the first unit you keep raising.

5:22  
The price goes 1/1/21 1:50.

5:25  
I'm not giving you the second unit until you exactly meet my marginal cost, which in this case would be $2.00.

5:33  
You're getting the second unit only when you hit at least $2.00 right?

5:37  
Anymore, Nothing more until we hit exactly $3, right?

5:41  
Because the price needs to be at least equal to my marginal cost until I'm willing to give you that extra unit.

5:48  
You go so on and so forth.

5:50  
Notice you're going to trace out a supply curve.

5:54  
That's also going to be your marginal cost curve, right?

6:00  
So supply marginal cost interchangeable because we are starting from the fundamental logic that we did in module one.

6:09  
It's using the third second principle about keep the extra unit based on thinking at the marginal marginal cost, marginal benefit.

6:19  
OK, good.

6:20  
So please always relate supply to marginal cost, make sure you understand why it's the quantity supplied for every price, but it's also effectively telling you the marginal cost for any quantity.

6:32  
OK.

6:33  
Make sure we've you've understood that in this third experiment just prices changing all else held fixed.

6:39  
We don't always say that, but that's something that we are doing.

6:41  
Keep that at the back of your head.

6:43  
OK, good.

6:44  
Now, now we want to think about the shape of the supply curve.

6:47  
When I drew that kind of supply curve or the data that we did implicitly, what I did was I said benefit was equal to the price, sorry, benefit was equal to the price.

6:58  
But then I drew a marginal cost curve that was upward sloping.

7:03  
Does it have to be upward sloping?

7:05  
Not necessarily.

7:05  
But what could cause it to be upward sloping?

7:08  
Well, if I think about producing more, you can say, well, maybe the cost is lower, maybe the cost is higher.

7:14  
But again, it's an opportunity cost, right?

7:17  
If you're going to put more resources into the production of one good, maybe you're taking it away from more profitable opportunities and that's what's going to increase the marginal cost of producing this good.

7:27  
If you produce more, maybe there's this economies of scale, right?

7:31  
There can be a couple of reasons.

7:32  
But for that you're going to have to dig more carefully into marginal cost.

7:36  
And if you're just thinking about price paid, you're going to miss the fact that it is opportunity cost and that can be a lot of the economics behind why marginal cost is increasing.

7:47  
OK.

7:47  
Pay attention to that doesn't have to be increasing, but if it is, then that's what the it's going to give us kind of an upward sloping supply curve, OK.

7:57  
So an individual supply curve plots the quantity supplied for any price.

8:02  
It's the marginal.