**W8 V3 Competitive Markets**

0:09  
And now that we've figured out what supply looks like from the firm side, from the market side, let's put them together and talk about competitive markets.

0:18  
At this point, you're going to say, didn't we already cover this in Module 3?

0:20  
I'm going to say yes, we're going to use all of your Module 3 intuition.

0:24  
But the difference is now we've got the firm side, so we can add on things like how much will each firm produce and how many firms do we have in the market.

0:32  
So that's going to be the extra thing that we're going to be adding in here.

0:35  
But otherwise, your intuition, everything that you've done in Module 3, you just bring in, OK.

0:41  
So we've got to find these four things to characterize fully characterize a market.

0:45  
We've just been focusing on these two.

0:46  
We're going to add in this, and it sounds like a lot.

0:49  
If I've got to find four things, where do I start?

0:52  
You know, Module 3 May already have been enough confusing for you.

0:55  
And the answer is going to be, well, figure out whether you're in the long run or short run first, ask that question, because then you know where your starting point is.

1:04  
And once you know where your starting point is, you follow everything in kind of a logical fashion.

1:08  
What you do have to keep in mind is that you're constantly toggling between firm and market.

1:14  
You can't do one and then get the other and then kind of, you know, never look back.

1:19  
You have to go from one to the other and then back and forth and that becomes complicated.

1:24  
So you can minimize your stress by making sure you bring everything from module 3IN.

1:28  
So that's solid.

1:30  
And then we're just going to add on this little part about the firm cost curves and the firm decisions to make that a little clearer.

1:36  
The other thing we're going to do to make it a little bit simpler is we're going to kind of make the consumer side a little bit straightforward in that we're just going to give you a market demand curve and then talk about changes in the market side.

1:47  
So you don't have to go firm, consumer, individual consumer and then kind of demand with that.

1:53  
OK.

1:53  
So let's see how we're going to do if we're starting in the short run analysis, what is true about the short run difference between the short run and long run, lots of differences.

2:03  
The one that we're going to focus on is that there is no entry or exit.

2:07  
That gives us a really nice starting point in that the number of forms, I already know what it is, it's fixed, it cannot change, which means that I know exactly what market supply is.

2:17  
I take each individual firm supply, I add it up and then I get market supply from that.

2:24  
And this is coming in directly from Module 3.

2:30  
Absolutely.

2:31  
But that's your starting point.

2:32  
Then from that, it's going to be exactly a repeat of Module 3.

2:35  
What did you do in Module 3?

2:36  
If you got a supply curve, you had a demand curve, you use the intersection to find price and quantity.

2:42  
So far, great, right.

2:43  
We're not adding anything in here.

2:45  
We're using the fact that there's no entry or exit fixed number of firms to use exactly what we're doing for Module 3.

2:51  
So how about then about the firm side?

2:54  
You use what we've been doing in the cost side module and actually module one when we're asking how much do firms produce?

3:02  
Well, if you've got market price, you take that price to the firm, the firm sees that price, the firm reacts to that price based on its marginal cost curve and tells you how much it's going to produce.

3:14  
What about the number of firms?

3:15  
Well, I don't need to find that out because that's already been given to me and that's fixed.

3:19  
OK, let's see what that looks like on a diagram.

3:21  
So I've got the firm on this side.

3:23  
I've got the cost curves.

3:25  
I've got the markets in there.

3:27  
I'm going to say in the short run, this is what the firm supply curve is going to be.

3:31  
This is my minimum ABC.

3:33  
This is the firm marginal cost curve.

3:36  
Above that I've got the firm supply curve, which is the green line here, the firm short run supply curve.

3:44  
I'm going to sum all of that up to get the market supply curve right.

3:51  
This will be the market supply curve, which will depend the sum of all of those number of firms that's fixed, right?

3:58  
Number of firms is fixed.

4:00  
It does not change.

4:01  
And I know that from before I use that to get the market supply curve.

4:05  
What's the price?

4:06  
Well, find out what the demand is, put the demand curve on there and then you figured out price and quantity, OK.

4:15  
At this point, some of you, especially those of you have done economics before, say, oh, you've done something wrong because you know that price should always be minimum ATC, to which I'm going to say, are we in the long run or are we in the short run?

4:28  
If we're in the short run, I don't care about fixed costs.

4:32  
I don't care about average total cost.

4:34  
I just care about variable costs.

4:36  
So I use variable cost and marginal cost to figure out the supply curve.

4:39  
I use the demand curve and then I figure out price and quantity.

4:43  
I don't care about this minimum ATC just yet.

4:46  
When I'm figuring out market demand and supply, OK, this is going to be price.

4:52  
This is going to be quantity.

4:54  
There will be some case when I know exactly it's going to be here and we'll talk about that a little bit later.

5:00  
Once I have this price and quantity, then I just take this price.

5:04  
I project it all the way on to the firm marginal cost curve.

5:11  
How much are they going to produce?

5:12  
I know each firm is going to produce this quantity.

5:16  
Right there again you're going to tell me, oh, they're making positive profits because look, this is the price and this is the average total cost.

5:23  
To which I'm going to say, yes, there is positive profits firm one to enter, but they cannot because this is the short run and by definition the number of firms is fixed.

5:33  
OK, but that's the process you follow.

5:35  
Please don't think, assume it has to be something and try and work backwards.

5:38  
Use your logic and work with what you're given.

5:42  
Long run, long run, Where do we start here?

5:46  
We've got to start from that incentive to enter or exit, right?

5:49  
Because that's the one that's the problem.

5:50  
That's the one that can keep moving up and down.

5:52  
And if I need stability, I need my market price to be such that the last firm is going to be making zero profits.

5:59  
If I've got identical firms, then the market price will be minimum ATC.

6:06  
Once I have the price, I know exactly what the market quantity will be.

6:12  
Why?

6:13  
Because I take my price, I say this is what the price is going is in the market.

6:19  
I ask consumers, what do you want to buy at this price and they'll tell me I want to buy this quantity.

6:26  
I have market quantity.

6:28  
Okay.

6:28  
Good.

6:29  
You have market price, market quantity.

6:31  
How much reforms produce?

6:33  
Well, take that price projected back onto the firm supply curve and find the quantity.

6:40  
But because we're starting at the zero profit condition, no surprises with identical firms, they're going to produce that quantity which is minimum ATC.

6:50  
Great.

6:50  
So I've got price, quantity, firm output, number of firms.

6:54  
This is just an accounting exercise.

6:57  
How much do you need?

6:58  
Because this is what consumers are demanding at this price.

7:01  
How much is each firm producing?

7:04  
The net is going to give me the number of firms I need in the market in one O 1 because of the numbers we have.

7:11  
Sometimes this can be a fractional number of firms.

7:15  
That's OK.

7:15  
That's just to make our lives a little bit easier.

7:17  
And here it's not realistic, I know, but you're allowed to have fractional firms in one O 1.

7:23  
OK, let's do the same logic on a graph.

7:25  
OK?

7:26  
What is a firm's long run supply curve?

7:31  
We've already talked about this.

7:32  
The green line here is the firm's long run supply curve.

7:36  
Fantastic.

7:37  
But that's not the market long run supply curve because the market long run supply curve is perfectly elastic at the minimum ATC, which is also the long run supply curve.

7:49  
If I have identical firms in a constant cost industry.

8:00  
OK, good.

8:01  
So this is going to tell me this is what the price has to be.

8:03  
A price goes above that too high, people are entering prices below that everybody leaves price has to be that to give us stability.

8:11  
OK, So what is market price?

8:15  
It's going to be minimum ATC.

8:18  
How many units do people want to demand at this quantity?

8:23  
Put the demand curve in there and at this price, this is what people demand.

8:29  
That's the market quantity.

8:31  
At this price, how much do firms want to supply?

8:35  
They want to supply that quantity.

8:38  
Finally, how many firms do I need in order to supply this quantity when each firm is producing that?

8:47  
It's just the ratio and I can solve for the number of firms that way.

8:51  
That's the logic.

8:52  
OK, adapt that logic.

8:54  
Please don't memorize, focus on the logic because it's serving as a revision for all of this previous modules, which is really useful at this point in time in the course.

9:03  
So here's what we've got.

9:04  
We've got the procedure following it, follow the logic.

9:07  
Please don't memorize think about what you're doing and why you're doing.

9:10  
But just remembering we're using the definition of the long run and short run and we're focusing on this part in the difference between the entry and exit in the long run compared to stuck in the short run.

9:21  
OK, you have to toggle between firm and market, firm and market to get your intuition.

9:27  
OK, you have, you can't look at one in isolation.

9:29  
You have to be able to move back and forth at the same thing.

9:32  
And initially, especially when you're getting started, you need to know the calculations.

9:36  
There's no doubt about that problems that has that more do some in class.

9:39  
But if you focus on the calculations, you're going to lose your intuition.

9:43  
And intuition is what's primary here.

9:45  
Intuition will help you do the calculations.

9:48  
Intuition will help you catch any errors in your calculation.

9:51  
Intuition will make you a better economist.

9:53  
Focus on that.

9:54  
Make sure you can explain what's happening and why, and at the same time do your calculations.

9:59  
That toggling between the two will help you in this module.