**W5 V3 Market Failure**

0:09  
Now that we have a concept of efficiency, let's talk about whether we can measure inefficiency.

0:15  
So if we end up at a market outcome that's not efficient, how do we quantify how non efficient it is?

0:22  
And then towards the end, we'll talk a little bit about this trade tension between efficiency and fairness.

0:29  
So last video, we talked about the assumptions needed in order to make the claim that markets are efficient because they result in the efficient quantity, OK.

0:41  
When it doesn't, we call that market failure, right, because it's producing a quantity that's not the efficient quantity can be either too high or too low, but it's not efficient.

0:53  
And typically this happens when we're not in a perfectly competitive world, which is most of the world, because perfectly competitive worlds require such strong assumptions that are very hard to satisfy.

1:04  
Let's talk quickly about some examples where we can have market failure.

1:08  
Some of these we'll cover later on.

1:10  
Some of these are detailed more in textbooks and some of these you'll see in much more detail in upper years.

1:14  
OK.

1:15  
First one is when we don't have these, this price taking behavior, right.

1:19  
So we have one side of the market that's able to have some market power, right, some ability to affect prices in its favor.

1:27  
We'll talk about this when we talk about oligopoly and monopoly coming later, right.

1:32  
Then we're not gonna reach efficiency when we have externalities, right?

1:35  
That's a big assumption in here.

1:36  
We're gonna spend a whole module talking about that.

1:39  
One of the other assumptions in the perfectly competitive world was that everybody knows everything about everybody, right?

1:44  
That's a huge assumption, not a realistic assumption.

1:47  
And when you have informational asymmetries, which we will cover later on, then you're going to have undermining trust, right?

1:55  
And then we're going to have market inefficiencies.

1:58  
Something that we will cover next week is this idea of government regulation.

2:01  
If the government actively intervenes in a perfectly competitive world, we could have loss of efficiency, OK?

2:09  
For all of those things, we need to have a measure of inefficiency.

2:13  
So that measure that we're gonna call is deadweight loss, right.

2:16  
And this can happen when we have lower market efficiency relative to the efficient surplus.

2:22  
Now happens for two reasons.

2:23  
One is trades that should happen do not happen, and the other one is the trades that should not happen, happen.

2:31  
We've not really talked about what should not happen.

2:34  
Trades happen based on private costs and benefits, but from a societal perspective, they should not happen because the social benefit is less than the social cost.

2:43  
OK, another type of dead weight loss is when we have allocation issues.

2:50  
So certain number of goods, but they're allocated to the wrong people.

2:54  
And we'll talk much more about that next week when we talk about market interventions.

2:59  
Everything that we've done, I've done my best to phrase it is quantity and not price.

3:04  
Price is useful.

3:06  
Price is intuitive, but price is the wrong way to go down this.

3:09  
If you go down the price path, you're going to end up in the wrong place.

3:11  
OK?

3:12  
Efficiency is all about economists taking a step back, evaluating things.

3:16  
For that, we do not need prices.

3:19  
Evaluation depends on total surplus, total surplus and everything depends on quantity.

3:26  
OK.

3:27  
So please phrase everything you do for surplus in terms of quantity and you will not go astray.

3:32  
Price only serves to allocate surplus between consumers and producers.

3:37  
Let's talk about those three different ways that we can be lower than efficient surplus in the previous slide.

3:45  
So the first one is, look, this is the efficient quantity, OK?

3:50  
This is based on social costs and social benefits.

3:54  
And so this is what we should be producing.

3:56  
We could end up at a market outcome where the quantity is less than efficient.

4:01  
So that's where we're actually ending up.

4:04  
It could be that we're at a quantity that's higher than efficient.

4:08  
Why?

4:09  
We'll talk about that next class.

4:12  
But we could be here or we could be at an any allocation but the wrong people get the good.

4:18  
OK, so let's talk about this first case.

4:21  
When the quantity that we're producing is less than efficient, what does this mean?

4:25  
OK, this means that here are transactions for which the benefit to society is higher than the cost of society.

4:33  
All of these transactions from a total surplus perspective should happen, but they're not taking place in this scenario.

4:40  
Here with this quantity is being produced.

4:43  
So all of this surplus is being lost to society.

4:47  
So if you had to measure what the lost to society was, it would be that gap in there, that surplus that somebody should be getting but is not.

4:56  
We don't care who's going to get it.

4:57  
Is it all going to go to producers, all going to go to consumers?

5:00  
Doesn't matter for us right now.

5:01  
We're just saying that red triangle is something somebody should be getting, but it's not getting.

5:08  
What if we produce too much?

5:10  
How can production be bad?

5:11  
Well, it can be bad if we've got a cost to society that's higher than the benefit to society.

5:20  
So these transactions taking place are actually a net loss to society.

5:25  
So if we actually decrease or we take away that unit from production, surplus will go up because right now it's being dragged down by this unit that's actually causing negative surplus, right, Is reducing social surplus.

5:38  
So if we cut down these transactions, if we would take them away from production, we'll take away the negative drag on surplus because we're removing those units that are decreasing surplus and total surplus will actually increase.

5:51  
So this here is a measure of the loss to society.

5:54  
At this point, students will say, should I put a negative sign, should I put a positive sign which I'll say drop the sign.

6:00  
Think about it in the absolute version because it's always a loss, right.

6:04  
So that's how we're thinking about this and focus on the calculation, which is the surplus that's either missing from society or being dragged out of society because those units are being produced for which the cost is higher than the benefit.

6:19  
OK, now the difference between these two and the last one that we're going to do is that these I can see on a diagram.

6:24  
I can use the diagram to actually calculate surpluses.

6:27  
I can find them in a particular shape.

6:30  
The last one, misallocation, is really hard to see on a diagram.

6:33  
And the reason it's hard to see on a diagram is because we're starting out on a diagram with these curves that already have effectively no misallocation in them.

6:42  
I'm arranging people from highest to lowest in benefit.

6:45  
I'm arranging people from lowest to highest of the cost.

6:49  
That doesn't have to be the case when we're thinking about social benefits and costs.

6:52  
Markets.

6:53  
Fine.

6:53  
We can talk about supply curves, demand curves, and why they are downward sloping and upward sloping.

6:58  
But for social benefits and costs, there's no reason why they should be arranged in this way.

7:02  
It just makes our calculations easier.

7:04  
OK, so that's the thing to remember.

7:06  
And so when we draw these curves this way, we're kind of biasing ourselves against finding this allocation on the diagram because it's not possible to show here.

7:15  
So I'm going to use this diagram to talk about it, with that caveat.

7:18  
And the way I'm going to do it is I'm going to say I have this one good, this is this one good.

7:23  
That's here.

7:24  
OK, there's two people that can get it.

7:26  
There's person A here who can get it, and there's person B here who can get this one good.

7:33  
If I give it to B.

7:35  
Sure, right?

7:36  
There's going to be some benefit to society, because the benefit to society for B is positive.

7:41  
But notice the benefit to society from A getting it is higher.

7:46  
So if I take this one good and I reallocate it away to A, social surplus, will increase, right?

7:53  
Reallocation will increase surplus.

7:56  
So that's what we mean by misallocation.

7:57  
And notice it's kind of biased against finding here, because I've already assumed implicitly that A is getting the good.

8:03  
What about from the producers Good side?

8:05  
If I've got this one good, who should produce it?

8:08  
Should it be Gaussia who has a high marginal cost?

8:10  
Should it be Janina?

8:12  
Well, if I have Gaussia producing it right now and I reallocate it from Gaussia to Janina, I will be increasing social surplus, right.

8:27  
So it's that same one good.

8:28  
I'm just taking it away from one person and giving it to another.

8:32  
So those are reasons and was a ways for which we can kind of see we can get more efficient in this world.

8:40  
OK.

8:40  
We will talk about efficiency endlessly.

8:42  
That's our concept as economist.

8:45  
Why?

8:45  
Because it fits with the tools that we have and it fits with the kind of questions that we're asking.

8:49  
But at this point, you as a person take a step back and say, look, there should be some things that are more important than efficiency to which we will wholeheartedly agree, right?

8:58  
There are some things that are more important than efficiency.

9:02  
But economists take the stand that that's for society to decide.

9:06  
That's not our job.

9:07  
As economists.

9:07  
We have a limited perspective.

9:09  
With our tools.

9:10  
We can answer these types of questions.

9:12  
If you want to go beyond them, please do.

9:14  
But then we would leave that to society to take care of.

9:18  
OK, here is another way of explaining to you why people have a problem with economists, right?

9:24  
We are just focused on your willingness to pay.

9:26  
And we're just saying, if you're willing to pay the highest for Taylor Swift tickets, then you should get the Taylor Swift ticket because that's the most efficient outcome.

9:35  
But willingness to pay is not everything for the same for the following reason, right?

9:44  
People like Taylor Swift or they dislike Taylor Swift.

9:46  
Some people can be really big fans of Taylor Swift and, you know, holding fixed to the ability to pay.

9:52  
There's a difference among people who like Taylor Swift or not.

9:55  
But there also can be people who really love Taylor Swift but are limited in their ability to pay for tickets.

10:03  
Does that mean that they should not get the tickets?

10:06  
Because our concept of willingness to pay hides inside it the ability to pay, right?

10:12  
And that's where all of this tension comes from, right?

10:15  
Because if we're focusing on the people who have the ability to pay for really expensive Taylor Swift tickets, it's saying that those are more worthy in an efficiency perspective of getting those tickets.

10:25  
And that's problematic, right?

10:28  
Because ability to pay could be determined by choices.

10:33  
A lot of times it's not right.

10:35  
A lot of times it's the luck of the draw.

10:37  
It's you happen to be born in Canada versus in India.

10:40  
You happen to be born into a society with into a society that's wealthier than than not.

10:45  
You happen to be lucky enough to be born into a richer family than not.

10:49  
Different set of circumstances.

10:51  
There's a lot of luck involved in ability to pay.

10:55  
And so we want to be a little bit mindful of that when we focus always on, you know, marginal willingness to pay is the be all and end.

11:03  
We want to remember that there's more to that in there.

11:05  
There can be other measures.

11:07  
So even stepping away from ability to pay, if you think about things like kidneys, right, somebody really needs a kidney and we have two people who really need a kidney, one who's able to pay for it and someone who's not.

11:20  
Does that mean the kidney should go to the person who can pay for it?

11:22  
These are complicated questions, right.

11:24  
This is one reason why we don't have a market for kidney donations.

11:28  
So be careful about that.

11:30  
We will talk about efficiency.

11:32  
We'll talk about willingness to pay.

11:34  
But I want you to Please remember that this is what's hidden inside.

11:37  
And be mindful of this when you're becoming an economist, OK?

11:42  
It's easy to forget.

11:44  
So here's our stand.

11:46  
As economists, we focus on efficiency, not because we don't think fairness is important, not because we not feel weird about this difference between ability to pay.

11:54  
We do it because that's what our tools are equipped to do.

11:58  
OK.

12:00  
We leave it up to society.

12:01  
So our job is to say you tell us what you want.

12:04  
You if you care about fairness, and you should.

12:07  
And voters determine what's fair or not fair.

12:09  
And that differs across societies.

12:11  
You tell us what you want and we can help you find the most efficient way to get there.

12:15  
That's where we can help.

12:17  
OK.

12:17  
But you need to take a stand.

12:18  
You need to tell us that.

12:19  
And we'll find a way that minimizes inefficiencies to get you the maximum surplus for the resources that you have.

12:27  
OK.

12:27  
So again, I want to emphasize assumptions are super important.

12:32  
Everything that you analyze depends on the assumptions that you're working with.

12:35  
Without the competitive markets assumptions, markets are not efficient.

12:38  
So do not take away the lesson that markets are always efficient.

12:42  
They are efficient if certain assumptions hold and pay attention to those assumptions.

12:47  
Second, efficiency does not mean fairness.

12:50  
We've never claimed that it is, but we can only handle efficiency questions on the tools that we have.

12:57  
We leave fairness up to society to decide, and we can help you reach that in the most efficient way possible.