

Economics 1: Fall 2010

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cast of thousands...

http://delong.typepad.com/econ_1_fall_2010/

Ladies and Gentlemen, to Your i>Clickers...

- About how much does use of markets rather than command amplify societal economic productivity?
 - A. None
 - B. Doubles it
 - C. Triples it
 - D. Quadruples it
 - E. Quintuples it

Economics 1: Fall 2010: Supply and Demand

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How Much Does Market Organization Matter?

East-Block Country	GDP per Capita	Matched West-Block Country	GDP per Capita	Percentage Gap
N. Korea	\$700	S. Korea	\$7,660	91%
China	\$490	Taiwan	\$9,500	95%
Vietnam	\$170	Philippines	\$850	80%
Cambodia	\$150	Thailand	\$2,110	93%
Georgia	\$580	Turkey	\$2,970	80%
Russia	\$2,340	Finland	\$19,300	88%
Bulgaria	\$1,140	Greece	\$7,390	85%
Yugoslavia	\$3,240	Italy	\$19,840	84%
Hungary	\$3,350	Austria	\$23,510	86%
Czech Republic	\$2,710	Germany	\$23,560	88%
Poland	\$2,260	Sweden	\$24,740	91%
Cuba	\$460	Mexico	\$3,610	88%
Geometric Mean:	\$930		\$8,030	88%

Questions to Ask of Any Societal Calculating Mechanism

- Is it attainable?
 - i.e., China during the Great Leap Forward and the Terror Famine not attainable
- Will it be productively efficient?
 - Will the right people be making the right things?
- Will it be distributionally efficient?
 - Will anybody say “I don’t want that, I want this instead”?
- Sum up these two in “Pareto-optimal”
- Will it be *fair*?
 - The cu0.40 price allocation might be Pareto-optimal
 - Dharma teaches yoga
 - Dharma consumes 2.5 yoga and 1 cup of coffee—and at a price of cu0.4 doesn’t want to teach any more or less for any more or less coffee
 - Greg consumes 2.5 yoga and 9 cups of coffee—if he doesn’t like yoga that much, he might not want to take any more yoga lessons even at a price of cu0.4
 - But it doesn’t seem *fair*, does it?
- That is what we will look at next time...

Assessing the Market Mechanism

- If prices are right, it will be productively efficient
 - People have incentives to make the right things, and to have them made by the right people
- If prices are right, it will be distributionally efficient
 - People will have every incentive to buy the right things—if we trust consumer sovereignty, that is
 - Sugar, salt, fat
 - Internet poker
- If prices are right, it will be attainable
- But will prices be right?
- And will it be fair?

Foundations of Supply and Demand

- Back to Dharma and Greg—but this time let's have Greg be the flexible one teaching yoga
- And suppose that there are lots of other people, and lots of Gregs
- If we got a price of yoga lessons—say cu_2 —then the fitness sector will organize itself and roll forward
- But how do we get a price of yoga lessons, and will it be the right price?

Fundamentals of Supply and Demand

- Let's say that we have five Gregs—Greg305, Greg310, Greg315, Greg320, and Greg 325
 - All are highly qualified to teach 10-person yoga classes
 - The last two digits of their names tell us the minimum per-person price they will require before they will teach...
- And let's take the entire Berkeley population and think of a demand curve:
 - At a cost of \$25/lesson, nobody wants to take yoga
 - Each dollar that the per-lesson cost falls, an extra 5 want to take yoga

Ladies and Gentlemen, to Your i>Clickers...

- If PDC—Production and Distribution Coordination—decides that we are going to offer two yoga classes, who should teach them?
 - A. Greg305 and Greg310, because they enjoy teaching yoga the most
 - B. Greg320 and Greg325, because they are the least happy people and it would be good to give them the chance to do such an enjoyable thing as teaching yoga
 - C. The best societal arrangement would be to choose who gets to teach by some random process

Fundamentals of Supply and Demand

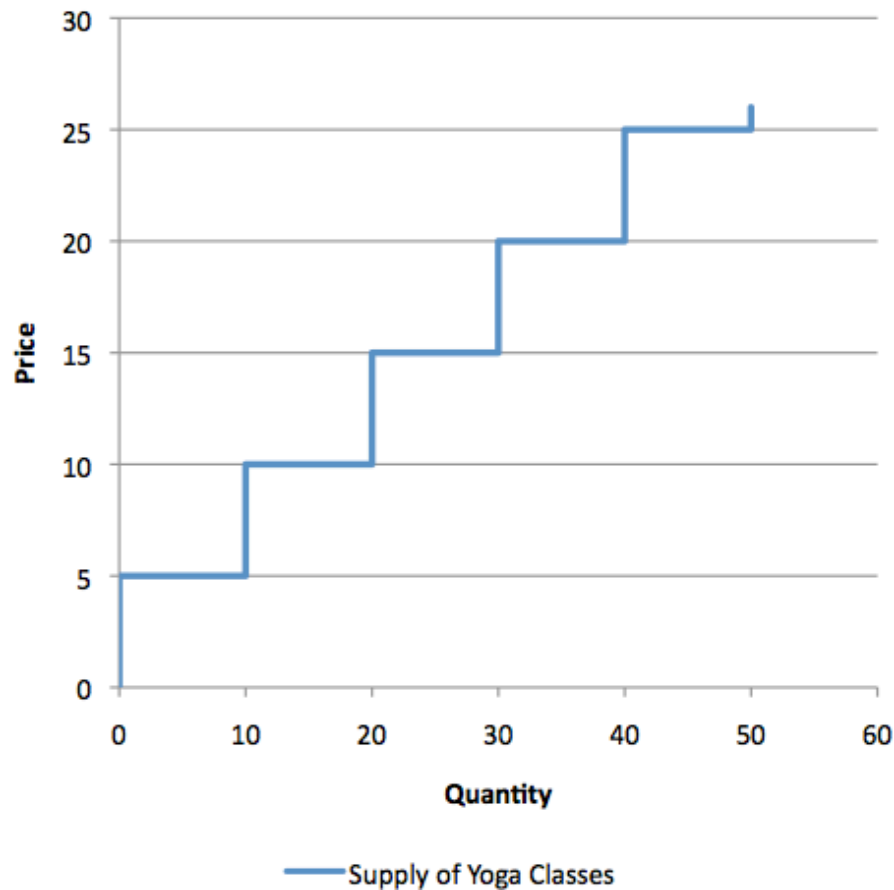
- At a price of \$19/lesson, 30 people want to take yoga and three teachers want to offer classes
- At a price of \$20/lesson, 25 people want to take yoga and four teachers want to offer lessons
- At a price of \$18/lesson, 35 people want to take yoga and three teachers want to offer lessons

Ladies and Gentlemen, to Your i>Clickers...

- Suppose PDC—Production and Distribution Coordination—decided that we were going to offer four yoga classes at a price of \$20/lesson for each student and \$200/lesson for each teacher. Now it finds that there are only 25 students and 4 teachers. What should PDC do?
 - A. Split up the students among the four teachers and announce that the teachers will only be paid \$120/lesson
 - B. Split up the students among the four teachers and announce that the students will each have to pay \$32/lesson
 - C. Pick one of the teachers by lot and send him or her home, and then go draft 5 passers-by and force them to take the class, charging each student \$20/lesson and paying each teacher \$200/lesson
 - D. Draft 15 passers-by and force them to take the class, charging each student \$20/lesson and paying each teacher \$200/lesson
 - E. Lower the price charged to \$19/lesson and the price paid to \$190/lesson, and see if any more students are willing to pay that price and if any of the teachers say they would rather go do something else.

Fundamentals of Supply and Demand I

Yoga Lesson Supply

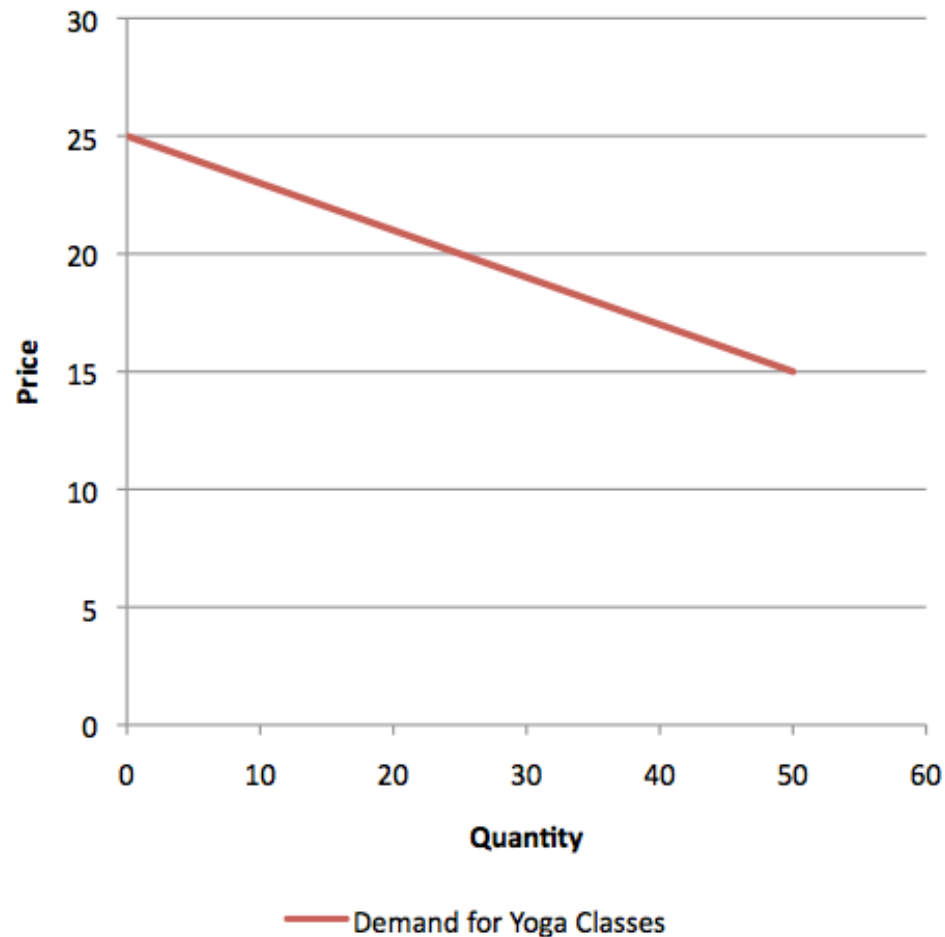


Drawing the Supply Curve

- Start out at a price of zero
- Raise the price until somebody is willing to sell
- Keep raising the price, and watch how other sellers enter the market

Fundamentals of Supply and Demand II

Yoga Student Demand

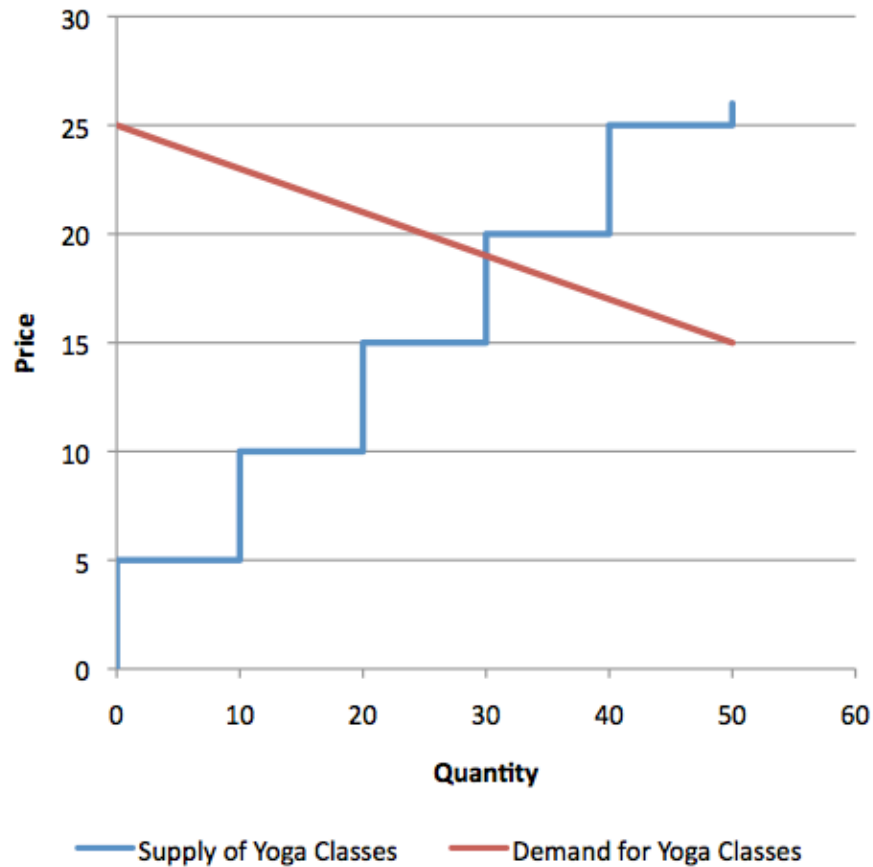


Drawing the Demand Curve

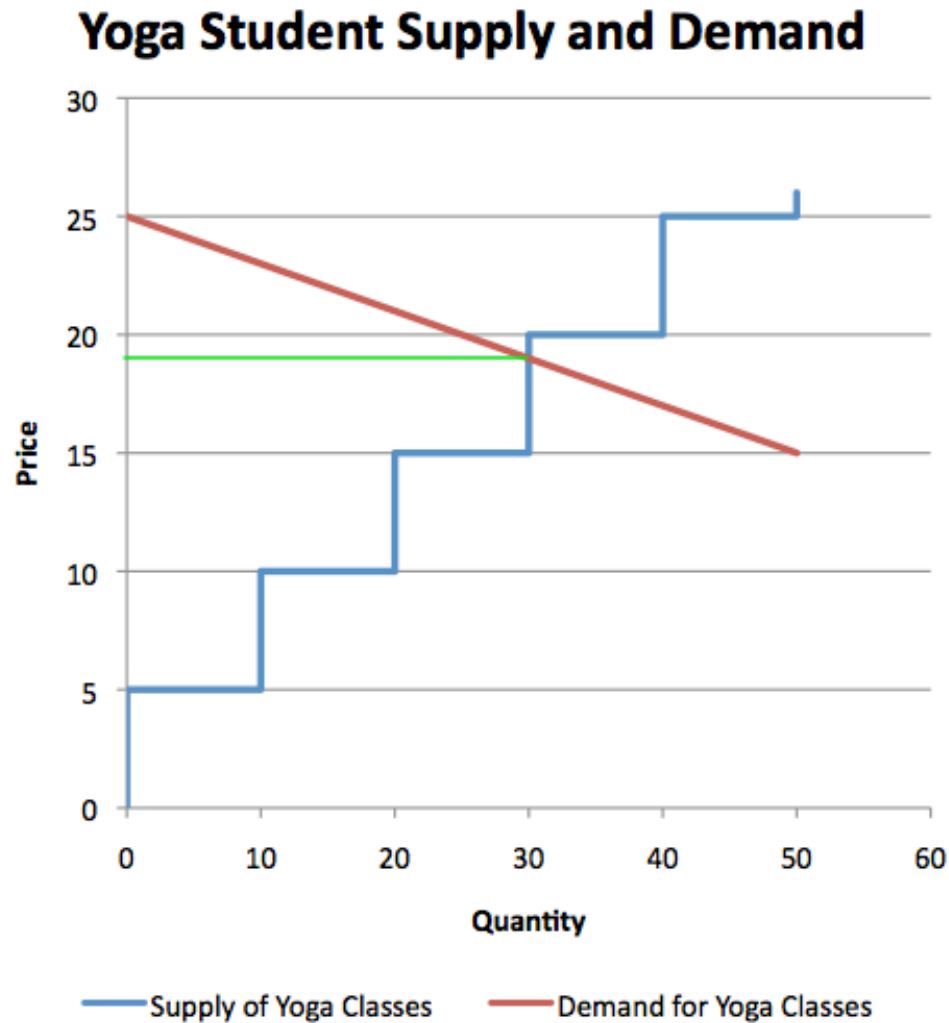
- Start out with a price so high that nobody wants to buy
- Lower the price until the first buyers appear
- Keep lowering it, and watch more buyers appear

Fundamentals of Supply and Demand III

Yoga Student Supply and Demand



Fundamentals of Supply and Demand

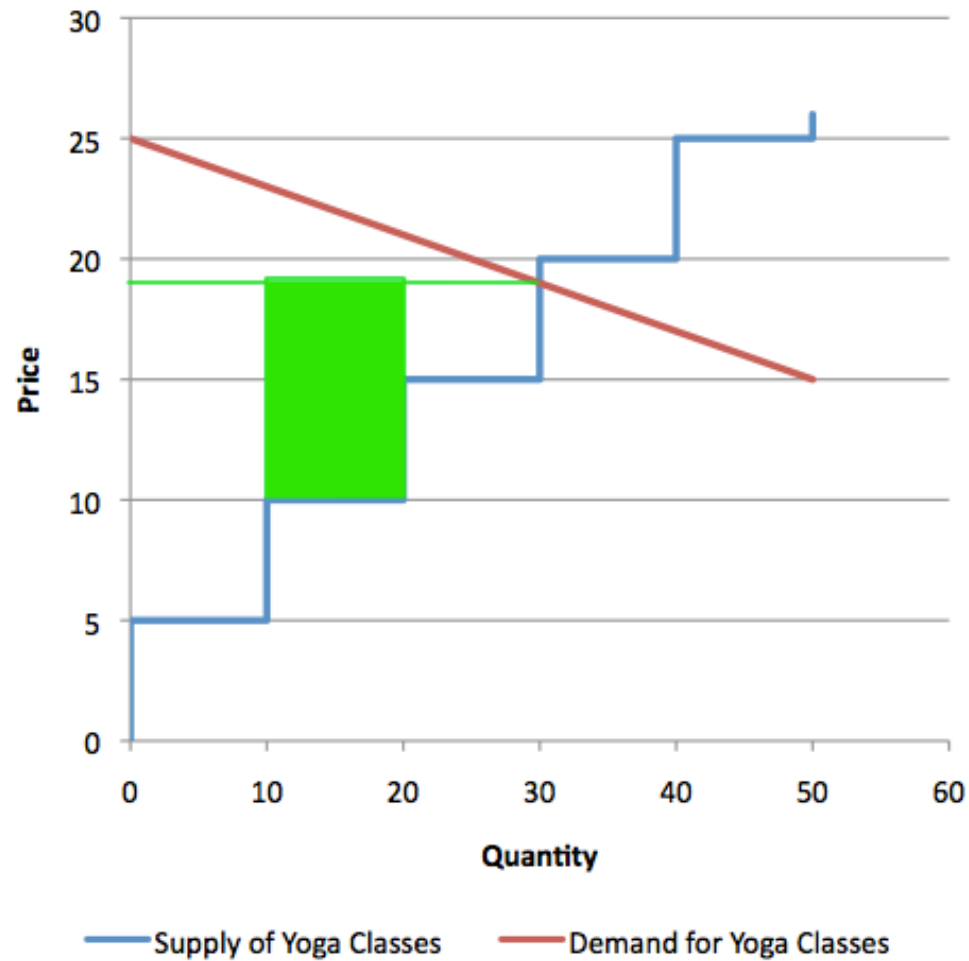


Market Equilibrium

- What will happen if the price is above 19?
 - Excess supply
- What will happen if the price is below 19?
 - Excess demand
- Some adjustment process out there
 - If the price is above 19, the disappointed sellers will be willing to offer to take less and bid business away from the satisfied sellers
 - If the price is below 19, the disappointed buyers will be willing to offer more
- The market should “grope” itself to the price of 19, where
 - There are no disappointed would-be sellers who wish to cut their prices
 - And no disappointed would-be buyers who wish to raise their prices

Surplus to Greg 310

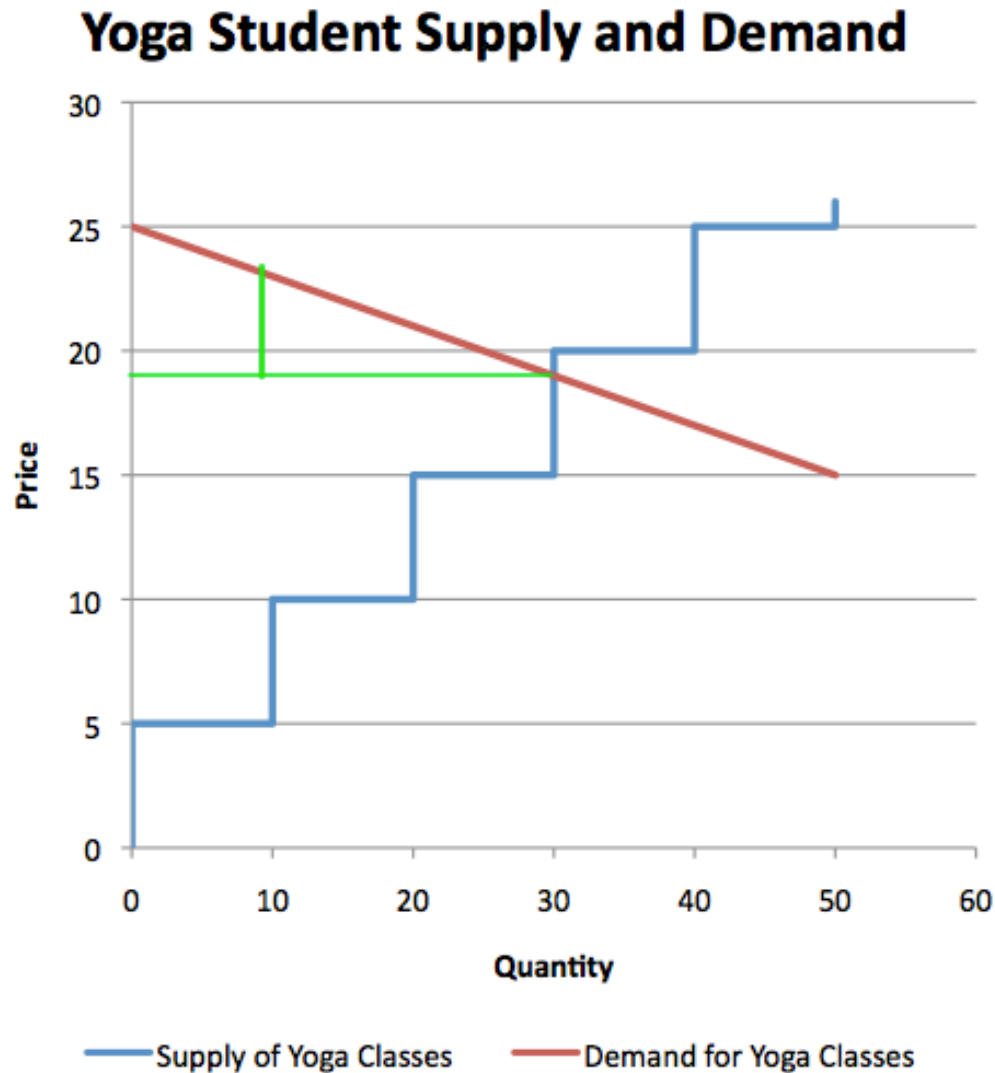
Yoga Student Supply and Demand



Surplus to Greg310

- Greg310 would have been willing—barely willing, but willing—to teach the class at a price of \$10 per head
- He is getting \$19
- He is thus getting \$90 more worth of “utility” than he could get in his next-best-available choice of profession
- He is doing rather well
- Greg305 is doing better: \$135 of “producer surplus”
- Greg315 is only getting \$45 of “producer surplus”
- And Greg320 and Greg 325 are not getting any producer surplus at all

Surplus to Yoga Student #10

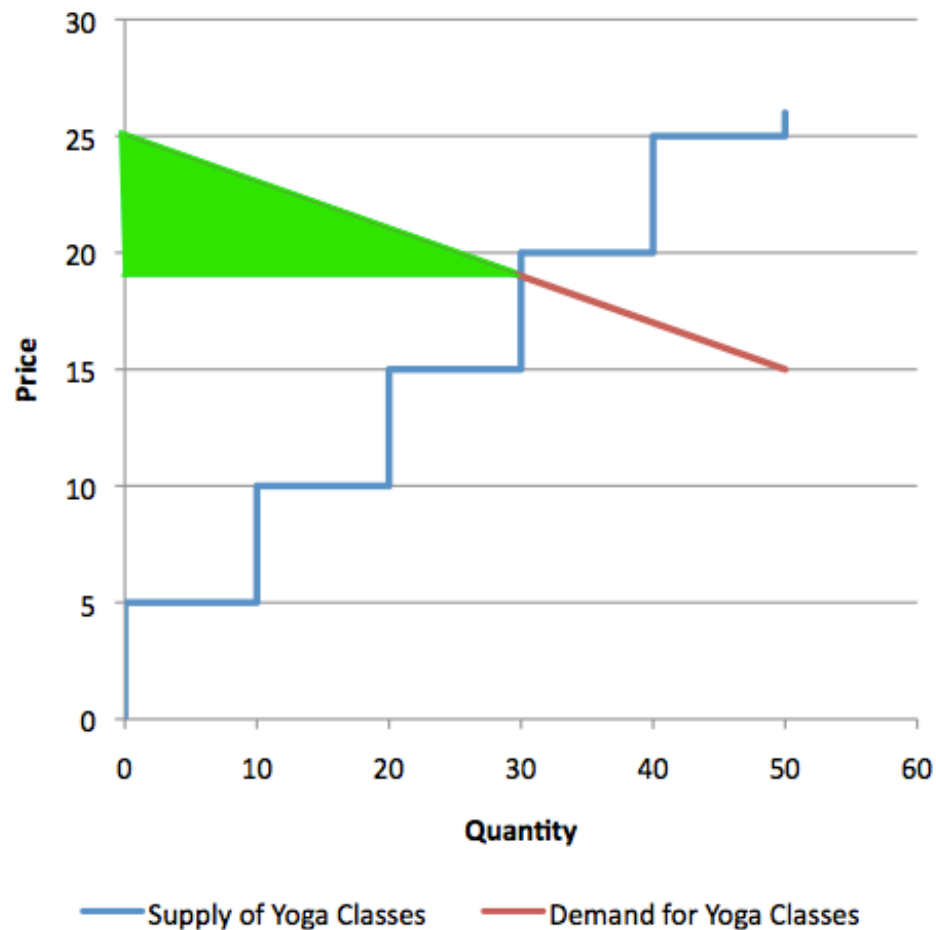


Surplus to Yoga Student #10

- Yogastudent #10 would have been happy to pay \$23 for a yoga lesson
- He is only paying \$19
- He is thus getting \$4 of “consumer surplus” out of this market—is \$4 better off than he would be if no yoga lessons were offered, and he had to go spend his money on something else.
- Yogastudent #20 is only getting \$2 of surplus
- And yogastudent #30 is getting no surplus at all—is in the “meh” state...

Consumer Surplus

Yoga Student Supply and Demand

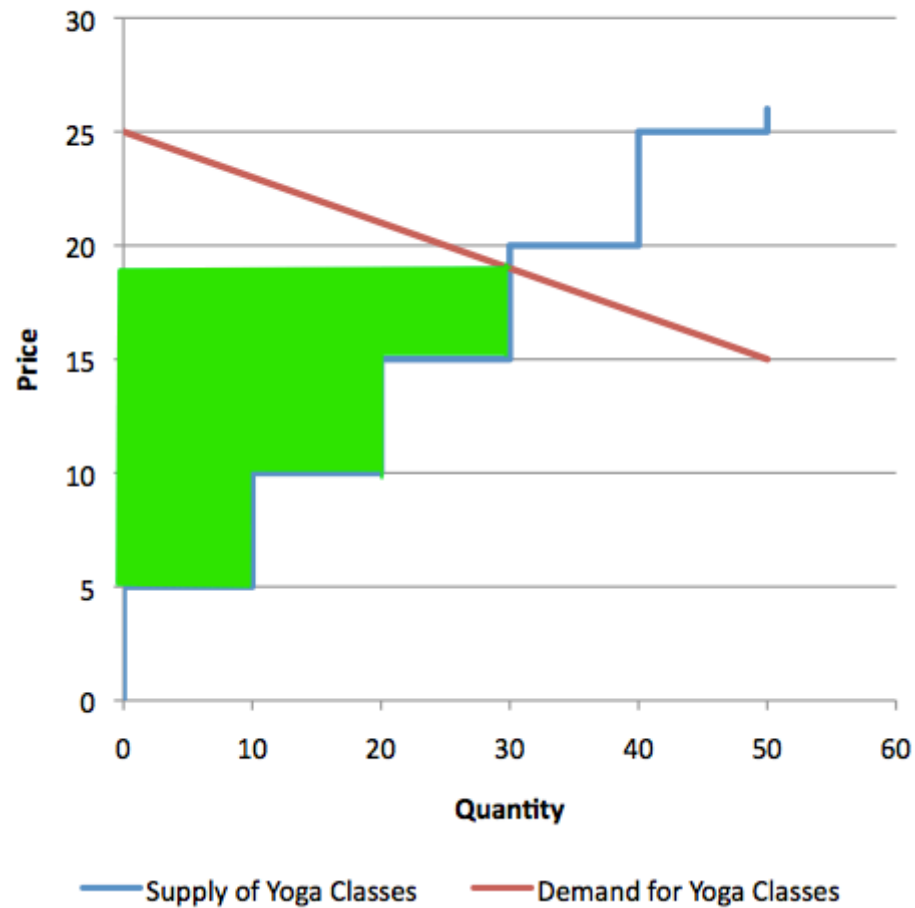


Consumer Surplus

- Add up all the consumer surplus of all the people getting it
- And it is equal to the area of this triangle
- Note how the surplus from the availability of yoga lessons at a price of \$19 is distributed
 - Some people get a lot—because they really like yoga, would pay through the nose for it, and so get a really good deal
 - Some people get only a little surplus—because they are “meh” about yoga, especially at \$19 a lesson
 - Is this fair?
 - Aristotle says fairness consists in treating equals equally, and unequals unequally. Is it fair for the people who really enjoy the class to only have to pay as much for it as the people for whom it is barely better than a poke in the eye from a sharp stick?

Producer Surplus

Yoga Student Supply and Demand



Producer Surplus

- Add up all the producer surplus of all the people getting it
- And it is equal to the area of this triangle
- Note how the surplus from the availability of yoga lessons at a price of \$19 is distributed
 - Some people get a lot—because they really like to give yoga lessons and would almost give them for free, and so get a really good deal
 - Some people get only a little surplus—because they are “meh” about giving yoga lessons, especially at a measly \$19 per student per lesson
 - Is this fair?
 - Aristotle says fairness consists in treating equals equally, and unequals unequally. Is it fair for the people who really love teaching the class to receive as much for teaching it as the people for whom teaching a yoga class is barely better than a poke in the eye from a sharp stick?

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Properties of the Market Equilibrium

- It is where the supply and demand curves cross
- Nobody is rationed out of the market
- It is stable
- It produces the maximum dollar-value social surplus
 - No other possible arrangement produces more social surplus
 - Other arrangements have
 - Some of the wrong people teaching the classes
 - Some of the wrong people taking the classes
 - Too few classes being offered
 - Too many classes being offered

Other Arrangements Leave Side Deals: Who

- Some of the wrong people teaching the classes
 - If Greg320 is assigned to teach one of the three classes and Greg305 is not, then—“Psst. Will you teach my class?” There’s \$150 of surplus for them to split
- Some of the wrong people taking the classes
 - If yogastudent#10 is not assigned to take a class and yogastudent#30 is, then—“Psst. Will you take my place?” There is \$4 of surplus for them to split

Other Arrangements Leave Side Deals: How Many

- Too few classes being offered
 - If only two classes are being offered, then yogastudent#21 through yogastudent#30 meet Greg315 outside and if they set up a class then there is \$100 of surplus for them to split
- Too many classes being offered
 - If four classes are offered, then when yogastudent#31 through yogastudent#40 meet Greg320 for their class, they look at each other and say: “Let’s just pretend we did this” —and in so doing they split \$20 of surplus

A Competitive Market in Equilibrium Leaves No Side Deals

- No group of students can get together with a teacher and agree to just pretend that they did this
- No group of non-students can get together with a non-teacher and gain surplus by engaging in a transaction
- No student can swap places with any non-student in such a way that they can make a side-payment that makes both happy
- No teacher can swap places with any non-teacher in such a way that they can make a side-payment that makes both happy

Ladies and Gentlemen, to Your i>Clickers...

- But is a competitive market equilibrium fair? Should we impose an excess profits tax on Greg305 and Greg310, and an excess education fee on yogastudent#1 through yogastudent#20?
 - A. Yes, on both the teachers and the students, because it is unfair to the rest of us that they like yoga so much
 - B. Yes on the teachers because they are getting a job they really, really like, but not on the students because it is not their fault that they like yoga and they should not be penalized.
 - C. Yes on the students because it is not fair that they get to pay so little for something so valuable to them, but not on the teachers because it is not their fault that they are good at teaching and enjoy what they do and they should not be penalized.
 - D. No on both: we cannot help how we are made, or what we like and dislike.
 - E. What is this “fair”? And once you start taxing people not for what they do but for how they feel, don’t you create a huge problem of deception and lies that you will not be able to untangle? The task here is to figure out what maximizes the total value we create rather than trying fruitlessly to ensure that nobody is enjoying themselves too much.

Test Your Knowledge

- What is a supply curve?
- What is a demand curve?
- What is a competitive market equilibrium?
- What is consumer surplus?
- What is producer surplus?
- What are side deals?
- Why doesn't a competitive market equilibrium leave open side deals?