Note to teachers

This case study comes after we have covered supply, demand, surplus, and price elasticity. My goal is to have students apply the content to a real-world problem and think carefully about how to interpret each of these economic ideas. The numbers are contrived and there are some simplifying assumptions (like there is a single market for apartments and it clears at a single price).

What I hope the student learn

1. How elasticity of supply and demand reflect the choices that producers and consumers make about how to use apartments, whether to renovate or build new ones, where to live, how many roommates to have, etc. The impact of Airbnb is interesting: it increases elasticity of supply since it gives owners more choices about how to profit from their apartments.

2. In question #3, a new addition slightly increases demand, which creates a new equilibrium. And equilibrium means everyone who wants to trade at that price is able to do so.

3. What are some arguments for and against the government getting involved in the market. By the end of the case study, I hope students see that this draconian rent control does not likely help those it intends to help. Afterwards we discuss other ways that governments can try to address issues of housing affordability, such as vouchers and changes to zoning. Policies that work within the market context have some advantages (and drawbacks) compared to price controls.

4. The numbers are contrived, but if correctly computed they show that rent control actually decreases both consumer and producer surplus (because the equilibrium quantity plummets). But that, on a per-apartment basis, those tenants who actually find apartments are big winners.

5. Rent control likely decreases the quantity and quality of the housing stock because it removes incentives for landlords and developers and it encourages more housing to be owned instead of rented.

6. From day one in my economics class, we look at different methods for allocating scarce resources. This fits well here, as without the market clearing on price, alternative methods must arise. While price has its drawbacks, other methods such as nepotism, the black market, lines, etc, have disadvantages as well.

7. Computing consumer surplus under a price control can be tricky. I encourage students to either assume that those who value the apartments most get them or to assume that they are calculating the maximum possible consumer surplus, which occurs when those who value the item the most get them. When the Varsity Blues college-admission corruption was in the news, I used it as an example that somehow those who value something most highly (and can pay accordingly) often gets things, whatever the official allocation method is!

Unit 4 Case Study: Price Controls **March 1, 2022**

Berkeley California is a city of approximately 100,000 people located across the bay from San Francisco. In addition to being home of the major University of California campus, it is a bastion of liberalism, having earned the nickname "The People's Republic of Berkeley." This case study, while grounded in fact, is a simplification of Berkeley's experience with "rent control", a government policy of trying to improve upon market outcomes. There have been significant changes in this policy over the decades.

Part I: The Market

Assume that there is a single market for rental apartments in Berkeley. (This is unrealistic, because supply and demand will differ by neighborhood, size and condition of apartment and various other factors.) The price of apartments is the monthly rent the tenant pays the owner. While there is a large rental market for apartments, many residents own their own apartments (condominiums) or houses. A rental apartment may be fairly quickly sold and turned into a condo, where the buyer lives in it themself rather than renting it out.

Assume the supply of apartments is given by the equation $Q^S = 19P - 15000$ and the demand is given by the equation $Q^D = -8P + 27000$.

1. Find the equilibrium price and quantity. Then compute the consumer surplus and producer surplus and briefly describe what they mean. Show computations to support your answers.

2. In the context of this scenario, what is the meaning of price elasticity of demand? You ***don't*** need to compute or estimate it. Instead, describe what it represents. Why does the quantity demanded change as prices increase? Where do those people go? Do the same with price elasticity of supply. Where do the apartments come from or go? Does Air B&B have any impact here?

3. Someone is moving to Berkeley and wants to rent an apartment. (Assume everyone in Berkeley loves it there and wants to stay.) What impact does this have on the market? And would it be a small impact or a large one? (no computations necessary) And if she is willing to pay this new rent, how hard should it be for her to find an apartment to rent? Note: use the supply/demand construct!

Part II: The Problem

The city councilors of Berkeley (the governing body) are concerned that rents in Berkeley have risen far faster than the incomes of residents for several decades. This has made it increasingly difficult for middle and lower-income families and individuals to continue to live in Berkeley or to move into the city. To help these people, the councilors decide to implement a policy called "rent control" where they dictate the highest monthly rent that owners may charge tenants for apartments.

4. Is the fact that middle- and lower-income people cannot afford to live in Berkeley a problem? In recent years, the price of NBA basketball tickets has also soared, making it hard for middle-class people to attend games. But there's not much in the way of government programs to help. Should the government get involved here? If so, why?

5. On the surface (no economic analysis yet!), does rent control seem like a good idea? Who does it seem benefit and who does it hurt? Why might someone with little economic knowledge find it appealing?

6. If the councilors set the maximum monthly rent at $2000, what impact will this have on the market? Why?

Part II: The Maximum Monthly Rent

Trying to help keep Berkeley affordable, the city councilors set the maximum monthly rent to be $1100.

7. Draw a supply/demand diagram for the market for Berkeley apartments and then draw a horizontal line showing this maximum monthly rent. At this rent, what is the quantity demanded and quantity supplied? Is there a shortage or a surplus? How large is it? Where on your diagram is this surplus or shortage represented? (is it a point, line, or area?)

8. Under rent control, what price and quantity occur in the rental market? Compute the consumer surplus and the producer surplus. Show computations to support your answers.

9. What do these surplus numbers reveal about who appears to gain and lose from this policy? You may want to consider outcomes relative to the original case where there is no rent control. You may also want to think about the numbers on an "average per apartment" basis as well as overall. *Be sure to answer this fully; this should be one of your longer answers.*

10. Someone moves to Berkeley and wants to rent an apartment. He is thrilled to read about the low rents prevailing in the city. What happens when he goes apartment hunting? Why?

11. Given that the city councilors have prevented the market from allocating the scarce resource based on price, what are some other methods of allocation that might arise to take the place of the market? What would you do as a landlord? To what extent would these methods benefit those people that the policy was designed to help? *Be sure to answer this fully; this should be one of your longer answers.* Consider different allocation methods we discussed this term and comment on how they could be applied and what you think would happen. AT LEAST 4 DIFFERENT METHODS.. how they would work and who they would beneft. Then what would you (as a landlord do)? What do you think is most likely to occur and why

12. What are some ways that landlords might respond to these limits on the rent they can charge?

13. What impact will this likely have on the ***quantity*** and ***quality*** of the apartments in Berkeley, and why? Landlords typically have to make frequent improvements and perform routine maintenance to keep apartments nice. To what extent would rent control impact their willingness and/or ability to do this?

14. Who does rent control end up helping and harming? Among others, think about renters in Berkeley, property owners in Berkeley, and renters and property owners in neighboring towns or cities.

15. In the New York Times Sept 19, 2019 about Bernie Sanders' housing plan:

> The national rent control standard Mr. Sanders has proposed would cap the amount that landlords can raise rents, to shield tenants from escalating housing costs and, in a deeper sense, the excesses of capitalism in the housing market. Landlords could raise the rent by no more than 3 percent per year, or one and a half times the rate of inflation, whichever is higher.

To what extent to you support this plan, and why?

-No resources besides your notes and group-mates, and textbook. You may communicate with your group-mates outside of class.

-***Use numbers to support your conclusions (***hint: consumer and producer surpluses!)

-You should not spend more than 4-5 hours on this case study outside of class

-It is due Friday March 25th at 4 pm. Uploaded as a pdf to schoology.

-You do not need to draw graphs and do math on the computer; attaching or including sheets with hand-written work is perfectly acceptable for the mathematical portions.

-The assignment is worth 100 points. ***This will be graded like a paper, not like homework. It is not just based on effort but on the accuracy of your calculations and the clarity and completeness of your explanations.***