

Econ 0100 | Classwork B2

Due in Recitation

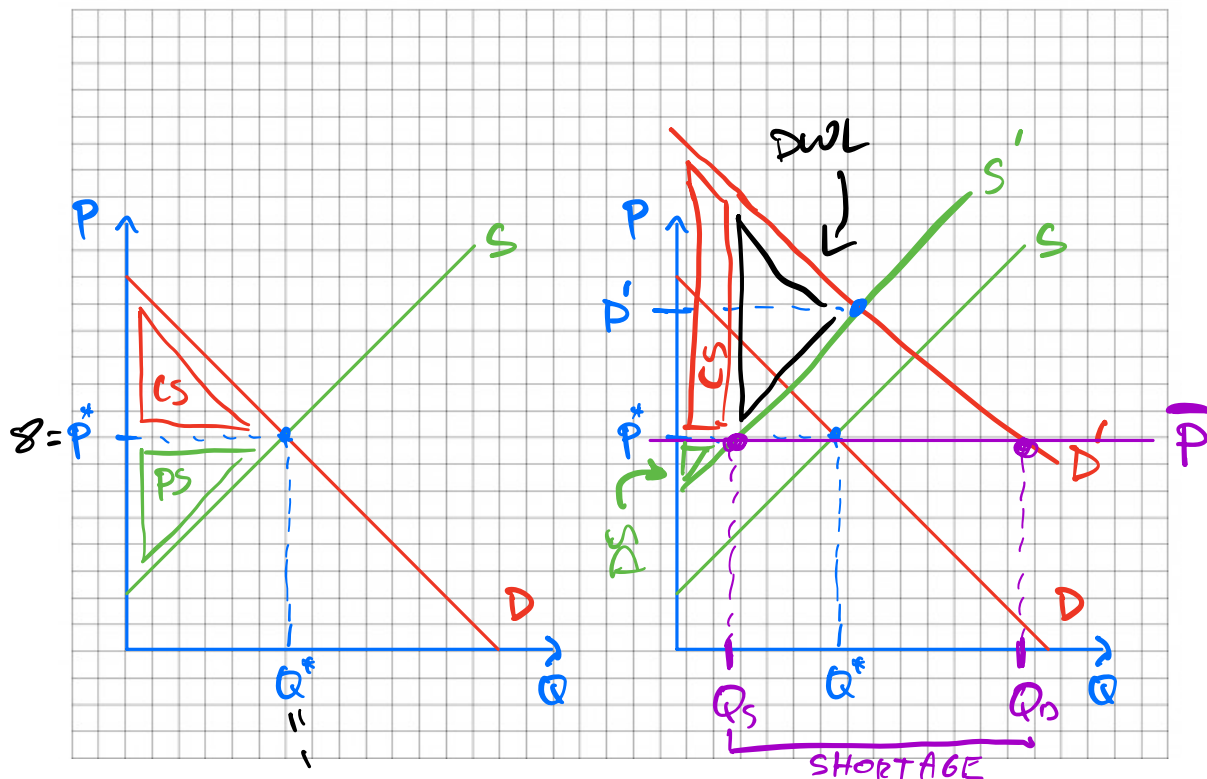
Modeling a Pandemic

Imagine a pandemic forces the world into a global lockdown and subsequent slow reopening. Imagine the market for food (as a bundle) is represented by the following supply and demand curves before the pandemic (units in dollars and daily servings).

$$\begin{aligned} \text{EQ: } Q_s &= Q_d \\ P &= 7 + Q_s \\ P &= 108 - 100Q_d \\ 101Q &= 101 \Rightarrow P^* = 7 + 1 = 8 \\ Q^* &= 1 \end{aligned}$$

Q1 | Pre-Pandemic Market

Use a graph (below) and a sentence to discuss the food market prior to the pandemic. Be sure to calculate equilibrium price and quantity.



This market is in equilibrium, with prices at \$8 and quantity at 1 daily serving.

Q2 | Pandemic Impact

The pandemic had two primary impacts on the food market. First, the supply chain experienced major disruptions. Second, consumers were willing to spend more on food as government programs like unemployment benefits and employee protections supported incomes and uncertainty about the future led to stockpiling. Use the graph (above) to discuss what happened to the market after the pandemic.

The supply shifted up and the demand shifted out leading to a higher price and indeterminate change in quantity.

Q3 | Government Response

In response to worries about the affordability of basic necessities in a time of difficulty, the government considers a ban on price hikes from pre-pandemic levels. Use the graph above to discuss the impact on good availability of this policy. Be sure to include welfare measures.

This price ceiling raises the quantity demanded and lowers the quantity supplied, leading to a shortage of food.

This would not be an effective policy to make food more affordable.