Microeconomics for Public Policy I
Fall 2026

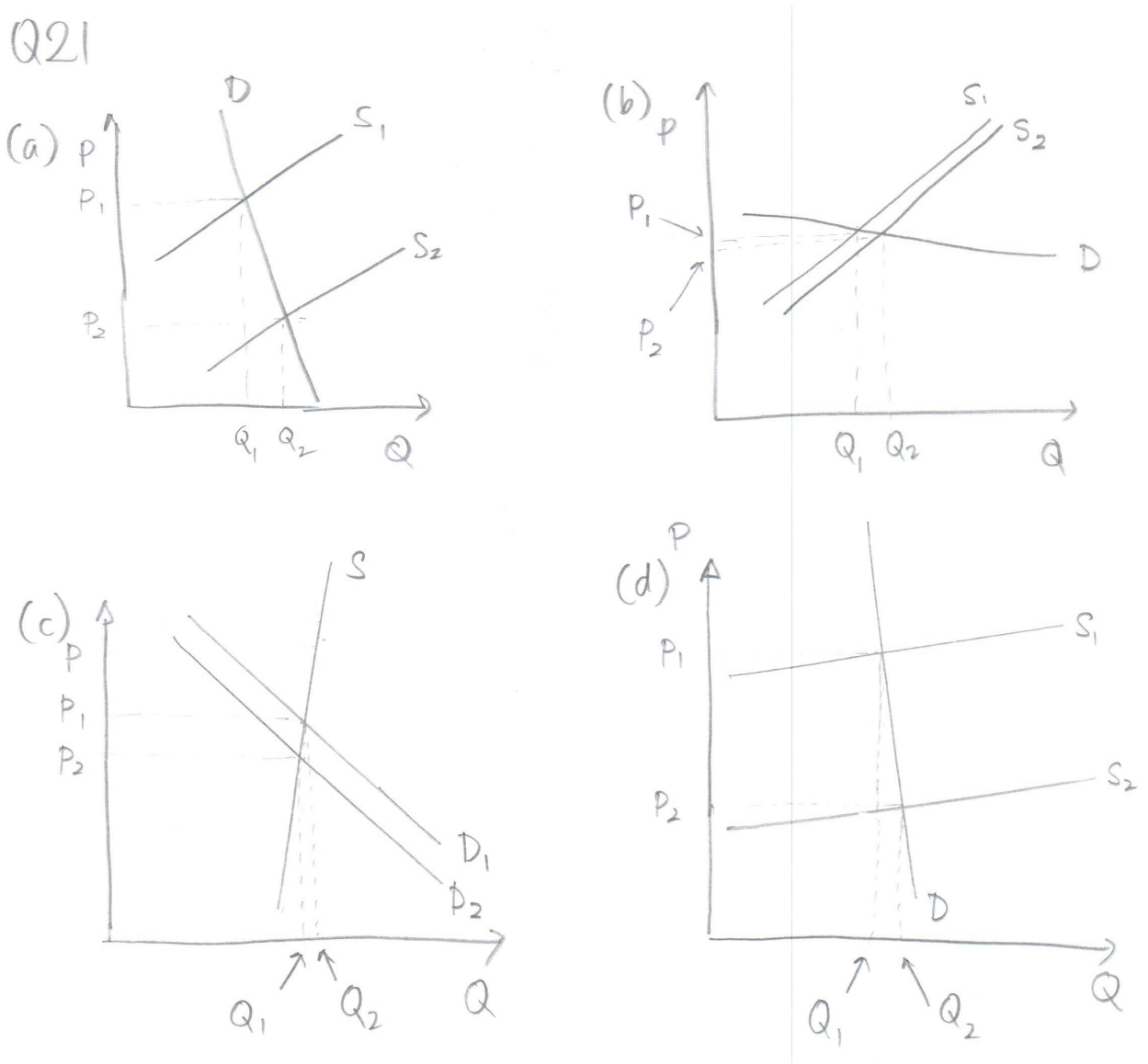
Problem Set 2

On what and how to submit

- For this and all future problem sets, questions are from the "Problems" section of the questions at the end of the chapter.
- Due before Lecture 3 to Blackboard. See assignment turn-in on course home page.
- Submit a pdf file
- Name the file "ps02_[lastname].pdf". For example, my file would be "ps02_brooks.pdf".
- In addition, write your name at the top of the problem set.
- You do not need to type your submission. Any **legible** submission is ok. For example, you can write the problem set with hand-drawn graphs, take a picture, and submit the picture as a pdf.

1. GLS Chapter 2, Question 21

This question gives four scenarios and then asks which one gives the largest decrease in equilibrium price, and which gives the largest change in equilibrium quantity. It asks you to draw graphs for each of the four scenarios.
Here is my representation of the four scenarios. There is no one "official" way to draw these. However, we should be able to understand which side of the market (demand or supply) is more or less elastic, and we should be able to tell the difference between and "big" and "small" change in demand or supply.



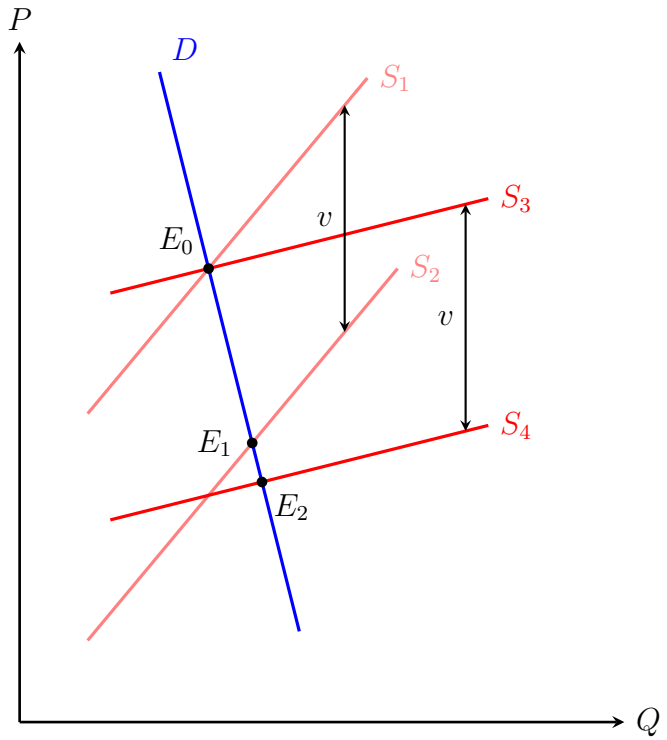
First we are interested in which case(s) deliver the larges change in equilibrium prices. We know that (b) and (c) are unlikely because the change in supply (in (b)) or demand (in (c)) are small. Small shifts yield small changes. This leaves cases (a) and (d).

Cases (a) and (d) both have inelastic demand (the textbook says "highly inelastic" for (a) and "very inelastic" for (d); I will interpret these as being equivalent). Both cases also have a "relatively large increase in supply." What differs across the two cases is the elasticity of supply. In (a), we don't know anything about the elasticity of supply. In (d), we know that supply is "highly elastic."

The figure below draws these two cases under some specific assumptions. The figure shows a

demand curve in blue, and two pairs of supply curves in dark and light red. The lighter red curves are the curves from (a): curve S_1 is the original supply curve, and it shifts downward to S_2 by amount v. The darker red curves are the more elastic curves (case (d)), and supply shifts downward from S_3 to S_4, also by amount v. Both curves S_1 and S_3 start at the same equilibrium price and quantity E_0.
What makes this problem difficult is that it did not specify what exactly what a "large increase in supply" means. If we assume, as I did in the figure below, that a "large increase in supply" is the same vertical change in the supply curve, then the case of more elastic supply (case (d)) gives a larger change in price – case (d) gets us to equilibrium E_2, which case (a) gets us to the higher price (so smaller price change) of E_1.

However, without a specific instruction about the size of the supply shift, it is not possible to tell whether the answer is (a), (d) or both. Therefore, we accept either or both as a correct answer for purposes of this problem.



2. Find one peer-reviewed (this means published in a reputable academic journal) estimate of either the price elasticity of demand or the price elasticity of supply for the good of your choice. I encourage you to use EconLit (first link under "periodical databases."). You must be logged in to GW's virtual private network to use Econlit. If you don't already have software to use GW's vpn, see here. Cite the source for your estimate, and interpret it. That means, if the estimate is 0.45, this means that [blah blah] increase in price causes a [blah blah] change in supply, where [blah blah] is a specific number.

A complete answer includes one citation, and an interpretation that makes sense of the estimates.