

## General Comments on Problem Set 3

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(1) I first talk about part b) in Question 1. First, some students mentioned income or budget and said what would happen if income or budget changed. This is a wrong idea. Once the question says "...relative to your total budget," we should fix the budget and discuss the effect of the expenditure of one good. What if we spend much or little? If the budget changes, it surely affects the demand but it is called the income effect, which changes the income elasticity instead of the price elasticity.

Second, a good does not necessarily mean a necessity or a necessary good if it takes up a tiny share of the budget. Take the example of masks I posed in class.

Third, usually an event or an incident occurs due to diverse factors. When we attempt to analyze a particular factor, we generally keep other factors unchanged and only modify that factor. Check the following linkage if you have further interest, type "Control variable" in Google and search for more tutorial. It is truly important when we want to make fair comparison.

(2) Some students reported that the elasticity of demand (ED) greater (or lower) than 1 to judge if it was elastic or inelastic. I wrote on their homework as "We do not have information about it." Again it is a problem of comparison. In reality, the world witnesses plenty of goods. To see which are elastic, we often use the value 1 as a criterion because it means the price change even causes a larger quantity change than itself. So we compute the elasticity of every good, then we can divide all the goods into two groups: relatively elastic and relatively inelastic. But in our examples, we just need to compare several types according to certain conditions. In addition, it is impossible to compute seriously the elasticity because we do not have such information.

(3) Please follow the formula of percentage change I wrote in class. I estimate that three fourths of you applied the expression Nicolas writes in the slide. However, there is a typo or mistake: you should not write \*100; instead, \*100% would be proper. As a consequence, many of you set down something like  $50=50\%$ , which is never true. You may see such a typo another time and pay attention to it. A few of you wrote even weird stuff perhaps because of bad habits in mathematics. Anyway, next time use the formula and focus on the starting point and the ending point.

(4) In part b) of Question 3, some of you drew a curve or a line. This is inappropriate in this case. Step functions of individual supply are aggregated to become a line because we see many or theoretically speaking, infinite producers. Our example only has 20 firms, far fewer than many. So the market supply must be still a step function.