

Announcements

- Please email me (at wsump@ucsc.edu) or come to office hours if you have any questions. I'll be happy to help out. ☺

Notes on Rationality

We first assume that individuals can rank order their preferences. This means that they can say which allocations they prefer most compared to the rest. There are also other assumptions that we make. The first is Transitivity. This implies that if $A > B$ and $B > C$, then it must be that $A > C$. Moreover, we also assume that preferences are reflexive, meaning that individuals are indifferent between choosing the same thing ($A = A$).

Furthermore, note that if people are rational, their preferences *at the margin* can be translated into prices. This is important because prices are observable and allow for easy comparison.

Notes on Pareto Optimality

An allocation is Pareto Optimal (or efficient) if no one can be better off at the expense of someone else. For example, take, for instance, a situation in which you are sharing a place with a single roommate (we assume just one to simplify this example). If you two decided to buy a large pizza and split it into two flavors, half is ham and pineapple (HM) and the other is simply pepperoni (P). Given that the pizza is split into 8 equal slices and you both like each type of pizza, you can divide it as follows

| Selection | You | Roommate |
|-----------|-----------|-----------|
| 1 | 4 HM, 4 P | 0 HM, 0 P |
| 2 | 4 HM, 2 P | 0 HM, 2 P |
| 3 | 2 HM, 4 P | 2 HM, 0 P |
| 4 | 0 HM, 0 P | 4 HM, 4 P |
| 5 | 3 HM, 2P | 0 HM, 0 P |
| 6 | 1 HM, 1P | 0 HM, 2 P |
| 7 | 0 HM, 0 P | 3 HM, 4 P |

We know that selections 1, 2, 3, and 4 are all Pareto Optimal since the two roommates shared the whole pizza. Either one cannot increase his own share without making the other have less pizza. On the other hand, in selection 5, 2 slices of pepperoni pizza are up for grabs still so this is not an efficient outcome. Comparing 1 and 5, we know that 1 is Pareto Superior to 5 since you are better off without making your roommate worse off by switching from 5 to 1. The same analogy works with the rest of the selections.

Despite the interesting uses of Pareto Optimality, it undoubtedly has many limitations. For one, it cannot enumerate which of the Pareto Optimal outcomes are the best. This is because it lacks a method of comparing two Pareto Optimal allocations. Another problem is that we do not have an adequate measure of what a just distribution will be especially since we cannot identify and compensate all of the losers in an agreement.