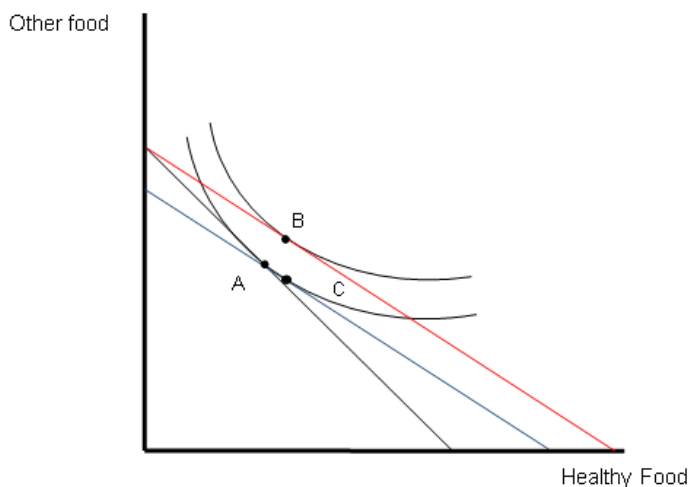


Lecture # 12 -- Applications of Utility Maximization

I. Examples: Income and Substitution Effects

- The figure below illustrates substitution and income effects, using an example from a recent study on food subsidies.
 - The study tested a pilot program where families were given subsidies to purchase healthy foods.
 - For high income families, the share of healthy food in their diet increased.
 - However, for low income families, the share of healthy food decreased.
 - Instead, they used their extra income to purchase more of the foods they liked best, even if they weren't healthy.
 - Thus, the income effect dominated the substitution effect.
 - The graph below illustrates. Here, a family chooses between healthy food and other food.
 - The family starts at point A.
 - The subsidy lowers the cost of healthy food. The budget constraint rotates out, as shown by the red line below.
 - The total change in consumption goes from A to B. Consumption of both types of food increases, but there is a larger increase in non-healthy food.
 - If we took away the extra income provided by the subsidies, families would face the blue budget line. This returns their utility to the original level, but represents the new lower cost of healthy food.
 - Thus, the substitution effect (A to C) does cause families to choose more healthy food.
 - However, the income effect (C to B) causes families to go in the opposite direction. Families use their extra purchasing power to purchase more of the types of food they like best.



- The key point of this example is that the income effect could work against the intended effect of your policy. Thus, it is important to understand what the income effect might be, and if it works against you, how big it might be.

II. Behavioral Economics

- Behavioral economics combines psychology and economics, and notes cases where observed behavior differs from what traditional economic models predict
- Systematic biases create a difference between decision utility and experienced utility.
 - Decision utility is the utility consumers maximize at the time of choice
 - Experienced utility is the utility consumers later realize as a result of a prior decision
 - Behavioral anomalies that lead to a difference between decision utility and experienced utility are behavioral failures
 - Behavioral economics provides examples where people make predictable errors, rather than just random errors.
- Note that if preferences are not stable over time, using consumer decisions to infer utility will lead to incorrect predictions.
- This led to our discussion of the role that policy could play to help correct the bias in actual decisions.