

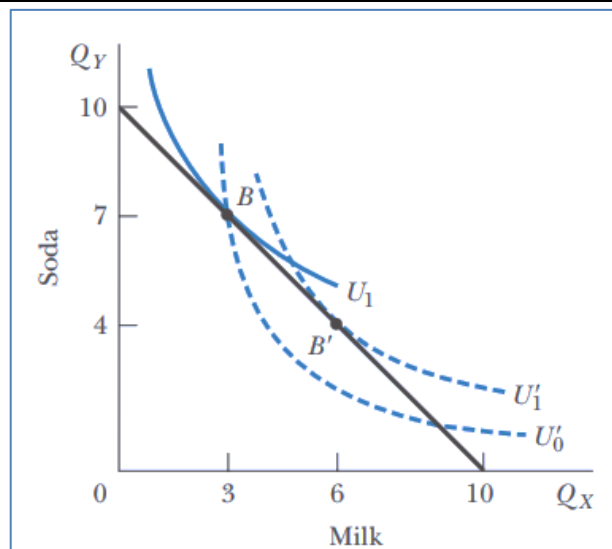
CASE STUDY – VII

CONSUMER PREFERENCES & CHOICE

Utility Maximization and Government Warnings on Junk Food

Suppose that in Figure, good X refers to milk and good Y refers to soda, $P_X = \$1$, $P_Y = \$1$, and the consumer spends his or her entire weekly allowance of \$10 on milk and sodas. Suppose also that the consumer maximizes utility by spending \$3 to purchase three containers of milk and \$7 to purchase seven sodas (point B on indifference curve U_1) before any government warning on the danger of dental cavities and obesity from sodas. After the warning, the consumer's tastes may change away from sodas and toward milk. It may be argued that government warnings change the information available to consumers rather than tastes; that is, the warning affects consumers' perception as to the ability of various goods to satisfy their wants.

Effect of Government Warnings: The consumer maximizes utility by purchasing 3 containers of milk and 7 sodas (point B on indifference curve U_1) before the government warning on the consumption of sodas. After the warning, the consumer's tastes change and are shown by dashed indifference curves U'_0 and U'_1 . The consumer now maximizes utility by purchasing 6 containers of milk and only 4 sodas (point B', where U'_1 is tangent to the budget line)



The effect of the government warning can be shown with dashed indifference curves U'_0 and U'_1 . Note that U'_0 is steeper than U_1 at the original optimization point B, indicating that after the warning the individual is willing to give up more sodas for an additional container of milk (i.e., MRS_{XY} is higher for U'_0 than for U_1 at point B). Now U'_0 can intersect U_1 because of the change in tastes. Note also that U'_0 involves less utility than U_1 at point B because the seven sodas (and the three containers of milk) provide less utility after the warning. After the warning, the consumer maximizes utility by consuming six containers of milk and only four sodas (point B', where U'_1 is tangent to the budget line).

The above analysis clearly shows how indifference curve analysis can be used to examine the effect of any government warning on consumption patterns, such as the 1965 law requiring manufacturers to print on each pack of cigarettes sold in the United States the warning that cigarette smoking is dangerous to health. Indeed, the World Health Organization is now stepping up efforts to promote a global treaty to curb cigarette smoking. We can analyse the effect on consumption of any new information by examining the effect it has on the consumer's indifference map. Similarly, indifference curve analysis can be used to analyse the effect on consumer purchases of any regulation such as the one requiring the drivers to wear seat belts.

Sources: "Some States Fight Junk Food Sales in School," New York Times, September 9, 2001, p. 1; and "Companies Agree to Ban on Sale of Fizzy Drinks in Schools," Financial Times, May 4, 2006, p. 6.