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| **Topic 5: Theory of consumer behaviour**  |

In this chapter, we begin the formal study of microeconomics by examining the economic behavior of the consumer. A consumer is an individual or a household composed of one or more individuals. The consumer is the basic economic unit that determines which commodities are purchased and in what quantities.

* 1. **Utility Analysis**

**Total and Marginal Utility**

Goods are desired because of their ability to satisfy human wants. The property of a good that enables it to satisfy human wants is called utility. As individuals consume more of a good per time period, their total utility (TU) or satisfaction increases, but their marginal utility diminishes. Marginal utility (MU) is the extra utility received from consuming one additional unit of the good per unit of time while holding constant the quantity consumed of all other commodities.

For example, Table 3.1 indicates that one hamburger per day (or, more generally, one unit of good X per period of time) gives the consumer a total utility (TU) of 10 utils, where a util is an arbitrary unit of utility. Total utility increases with each additional hamburger consumed until the fifth one, which leaves total utility unchanged. This is the saturation point. Consuming the sixth hamburger then leads to a decline in total utility because of storage or disposal problems.1 The third column of Table 3.1 gives the extra or marginal utility resulting from the consumption of each additional hamburger. Marginal utility is positive but declines until the fifth hamburger, for which it is zero, and becomes negative for the sixth hamburger





FIGURE 3.1 Total and Marginal Utility In the top panel, total utility (TU) increases by smaller and smaller amounts (the shaded areas) and so the marginal utility (MU) in the bottom panel declines. TU remains unchanged with the consumption of the fifth hamburger, and so MU is zero. After the fifth hamburger per day, TU declines and MU is negative.

Plotting the values given in Table 3.1, we obtain Figure 3.1, with the top panel showing total utility and the bottom panel showing marginal utility. The total and marginal utility curves are obtained by joining the midpoints of the bars measuring TU and MU at each level of consumption. Note that the TU rises by smaller and smaller amounts (the shaded areas) and so the MU declines. The consumer reaches saturation after consuming the fourth hamburger. Thus, TU remains unchanged with the consumption of the fifth hamburger and MU is zero. After the fifth hamburger, TU declines and so MU is negative. The negative slope or downward-to-the-right inclination of the MU curve reflects the law of diminishing marginal utility.

Utility schedules reflect tastes of a particular individual; that is, they are unique to the individual and reflect his or her own particular subjective preferences and perceptions. Different individuals may have different tastes and different utility schedules. Utility schedules remain unchanged so long as the individual’s tastes remain the same.

* 1. **Consumer’s tastes: Indifference curves**

Indifference Curves—What Do They Show?

Consumers’ tastes can be examined with ordinal utility. An ordinal measure of utility is based on three assumptions. First, we assume that when faced with any two baskets of goods, the consumer can determine whether he or she prefers basket A to basket B, B to A, or whether he or she is indifferent between the two. Second, we assume that the tastes of the consumer are consistent or transitive. That is, if the consumer states that he or she prefers basket A to basket B and also that he or she prefers basket B to basket C, then that consumer will prefer A to C. Third, we assume that more of a commodity is preferred to less; that is, we assume that the commodity is a good rather than a bad, and the consumer is never satiated with the commodity. The three assumptions can be used to represent an individual’s tastes with indifference curves. In order to conduct the analysis by plane geometry, we will assume throughout that there are only two goods, X and Y.

An indifference curve shows the various combinations of two goods that give the consumer equal utility or satisfaction. A higher indifference curve refers to a higher level of satisfaction, and a lower indifference curve refers to less satisfaction. However, we have no indication as to how much additional satisfaction or utility a higher indifference curve indicates. That is, different indifference curves simply provide an ordering or ranking of the individual’s preference.

**The Marginal Rate of Substitution**

The marginal rate of substitution (MRS) refers to the amount of one good that an individual is willing to give up for an additional unit of another good while maintaining the same level of satisfaction or remaining on the same indifference curve. For example, the marginal rate of substitution of good X for good Y (MRSXY) refers to the amount of Y that the individual is willing to exchange per unit of X and maintain the same level of satisfaction. Note that MRSXY measures the downward vertical distance (the amount of Y that the individual is willing to give up) per unit of horizontal distance (i.e., per additional unit of X required) to remain on the same indifference curve. That is, MRSXY =−∆Y/∆X. Because of the reduction in Y, MRSXY is negative. However, we multiply by −1 and express MRSXY as a positive value.

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| **References** |

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