

Microeconomics: BSc Year One
Choices

Behind the supply and demand curves lie choices; each person must make a plan as to what they will do. All they need to know are prices, rather than what's happening in the rest of the economy. From this, we can assume that in a market economy, production and consumption decisions are entirely separate.

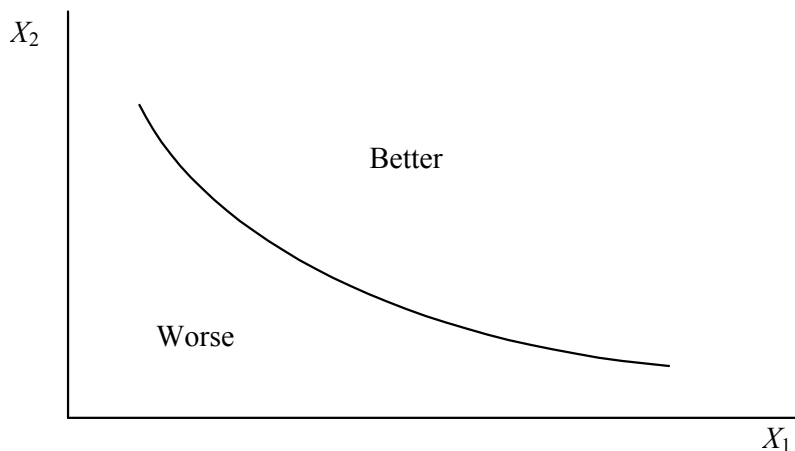
This single-person volatility leads to advantages in working in terms of groups, of households and firms. Households may consist of single individuals, extended families, or so on. The members of households will co-ordinate their consumption, and so the household should be treated as a unit.

There are two types of choices made by households; those of how to earn (career choices) and how to spend (consumption choices). These choices will be influenced by future risk (especially in the career choices) and some sort of time dimension.

Consumer Spending

There is one basic assumption in this area: that people are rational in their preferences. The fact that people actually have preferences involves a complete ordering of goods in the economy, in which it is perfectly acceptable to be indifferent between two goods but this indifference must be absolute (a case of definitely no caring, not simple indecision). The ordering must also be transitive - that is, if X is preferred to Y, and Y is preferred to Z, then X is preferred to Z.

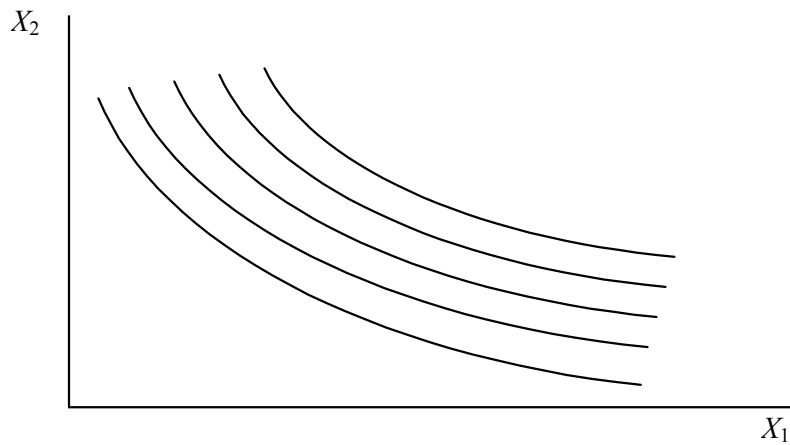
Assuming we have a timeless case, with a certain amount of money to spend, we can draw a curve showing preferences between two goods thus:



The slope of an indifference curve represents the rate at which a consumer would trade off between X_1 and X_2 , known as the marginal rate of substitution (*mrs*), which is by definition a positive number:

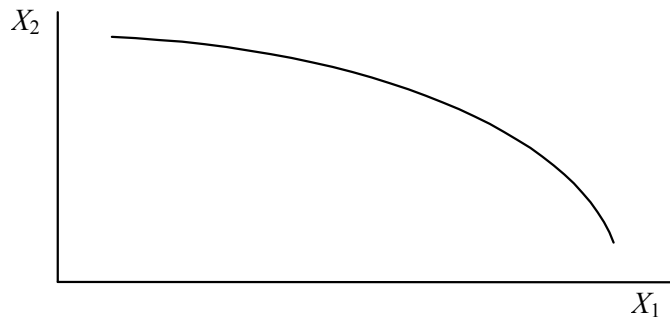
$$mrs = |slope| = -\frac{dX_2}{dX_1}$$

There are any number of indifference curves, creating an indifference map (the curves are analogous to isobars on a weather map, each showing a set of positions in which utility is the same):

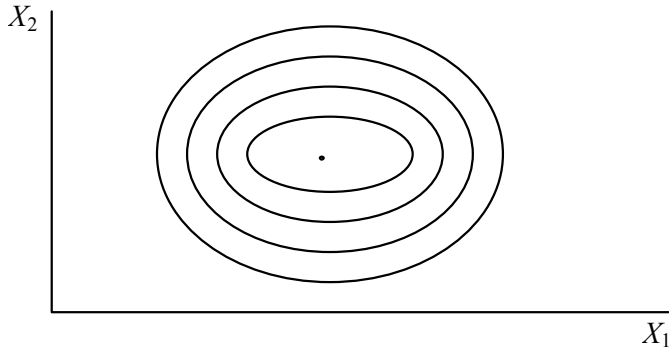


The highest indifference curve (that is, the one furthest from the origin) will always be preferred.

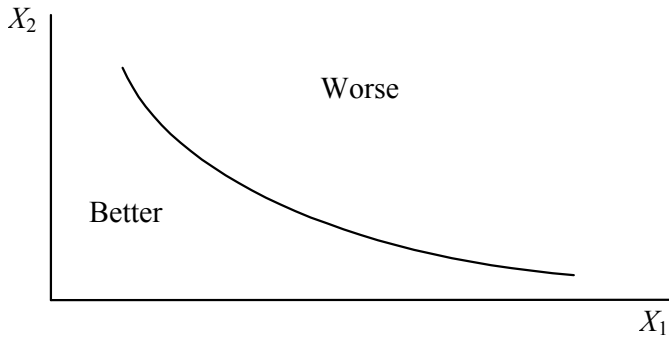
There are many different shapes of indifference curve:



which represents the possibility that it is preferred to have all of one or the other good



which represents the possibility that a consumer doesn't like too much of anything



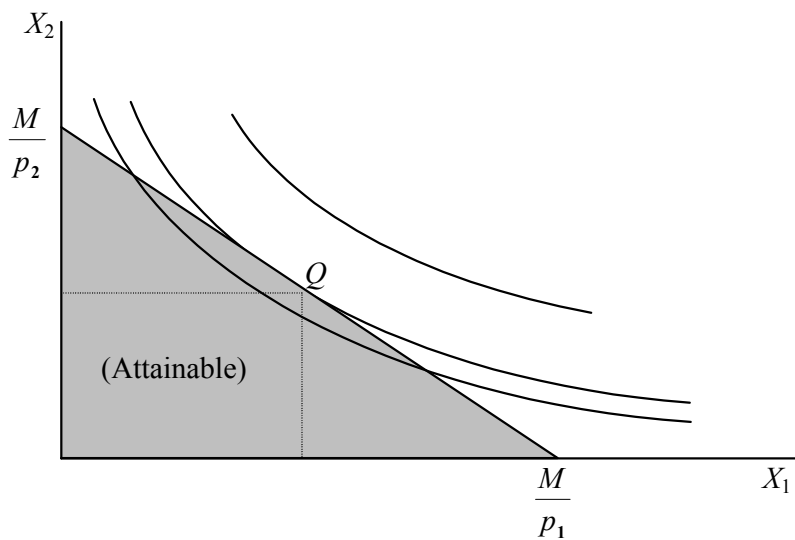
which represents the possibility that the goods aren't goods at all, but bads, such as types of pollution, where increased consumption is worse.

Choices Available

Consumers will choose the best point available to them, but there are budget constraints. Taking M as the money available, and p_1 and p_2 as the prices of the goods, we can derive the equation:

$$p_1X_1 + p_2X_2 \leq M,$$

where benefit will normally be maximised when the equality is used. This can be set as a "budget line", with a slope given by $-\frac{p_1}{p_2}$:



From the assumption of rationality, we can say that, given choices, a consumer will choose the best available. It can be seen that the consumer will choose the point Q above, where the MRS (the marginal rate of substitution – the slope of the indifference curve) is equal to $\frac{p_1}{p_2}$.

However, we know prices are the same across the entire economy, so everybody's MRS must be equal. There are only two cases when this is not true, and that is when indifference curves have sharp corners (and the MRS is therefore not well defined), or when the budget line crosses the indifference curve on one of the axes (when the slope does not necessarily equal the MRS).

People aren't necessarily rational however – they do form habits, leading to lags in response to price changes. Also, there is never perfect information in an economy, meaning choices may be biased. Preferences are also not directly observable, so in most cases the process defined above is used in reverse, for policy reasons.