Revealed Preference

Revealed Preference

Generally speaking,

Preferences + Prices & Income = Choice

or IC's + Budget Line = Consumer Optimum

This however assumes that the <u>consumer knows his preferences</u> and hence IC's.

Revealed Preference

Suppose that <u>preferences are not known</u>.

Can they be inferred from purchasing behavior?

This is called "Revealed Preference".

In other words,

Choice + Prices & Income = Preferences

or Consumer Optimum + Budget Line = IC's

Basic Idea

Suppose the **rational** consumer buys Bundle A at the current prices and income.

Suppose Bundle A costs $100 while Bundle B costs $120.

Can it be concluded that he prefers A over B?

Why?

Basic Idea

Suppose Bundle A costs $100 while Bundle B costs $90.

Can it be concluded that he prefers A over B?

Why?

The Principle of Revealed Preference

Suppose the rational consumer has chosen

Bundle A(Xa,Ya) that is affordable at prices (Px,Py).

Let Bundle B(Xb,Yb) be some other bundles such that

PxXa + PyYa ≥ PxXb + PyYb

or **Expenditure on A ≥ Expenditure on B**

Then, it must be that he prefers A over B.

The Principle of Revealed Preference

The inequality **PxXa + PyYa ≥ PxXb + PyYb** means that both bundles are affordable to the consumer at (Px,Py).

When **"A is chosen while B is affordable"**,

it can be said that **"A is revealed preferred to B"**.

Under Rationality, Revealed Preference implies Preference.

The Principle of Revealed Preference

Consider the BL(I,Px,Py).

A is chosen, meaning that

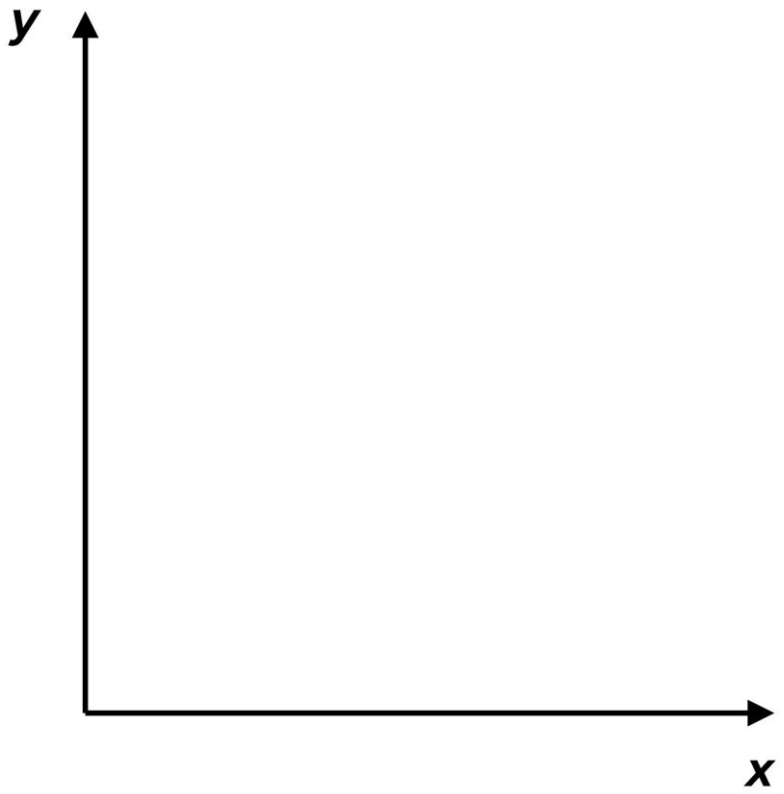
PxXa + PyYa = I.

B is affordable, meaning that

PxXb + PyYb ≤ I.

Combining the two inequalities:

PxXa + PyYa ≥ PxXb + PyYb.



The Principle of Revealed Preference

Revealed Preference can be used to

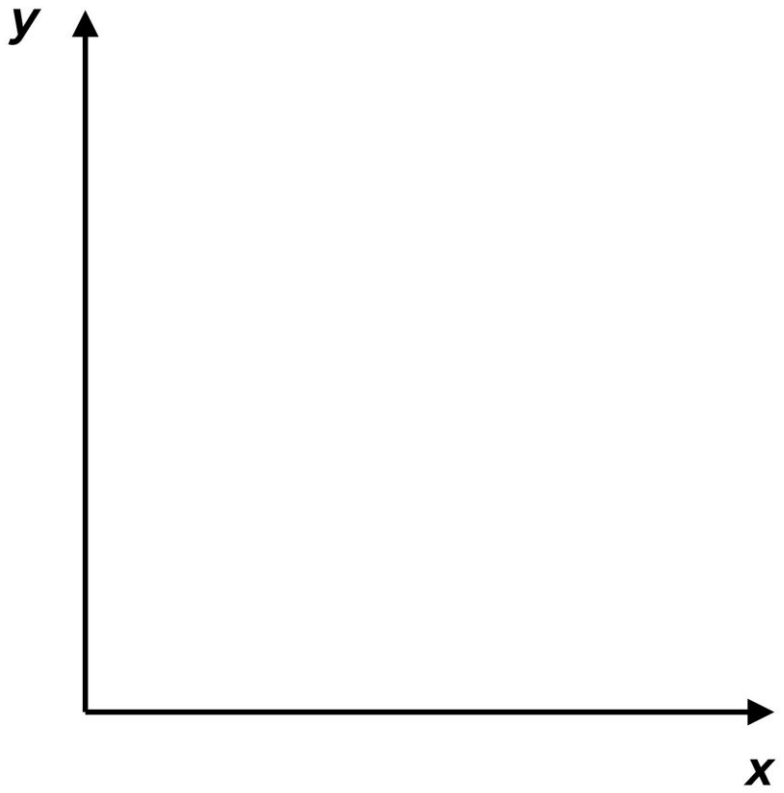
1. Infer the shape of indifference curves
2. Infer the change in utility over time

Inferring the Indifference Curves

At BL(I,Px,Py), suppose the consumer chooses A over B, i.e. A is revealed preferred to B.

At BL'(I',Px',Py'), suppose the consumer chooses B over C, i.e. B is revealed preferred to C.

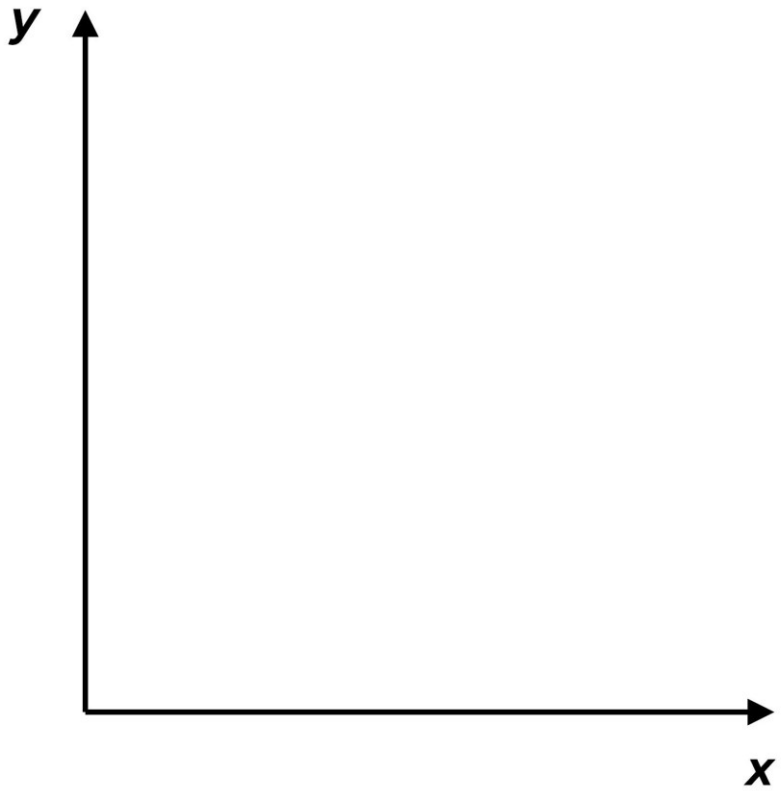
It can be inferred that…



Inferring the Indifference Curves

When income and/or prices changes, more and more choices will be revealed.

With revealed preferences, these choices can be used to uncover the preferences and IC's of the consumer.



Inferring the Change in Utility

Consider two periods of time: the past and the present.

In the past…

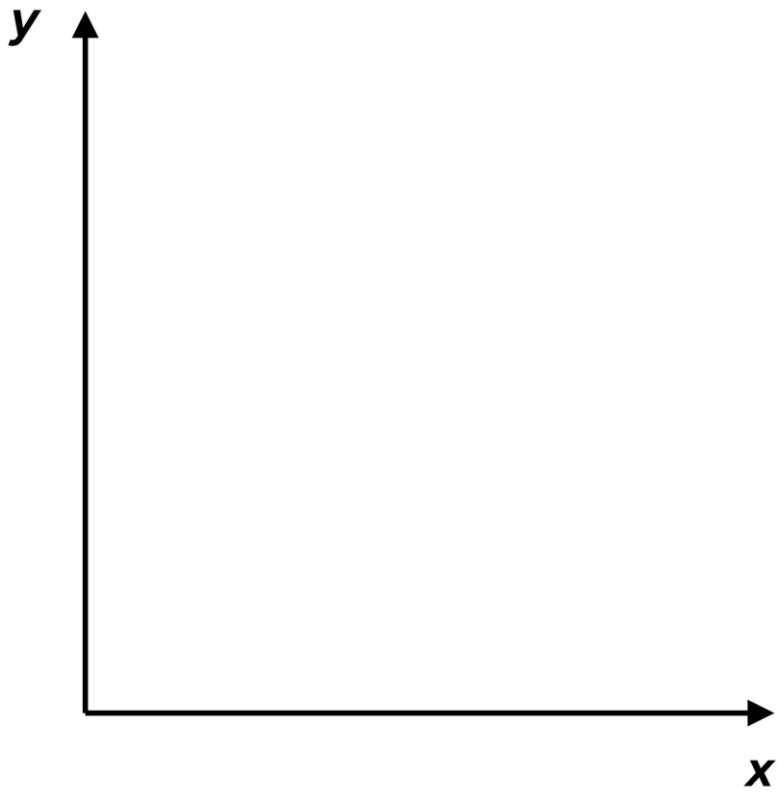
the consumer faced BL(I,Px,Py) and chose Bundle A.

In the present…

the consumer faces BL'(I',Px',Py') and chooses Bundle B.

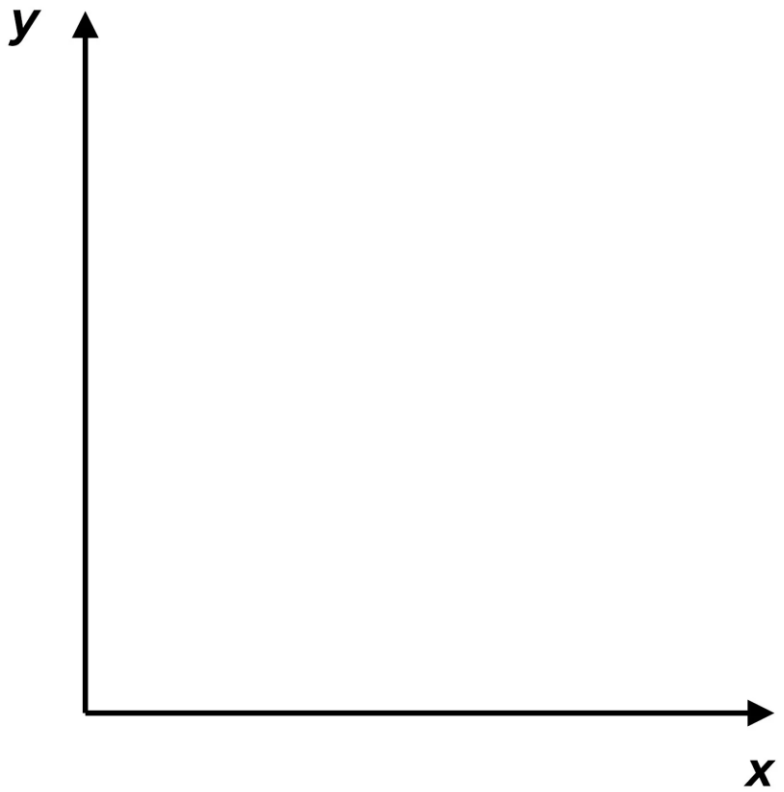
Inferring the Change in Utility

It can be concluded that…



Inferring the Change in Utility

It can be concluded that…



Inferring the Change in Utility

It can be concluded that…