Concept of Rationality in Economics

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Introduction

- Scarcity of resources
- Unlimited wants
- Problem of Choice
- Best solution

What is Rational Behavior

- It refers to a decision-making process that is based on making choices that result in the optimal level of benefit or utility for an individual.
- (demand and supply model)
- Rational behavior may not involve receiving the most monetary or material benefit, because the satisfaction received could be purely emotional or non-monetary.
- (Utility analysis)

- Modem economists, particularly Hicks & R.G.D Allen gave the ordinal utility concept to analyze consumer behavior.
- They used a tool, called <u>indifference curve</u>, for consumer behavior analysis.
- Assumptions:
- Consumer is rational
- Consumer has complete information
- There are 2 goods and the prices of the goods are given
- Consumer tastes, preferences, habits, and income remain constant throughout the analysis.

Indifference Curve

- The diagram shows an Indifference curve (IC).
- Any combination lying on this curve gives the same level of consumer satisfaction.
- 1 unit of food and 12 units of clothing
- 2 units of food and 6 units of clothing
- 3 units of food and 4 units of clothing
- 4 units of food and 3 units of clothing
- All the combinations give the same level of utility to the consumer.

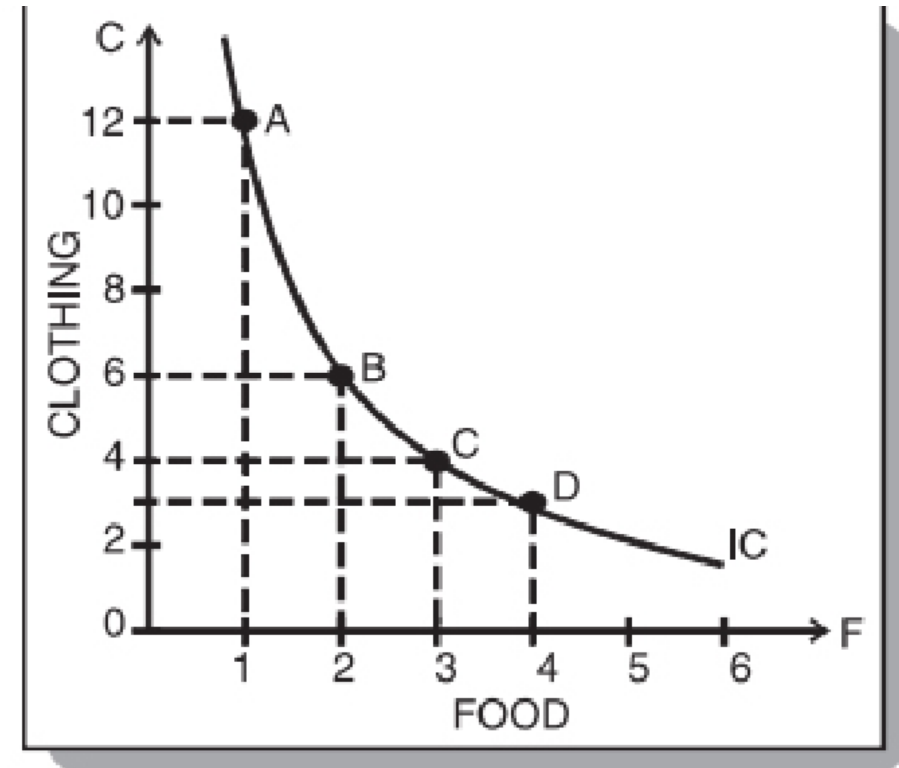


Fig. 1 : A Consumer's Indifference Curve

Assumptions

- Complete ordering/ranking- It assumes that utility can be expressed only in ordinal terms. The consumer can rank or express his/her preference for goods.
- Transitivity- The transitivity of choice means that if a consumer prefers A to B and B to C, he/she would prefer A to C.
- Consistency- The consistency of choice means that if a consumer prefers A to B in one period, he or she cannot prefer B to A in another period.
- Non-satiety- It means consumers always prefer larger bundles than small bundles.
- Consumer's equilibrium is the point at which the consumer attains maximum satisfaction.
- A consumer is said to be in equilibrium when the budget line touches the indifference curve, with a given price and income.

Budget Line

- A budget line shows all possible combinations of two goods that a consumer can buy within the funds available to him at the given prices of the goods.
- All combinations that are within his reach lie on the budget line.
- A point outside the line (point H) represents a combination beyond the financial reach of the consumer.
- On the other hand, a point inside the line (point K) represents under-spending by the consumer.

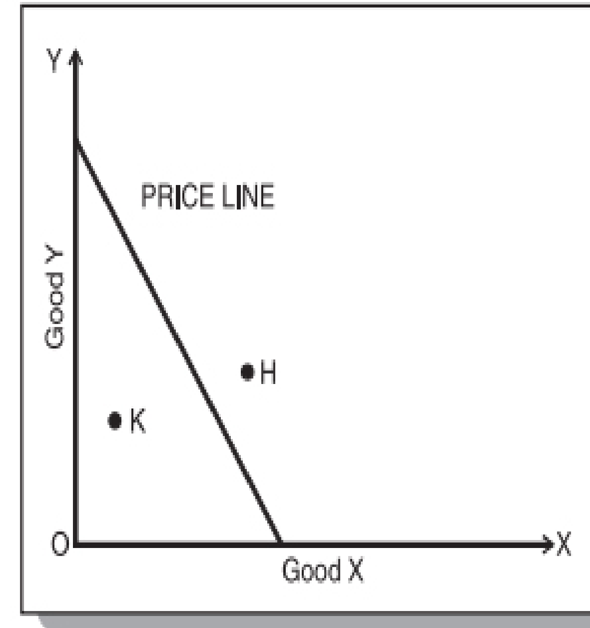


Fig. 4 : Price Line

- Classical economic theories assume that all individuals taking part in an activity are behaving rationally.
- Free market/ market forces
- Adam Smith was one of the first economists to develop the concept of the rational choice theory.
- Self-interest and the invisible hand theory in his book “*An Inquiry into the Nature and Causes of the Wealth of Nations.*”

Origin in economics

- The invisible hand is a metaphor for how, in a free market economy, self-interested individuals operate through a system of mutual interdependence.
- The invisible hand is part of laissez-faire.
- This interdependence incentivizes producers to make what is socially necessary, even though they may care only about their well-being.
- Each free exchange creates signals about which goods and services are valuable.

- Critics argue that the invisible hand does not always produce socially beneficial outcomes, and can encourage greed, negative externalities, inequalities, and other harms.
- 1930s great depression

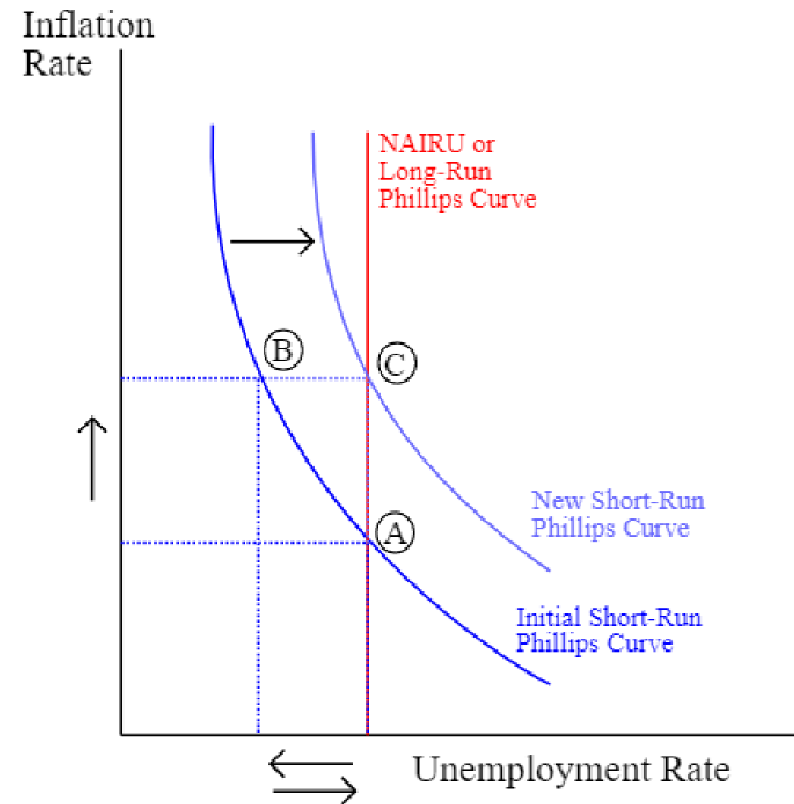
Money wage rigidity

- 1. Money illusion
- 2. Wage fixation through contracts
- 3. Minimum wage laws
- 4. Efficiency wages

Phillips Curve

- The Phillips curve relates the rate of inflation with the rate of unemployment.
- The Phillips curve argues that unemployment and inflation are inversely related: as levels of unemployment decrease, inflation increases.
- The short-run Phillips curve depicts the inverse trade-off between inflation and unemployment.
- The long-run Phillips curve is a vertical line that illustrates that there is no permanent trade-off between inflation and unemployment in the long run.

- Point A is an initial rate of unemployment and inflation rate.
- If the government decides to pursue expansionary economic policies, inflation will increase.
- As aggregate demand increases, more workers will be hired by firms to produce more output to meet rising demand, and unemployment will decrease.
- However, due to the higher inflation, workers' expectations of future inflation change, which shifts the short-run Phillips curve to the right, from unstable equilibrium point B to stable equilibrium point C.
- At point C, the rate of unemployment has increased back to its natural rate, but inflation remains higher than its initial level.



- The reason the short-run Phillips curve shifts is due to the changes in inflation expectations.
- Workers, who are rational and informed, will recognize their nominal wages have not improved with inflation increases (the movement from A to B), so their real wages have been decreased.
- They will renegotiate their nominal wages to reflect the higher expected inflation rate, to keep their real wages the same.
- As nominal wages increase, production costs for the supplier increase, which diminishes profits.
- As profits decline, suppliers will decrease output and employ fewer workers (the movement from B to C).
- Consequently, an attempt to decrease unemployment at the cost of higher inflation in the short run led to higher inflation and no change in unemployment in the long run.

Rational Expectation Theory

- Propounded by Robert Lucas
- "Individuals make decisions based on the best available information in the market and learn from past trends"
- A business owner deciding whether to expand his business or not.
- The owner evaluates current market trends and economic conditions (e.g., inflation rate, interest rate, exchange rate), competition in the marketplace, consumer demand trends, past experiences, and various other factors to assess the likely profitability of an expansion.
- Based on this analysis, the business owner decides whether to invest in an expansion or not.

Assumptions

- 1. With rational expectations, people always learn from past mistakes.
- 2. Forecasts are unbiased, and people use all the available information and economic theories to make decisions.
- 3. People understand how the economy works and how government policies alter macroeconomic variables such as price level, level of unemployment, and aggregate output.

Strong and Weak Expectation

- The “strong” version assumes that actors can access all available information and make rational decisions based on the information.
- The “weak” versions assume that people do not have time to access all relevant information but make decisions based on their limited knowledge.
- For example, if they buy cornflakes, it is “rational” to keep buying the same brand and not worry about getting perfect information about the relative prices of other cornflakes brands.

Behavioral economics and choice

- Psychological insights to explain human behavior as it relates to economic decision-making.
- According to rational choice theory, the rational person has self-control and is unmoved by emotional factors.
- Behavioral economics acknowledges that people are emotional and easily distracted, and therefore, their behavior does not always follow the predictions of economic models.

Example

- Why people make certain decisions about-
- How much to pay for a cup of coffee,
- Whether or not to pursue a college education or a healthy lifestyle,
- How much to save for retirement etc.
- Investing in a company for which the investor has positive feelings, even if financial models suggest the investment is not wise.

Pros and cons of Rational choice

- Helpful in explaining individual and collective behaviors
- All theories attempt to give meaning to the things we observe in the world.
- Can help to explain behavior that seems irrational

- Individuals do not always make rational decisions.
- In reality, people are often moved by external factors that are not rational, such as emotions.
- Individuals do not have perfect access to the information they would need to make the most rational decision every time.

- Raj and Annie, owners of a trucking company, are discussing opening a new distribution center and are analyzing the estimated cost and potential benefits of the project. Raj and Annie are behaving rationally because-

- they are only considering their own interest as well as the interests of their community and competitors.

- their decision is based on self interest.

- expanding is the right decision.

- Suppose that a family decides to spend all of their available money on a fancy vacation instead of purchasing a much-needed new automobile. From an economist’s perspective, which of the following statements about this decision is likely to be true?
- The decision must have been made haphazardly and is therefore irrational.
- The decision is irrational because anyone can see that choosing a vacation over a much-needed new automobile is an improper use of scarce resources.
- The decision is rational in the sense that it reflects the family's preference for vacations over new automobiles.