# ECON2103 Microeconomics

## Chapter 1 Introduction

Dr. Sherry Zhou

BEIJING NORMAL UNIVERSITY · HONG KONG BAPTIST UNIVERSITY
UNITED INTERNATIONAL COLLEGE

# Outline

# Economics

- **scarcity** - the limited nature of society resources
- **economics** - the study of how society manages its scare resources. For example,
  - How people make choices among: how much they work, what they buy, how much they save, how they invest their savings, etc.
  - How people interact with one another: how buyers and sellers together determine the price and quantity.
  - The forces and trends that affect the overall economy: the growth in average income, the fraction of the population that cannot work, and the rate at which prices are rising.

# Microeconomics and Macroeconomics

**Microeconomics:** Branch of economics that deals with behavior of individual economic units - consumers, firms, workers, and investors - as well as the markets that these units comprise.

**Macroeconomics:** Branch of economics that deals with aggregate economic variables, such as the level and growth rate of national output, interest rates, unemployment, and inflation.

# Trade-Offs

- **Consumers**
  - Trade-offs in the purchase of more of some goods for less of others
  - Trade-off between current consumption and future consumption
- **Workers**
  - Trade-offs in their choice of employment
  - Trade-off between labor and leisure
- **Firms**
  - Trade-offs in what to purchase
  - Trade-offs in the resources to use in production

# Prices and Markets

Trade-offs are based on the prices faced by consumers, workers, or firms.

In a centrally planned economy, prices are set by the government.

In a market economy, prices are determined by the interactions of consumers, workers, and firms in **markets** — collections of buyers and sellers that together determine the price of a good.

# Theories and Models

Economics is concerned with the *explanations* of observed phenomena and predictions based on *theories* developed from a set of assumptions.

A *model* is a mathematical representation, based on economic theory, of a firm, a market, or some other entity.

# Market

- **Market:** Collection of buyers and sellers that, through their actual or potential interactions, determines the price of a product or set of products.
- **Market definition:** Determination of the buyers, sellers, and range of products that should be included in a particular market.
- **Arbitrage:** Practice of buying at a low price at one location and selling at a higher price in another.

# Competitive versus Noncompetitive Markets

- **perfectly competitive market** - Market with many buyers and sellers, so that no single buyer or seller has a significant impact on price.
  - Most agricultural markets are close to being perfectly competitive.
  - Other markets containing a small number of producers may still be treated as competitive for purposes of analysis, for example, the U.S. airline industry.
- Some markets contain many producers but are noncompetitive; that is, individual firms can jointly affect the price, for example, the world oil market.

# Market Price

**market price** - Price prevailing in a competitive market.

In markets that are not perfectly competitive, different firms might charge different prices for the same product.

The market prices of most goods will fluctuate over time, and for many goods the fluctuations can be rapid. This is particularly true for goods sold in competitive markets.

# Market Definition

- **Market definition** identifies which buyers and sellers should be included in a given market.
- **extent of a market** - Boundaries of a market, both geographical and in terms of range of products produced and sold within it.

# Example: Starbucks vs Luckin


# Real vs Nominal Prices

- **nominal price** - Absolute price of a good, unadjusted for inflation.
- **real price** - Price of a good relative to an aggregate measure of prices; price adjusted for inflation.
- **Consumer Price Index (CPI)** - Measure of the aggregate price level.
- **Producer Price Index (PPI)** - Measure of the aggregate price level for intermediate products and wholesale goods.

# Example 1: Butter

For example, the nominal price of a pound of butter was about \$0.87 in 1970, and about \$3.48 in 2015. After correcting for inflation, was the price of butter more expensive in 2015 than in 1970?

Calculate the 2015 price of butter in terms of 1970 dollars. The CPI was 38.8 in 1970 and rose to about 237.0 in 2015.

$$\frac{38.8}{237.0} \times \$3.48 = \$0.57$$

In real terms, the price of butter was lower in 2015 than it was in 1970.

# Example 2: Eggs and College Education

TABLE 1.2 THE REAL PRICES OF EGGS AND OF A COLLEGE EDUCATION[6]

| | 1970 | 1980 | 1990 | 2000 | 2016 |
|---|---|---|---|---|---|
| Consumer Price Index | 38.8 | 82.4 | 130.7 | 172.2 | 241.7 |
| **Nominal Prices** | | | | | |
| Grade A Large Eggs | $0.61 | $0.84 | $1.01 | $0.91 | $2.47 |
| College Education | $1,784 | $3,499 | $7,602 | $12,922 | $25,694 |
| **Real Prices ($1970)** | | | | | |
| Grade A Large Eggs | $0.61 | $0.40 | $0.30 | $0.21 | $0.40 |
| College Education | $1,784 | $1,624 | $2,239 | $2,912 | $4,125 |

# Example 2: Eggs and College Education

The real prices of eggs and a college education in 1970 dollars are calculated as:

$$\text{Real price of eggs in 1980} = \frac{\text{CPI}_{1970}}{\text{CPI}_{1980}} \times \text{norminal price in 1980}$$
$$= \frac{38.8}{82.4} \times 0.84 = \$0.40$$

and so forth.

# Example 2: Eggs and College Education

Suppose we want to calculate the real price of eggs in *1990* dollars. Then,

Real price of eggs in 1970 =

Real price of eggs in 2016 =

$$\text{Percentage change in real price} = \frac{\text{real price}_{2016} - \text{real price}_{1970}}{\text{real price}_{1970}}$$

$$=$$

# Exercises

1. Boeing Corporation and Airbus Industries are the only two producers of long-range commercial aircraft. This market is not perfectly competitive because: (b)
   a. each company has annual sales over $10 billion.
   b. each company can significantly affect prices.
   c. Airbus receives subsidies from the European Union.
   d. Airbus cannot sell aircraft to the United States government.
   e. all of the above

# Exercises (Con't)

2. Suppose the price of crude oil is $95 per barrel in New York and $85 per barrel in Texas, and the transaction costs for trading between the two markets are $15 per barrel. What actions should you take to arbitrage this price difference? (d)
    a. Buy oil in Texas and sell oil in New York
    b. Sell oil in Texas and buy oil in New York
    c. Buy oil in both markets and wait for higher prices
    d. Do not buy or sell oil in either market

# Exercises (Con't)

3. Over the past year, price inflation has been 10%, but the price of a used Ford Escort has fallen from \$6,000 to \$5,000. The real price of a Ford Escort has fallen by: (d)
   a. 12%.
   b. 17%.
   c. 20%.
   d. 24%.
   e. 32%.