

# ECO2011 Basic Microeconomics

Mankiw Chapter 1 (Ten Principles)

Mankiw Chapter 2 (Thinking Like an Economist)

2025

# Administrative Issues

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- Office Hours: 9:30 am—11:30 am Friday

# Teaching Assistants

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# Administrative Issues

- Please let me know if you can't see the slides/can't hear my voice/think I am talking too fast
- No videotaping / photo-taking during class.
- We don't have tutorial in the first week. Will have weekly tutorials starting Week 2 unless otherwise announced.
- If you are unable to attend class or exams, please let me know in advance. And you'll need to provide with me certain documentation following university's policy. You need to study the class materials of missed lectures by yourself. No recording of the lectures will be provided. [Of course you are welcome to stop by our office hours if you have any questions related to course materials.]

## Relevant Regulations of *General Regulations Governing Undergraduate Studies* at CUHK(SZ)

8.1 A Student who has been absent from class or required activities for any period shall be responsible for applying to the teaching staff concerned for permission to make up for any required work missed.

8.2 In case of illness necessitating absence exceeding one week, a Student shall apply in writing to seek permission from the Director of Registry Services. Such an application shall be accompanied by a medical certificate signed by a qualified medical practitioner and shall require the endorsement of his/her Major Programme.

8.3 A Student who wishes to apply for a leave of absence exceeding one week for non-medical reasons shall seek prior permission from the Director of Registry Services through written application. Such application shall state the reasons for which leave of absence is sought and shall require the endorsement of his/her Major Programme.

8.5 A Student who has been absent without approval for leave of absence for a continuous period exceeding one month shall be considered to have withdrawn from CUHK(SZ).

## Relevant Regulations of *General Regulations Governing Undergraduate Studies* at CUHK(SZ)

Please visit the following website for details of university policy on Leave of Absence: <https://registry.cuhk.edu.cn/en/page/352>

# Honesty in Academic Work

- The Chinese University of Hong Kong, Shenzhen places very high importance on honesty in academic work submitted by students, and adopts a policy of zero tolerance on academic dishonesty. Any related offence will lead to disciplinary action including termination of studies at the University. Please visit the following website for details of university policy on Honesty in Academic Work:

<https://registry.cuhk.edu.cn/en/page/30>

# Grading Policy

## 1. Assignments and quizzes: 15%

- Assignments: 9%
  - There will be 4 assignments
  - Drop each student's lowest assignment score and count only your top three scores toward the final assignment grade
- Quizzes: 6%
  - There will be 7 quizzes
  - Drop each student's lowest quiz score and count only your top six scores toward the final quiz grade

## 2. Midterm Exam: 30%

- Midterm Exam is scheduled at **14:00-15:00, Saturday, Nov 1<sup>st</sup>, 2025**
- No make-up midterm will be provided.

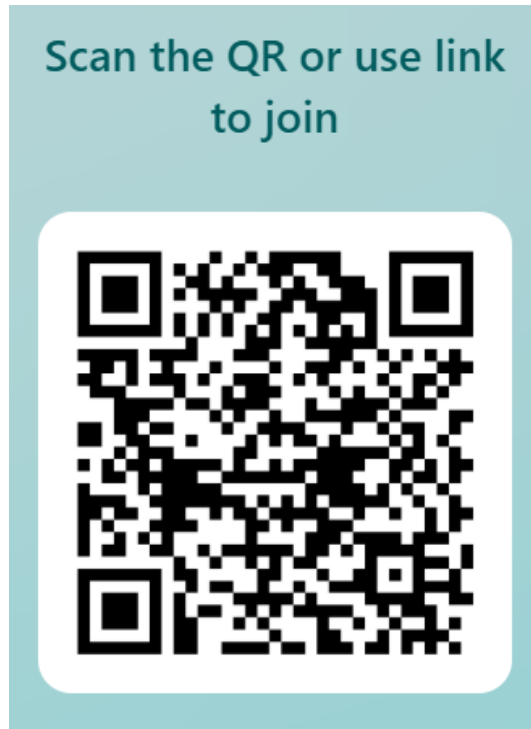
## 3. Final Exam: 55%

- Final Exam is cumulative.
- Common assignments, common quizzes, common exam papers across all 10 sections of ECO2011.

# Recommended Textbook

- Mankiw, Gregory N., 2020, *Principles of Economics*, 9th Edition, South Western Cengage Learning.
- Pindyck, S. Robert and Daniel Rubinfeld, Microeconomics 9<sup>th</sup> Edition, Pearson: Prentice Hall, 2017

# What is Economics?



- <https://forms.office.com/r/AqBvULk2Ui?origin=lprLink>

# What is Economics?

- Economics: the study of how society manages its scarce resources.  
(Mankiw, *Principles of Economics*, page 2)

# What Does Scarce Mean?

# What Does Scarce Mean?

- Scarcity: the limited nature of society's resources (Mankiw, *Principles of Economics*, page 2)
  - Society has limited resources
    - Cannot produce all the goods and services people wish to have
  - Resources are scarce
    - Can you think of something that is not scarce?

# Ten Principles of Economics

- Economists study:
  - How people decide what to buy, how much to work, save, and spend
  - How firms decide how much to produce, how many workers to hire
  - How society decides how to divide its resources between national defense, consumer goods, protecting the environment, and other needs



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# How People Make Decisions

- Decision making is at the heart of economics.
- The first four principles deal with how people make decisions.

# “There is no such thing as a free lunch!”

- Zhang San is a freshman who just entered CUHK(SZ).
  - At the beginning of the first semester, he needs to pick a school
  - Two nights before the ECO2011 midterm exam, he needs to decide whether to study for the exam or prepare for a club interview
  - At the end of the first year, he needs to pick a major within his school
  - .....

# Principle 1: People Face Trade-offs

- To get something that we like, we have to give up something else that we also like
  - Going to a party the night before an exam
    - Less time for studying
  - Having more money to buy stuff
    - Working longer hours, less time for leisure
  - Other examples?

# Principle 1: People Face Trade-offs

- Society faces trade-offs:
  - The more it spends on national defense (guns) to protect its shores
    - The less it can spend on consumer goods (butter) to raise the standard of living at home
  - Pollution regulations: cleaner environment and improved health
    - But at the cost of reducing the incomes of the firms' owners, workers, and customers



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# Principle 1: People Face Trade-offs

- Efficiency: society gets the most from its scarce resources
- Equality: prosperity is distributed uniformly among society's members
- Tradeoff:
  - To achieve greater equality, could redistribute income from wealthy to poor
  - But this reduces incentive to work and produce, shrinks the size of economic "pie"

# Decisions require comparing costs and benefits of alternatives.

- Zhang San is a freshman who just entered CUHK(SZ).
  - Whether to pick SME or SSE?
  - Whether to study for ECO2011 midterm or prepare for club interview?
  - Whether to pick economics or finance?
  - .....

# Principle 2: The Cost of Something Is What You Give Up to Get It

- Making decisions:
  - Compare costs with benefits of alternatives
  - Need to include opportunity costs
- Opportunity cost
  - Whatever must be given up to obtain some item



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# Examples

- The opportunity cost of:
  - Going to college for a year
    - Tuition, books, and fees
    - PLUS foregone wages
  - Going to the movies
    - The price of the movie ticket
    - PLUS the value of the time you spend in the theater
  - Other Examples?



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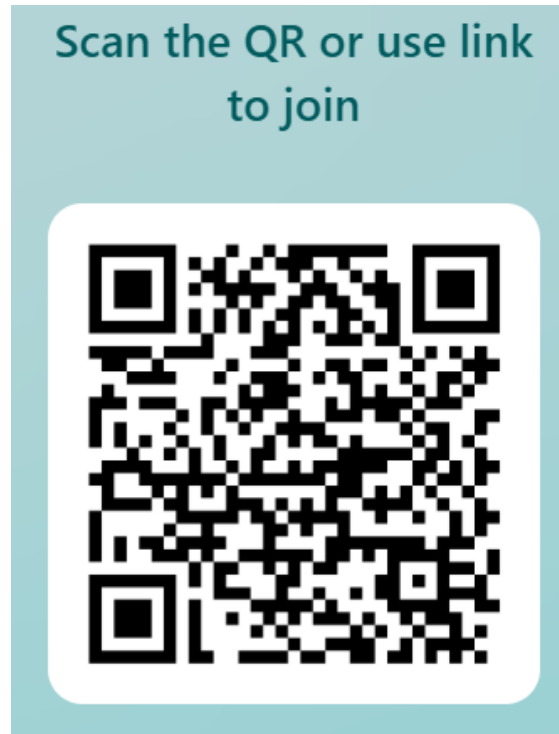
# Zhang San's daily life continues

- Zhang San is a freshman who just entered CUHK(SZ).
  - He can spend 2 hours watching movie, going to the gym or playing computer games. Suppose it is free to do all these activities. Each of these choice worth 5, 4, 6 units of happiness. In this case, what's Zhang San's opportunity cost in choosing to play computer games?

# Principle 3: Rational People Think at the Margin

- A person is **rational** if she systematically and purposefully does the best she can to achieve her objectives.
- Many decisions are not “all or nothing,” but involve **marginal changes** – incremental adjustments to an existing plan.
- Evaluating the costs and benefits of marginal changes is an important part of decision making.

# Let's see how marginal analyses can be relevant!



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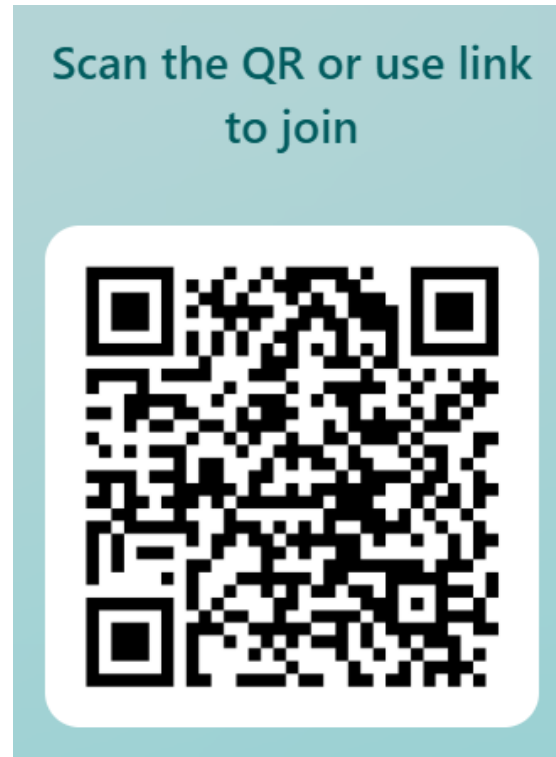
# Principle 4: People Respond to Incentives

- Incentive
  - Something that induces a person to act
- Examples:
  - When gas prices rise, consumers buy more hybrid cars and fewer gas guzzling SUVs
  - When cigarette taxes increase, teen smoking falls
  - Other examples?



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Let's recap what we have learned with some practices together!



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# How People Interact

- An “economy” is just a group of people interacting with each other.
- The next three principles deal with how people interact.

# Let's zoom in to Zhang San's life again

- Zhang San is a freshman who just entered CUHK(SZ)
  - He wears shoes from Anta, which he does not make himself
  - He eats noddle for lunch, but he does not know how to plant wheat
  - He reads Mankiw's textbook for ECO2011, but he does not know how to make papers
  - .....

# Principle 5: Trade Can Make Everyone Better Off

- People benefit from trade:
  - People can buy a greater variety of goods and services at lower cost
- Countries benefit from trade and specialization
  - Get a better price abroad for goods they produce
  - Buy other goods more cheaply from abroad than could be produced at home

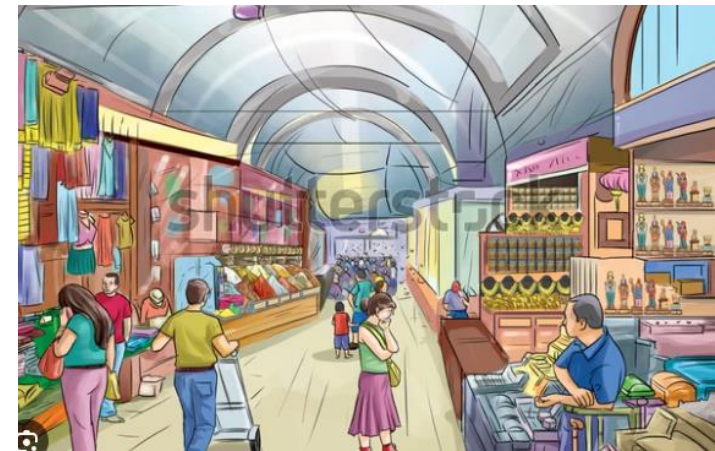


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# Principle 6: Markets Are Usually a Good Way to Organize Economic Activity

## ■ Market

- A group of buyers and sellers (need not be in a single location)
- “Organize economic activity” means determining
  - what goods to produce
  - how to produce them
  - how much of each to produce
  - who gets them



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# The Pickle Problem

- Feeding America (a network of food banks in the U.S.) gets some complaints from various local directors:
  - Alaska got a truckload of pickles that they don't want.
  - Idaho got a truckload of potatoes that they don't need.
- Question: If you are running Feeding America, how do you distribute products across various local food banks? Any engineering solutions?
- U Chicago Economists says this is an economic problem. Any idea how to solve this problem in an economical way?
- Sources: Planet Money Episode 665: The Pickle Problem
  - Link: <https://www.npr.org/transcripts/457408717>

# More Questions

- When creating this “market” to allocate resources across local food banks, what will happen if we allow them to use real money to buy? How do they solve this problem?
- Guess what product is vastly popular in this food bank market?
- What lessons can be drawn from this example about the role of markets in non-profit and public sectors? Any other areas where a market-based approach could solve problems?

# Principle 6: Markets Are Usually a Good Way to Organize Economic Activity

- In a market economy, these decisions result from the interactions of many households and firms.
- Famous insight by Adam Smith in *The Wealth of Nations* (1776):
  - Each of these households and firms acts as if “led by an invisible hand” to promote general economic well-being

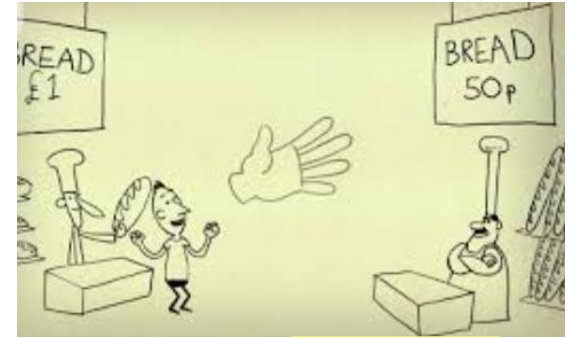


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# Principle 6: Markets Are Usually a Good Way to Organize Economic Activity

## ■ Prices:

- Determined: interaction of buyers and sellers
- Reflect the good's value to buyers
- Reflect the cost of producing the good



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## ■ Invisible hand:

- Prices guide self-interested households and firms to make decisions that maximize society's economic well-being

# Alright, Zhang San Again

- Zhang San is a freshman who just entered CUHK(SZ)
  - Zhang San is considering buying a bicycle, what will he do if he knows for sure the bicycle will get stolen?

# Principle 7: Governments Can Sometimes Improve Market Outcomes

- Important role for govt: enforce property rights (with police, courts)
- People are less inclined to work, produce, invest, or purchase if large risk of their property being stolen.
  - A restaurant won't serve meals if customers do not pay before they leave.
  - A music company won't produce CDs if too many people avoid paying by making illegal copies.
  - Other examples?

# Principle 7: Governments Can Sometimes Improve Market Outcomes

- Govt may alter market outcome to promote efficiency
- Market failure, when the market fails to allocate society's resources efficiently. Causes:
  - externalities, when the production or consumption of a good affects bystanders (examples?)
  - market power, a single buyer or seller has substantial influence on market price (e.g. monopoly)
- In such cases, public policy may increase efficiency.

# Principle 7: Governments Can Sometimes Improve Market Outcomes

- Govt may alter market outcome to promote equity
- If the market's distribution of economic well-being is not desirable, tax or welfare policies can change how the economic “pie” is divided.

# Discussion Question

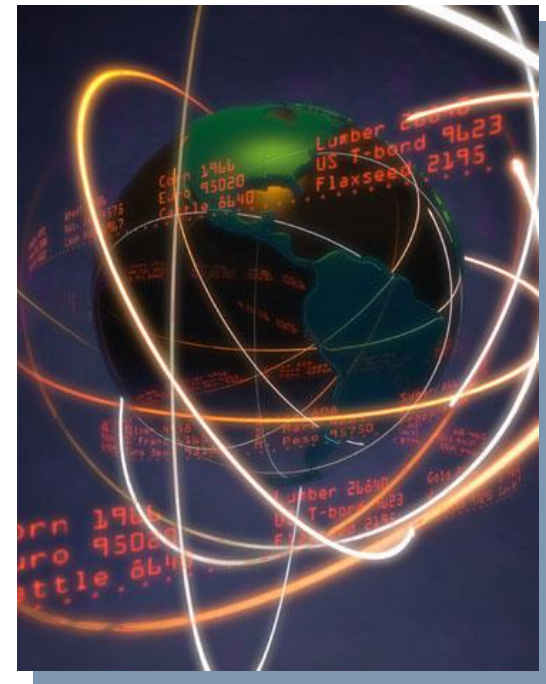
In each of the following situations, what is the government's role?

Does the government's intervention improve the outcome?

- a. Public highways
- b. Patent laws, which allow drug companies to charge high prices for life-saving drugs

# How the economy as a whole works

- The last three principles deal with the economy as a whole.



# Principle 8: Country's Standard of Living Depends on Its Ability to Produce Goods and Services

- Huge variation in living standards
  - Across countries and over time
  - Average income in rich countries
    - Is more than ten times average income in poor countries
  - The U.S. standard of living today
    - Is about eight times larger than 100 years ago

# Principle 8: Country's Standard of Living Depends on Its Ability to Produce Goods and Services

- Productivity: most important determinant of living standards
  - Quantity of goods and services produced from each unit of labor input
  - Depends on the equipment, skills, and technology available to workers
  - Other factors (e.g., labor unions, competition from abroad) have far less impact on living standards

# Principle 9: Prices Rise When the Government Prints Too Much Money

- Inflation
  - An increase in the overall level of prices in the economy
- In the long run
  - Inflation is almost always caused by excessive growth in the quantity of money, which causes the value of money to fall
  - The faster the government creates money, the greater the inflation rate

# Principle 10: Society Faces a Short-run Trade-off between Inflation and Unemployment

- Short-run trade-off between unemployment and inflation
  - Over a period of a year or two, many economic policies push inflation and unemployment in opposite directions
  - Other factors can make this tradeoff more or less favorable, but the tradeoff is always present

# What Have We Learned So Far?

- Fundamental lessons about individual decision making:
  - People face trade-offs among alternative goals
  - The cost of any action is measured in terms of forgone opportunities
  - Rational people make decisions by comparing marginal costs and marginal benefits
  - People change their behavior in response to the incentives they face

# What Have We Learned So Far?

- Fundamental lessons about interactions among people:
  - Trade and interdependence can be mutually beneficial
  - Markets are usually a good way of coordinating economic activity among people
  - The government can potentially improve market outcomes by remedying a market failure or by promoting greater economic equality

# What Have We Learned So Far?

- Fundamental lessons about the economy as a whole:
  - Productivity is the ultimate source of living standards
  - Growth in the quantity of money is the ultimate source of inflation
  - Society faces a short-run trade-off between inflation and unemployment

# The Economist as a Scientist

- Economists play two roles:
  1. Scientists: try to explain the world
  2. Policy advisors: try to improve it
- As scientists, economists employ the scientific method
  - Dispassionate development and testing of theories about how the world works



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# Observation, Theory, and More Observation

- Physics: Newton observes a falling apple → Develops theory of gravity → Tests and refines it.
- Economists: Observe inflation → Develop theory (“too much money causes inflation”) → Test with real-world data.
- Why Testing Matters:
  - Confirms or challenges our explanation of reality.

# Forming Theories

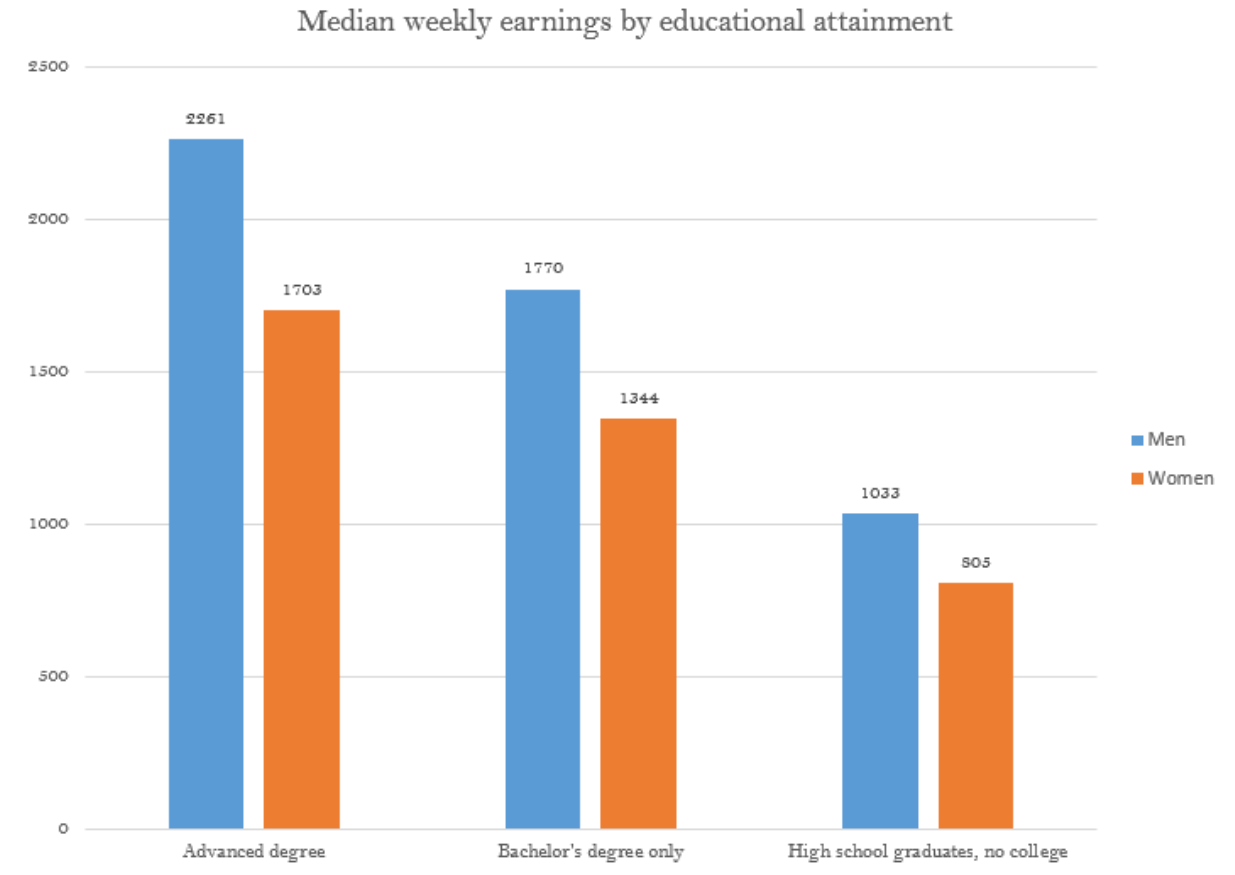
- Why assumptions matter: assumptions simplify the complex world, make it easier to understand.
  - Example: When studying international trade, we might assume the world consists of two countries and two goods.
    - Is it realistic?
    - Is it useful?
- Economic models: built with assumptions, focusing on essential factors.
  - Highly simplified representation of a more complicated reality.

# What Challenges Do Economists Face?

- Controlled experiments are often impractical in economics.
  - e.g.: cannot deliberately change a country's monetary policy just to test a theory!
- ⇒Solution: Use natural experiments
  - Historical or unexpected events that mimic controlled tests
- Separate *correlation* from *causation*, which is crucial for decision making

# Example: Returns to College

- Why is this question important?
- Based on these data, can we say with confidence that going to college will make you richer? Why?



Data Source: U.S. Department of Labor

<https://www.dol.gov/agencies/wb/data/earnings/Median-weekly-earnings-educational-sex>

# Economists in Silicon Valley


## Senior Economist

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### We're looking for someone with:

Ph.D. in Economics (or related field) with a specialization in labor economics, applied microeconomics, or industrial organization.

Strong empirical research skills, including experience with survey design, econometric modeling, and causal inference.

Proficiency in statistical software (R or Python) and deep experience working with large government datasets (e.g., Census, JOLTS).

Demonstrated ability to publish or contribute to high-quality research in economics or related fields.

Significant experience working with governments, philanthropies, and/or policymaker.

- Source: <https://www.indeed.com/q-economist-l-silicon-valley,-ca-jobs.html?vjk=f817c14518c2d232>

# Microeconomics and Macroeconomics

- Microeconomics

- The study of how households and firms make decisions and how they interact in markets

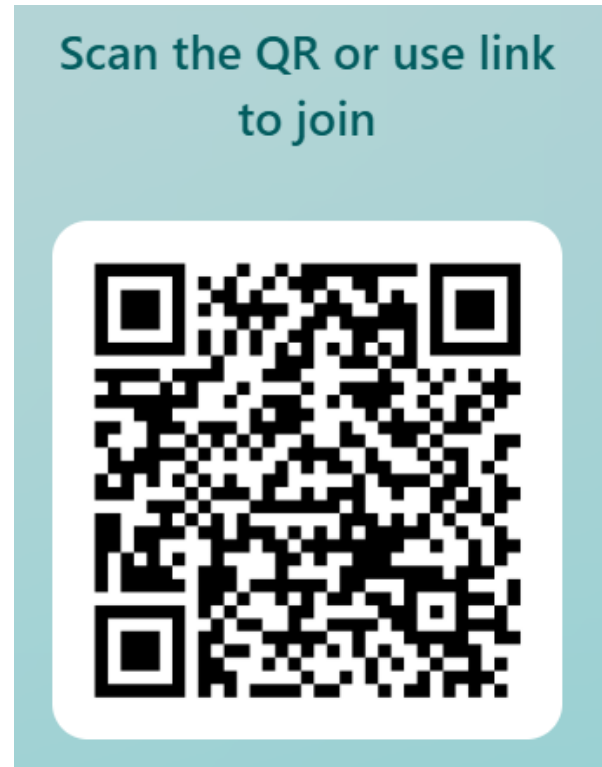
- Macroeconomics

- The study of economy-wide phenomena, including inflation, unemployment, and economic growth

# The Economist as Policy Advisor

- As scientists, economists make positive statements, which attempt to describe the world as it is.
- As policy advisors, economists make normative statements, which attempt to prescribe how the world should be.
- Positive statements can be confirmed or refuted, normative statements cannot.
- Govt employs many economists for policy advice.
  - E.g., the U.S. President has a Council of Economic Advisors, which Mankiw chaired from 2003 to 2005.

Are the following statements positive or normative?



<https://forms.office.com/r/OptijU68bV?origin=lprLink>

# Propositions about Which Most Economists Agree (and % agreeing)

- A ceiling on rents reduces the quantity and quality of housing available. (93%)
- Tariffs and import quotas usually reduce general economic welfare. (93%)
- A large federal budget deficit has an adverse effect on the economy. (83%)
- A minimum wage increases unemployment among young and unskilled workers. (79%)
- Effluent taxes and marketable pollution permits represent a better approach to pollution control than imposition of pollution ceilings. (78%)

End