Principles of Economics (經濟學原理)

Chapter 22:

Frontiers of Microeconomics

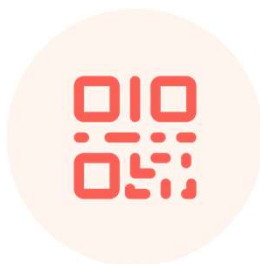### (個體經濟學的前沿研究)

2022/11/25	Frontiers of Microeconomics	Joseph Tao-yi Wang

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In This Chapter (本章主題)

▸ How does asymmetric information affect market outcomes? (資訊不透明如何影響市場競爭結果?)

▸ How can market participants reduce the resulting problems? (市場成員可以怎麼做來降低資訊不透明造成的問題?)

▸ Why might democratic voting systems fail to represent the preferences of society? (民主投票為何不一定反映整個社會的偏好?)

▸ Why do people not always behave as rational maximizers? (為什麼人們並非總是行為理性極大化自身好處?)

Introduction (簡介)

▸ Economists are always looking for new areas to study and new phenomena to explain. (經濟學家總是在尋找新的研究領域、解釋新的現象)

▸ 3 topics on understanding human behavior and society:

▸ Asymmetric Information: How imbalance in information affects choices (資訊不透明: 資訊落差如何影響決策) (理解人類行為和社會的研究主題#1)

▸ Political Economy: Apply tools of economics to understand how government works (政治經濟學: 用經濟學的工具來研究政府如何運作) (#2)

▸ "Behavioral" Economics: Apply insights from psychology to the study economic issues (「行為」經濟學: 用心理學的洞見來研究經濟議題) (#3)

Asymmetric Information (資訊不透明)

- ▶ Information Asymmetry: (資訊落差)
  - ▶ A difference in access to knowledge that is relevant to an interaction (不同人能取得跟互動相關的資訊有落差)
  1. Hidden actions (行動不透明)
     - ▶ One person knows more than another about an action he or she is taking. (當事人對自己的行動比別人更清楚)
  2. Hidden characteristics (特質不透明)
     - ▶ One person knows more than another about the attributes of a good he is selling. (當事人對自己所賣的產品特質比別人更清楚)

Hidden Actions (行動不透明)

- ▶ Moral Hazard: (道德風險: 人們未受監督時傾向採取不誠實或別人不樂見的行為)
- ▶ Tendency of a person who is imperfectly monitored to engage in dishonest or otherwise undesirable behavior
  - ▶ Arises when one person (the agent) performs some task on behalf of another person (the principal) (在代理人為當事人做事情時)
- ▶ Principal-Agent Problem (當事─代理人問題: 當事人無法完全監督代理人行為)
  - ▶ The principal cannot perfectly monitor the agent's behavior,
  - ▶ So the agent tends to undertake less effort than the principal considers desirable (以致代理人傾向投入過少努力、程度不符當事人期待)

Example 1: Moral Hazard (例一：下列情況可能會有哪些道德風險?)

▸ How can each of these lead to a moral hazard problem?

A. The employee – employer relationship. (雇傭關係)
  ▸ Unmonitored, workers are browsing social media while on the clock. (員工如果沒有被監督，在上班時間可能會流連社群媒體)

B. Homeowner with a good home insurance policy. (保全險屋主)
  ▸ Someone whose property is insured may not try as hard to protect it from theft/damage. (房屋已經保全險自己就不見得需要小心)

C. Hiring a babysitter. (雇用保母)
  ▸ While the parents are out, the babysitter may spend more time texting than watching the kids. (父母不在保母花時間在簡訊而非小孩)

How Principals May Respond (雇主如何反應)

▸ Better monitoring (加強監督)
  ▸ Hidden cameras to increase the chance of detecting undesirable behavior (裝設隱藏式攝影機、提高偵測不適當行為的機會)

▸ Higher wages (提高薪資待遇) (給予「效率工資」、提高亂搞被抓到的懲罰)
  ▸ Efficiency wages to increase the penalty if caught shirking

▸ Delayed payment (延遲支付薪資)
  ▸ Firms delay payment (e.g., year-end bonuses) to increase the penalty for being caught shirking (延遲支付薪資也會提高被抓到的懲罰)

▸ Government regulation (政府管制)

Hidden Characteristics (特質不透明)

‣ Adverse Selection (反淘汰)

‣ The tendency for the mix of unobserved attributes to become undesirable from the standpoint of an uninformed party (出現不知情的一方所不希望、資訊不透明的一些特質)

  ‣ Arises when the seller knows more than the buyer about the good being sold (賣家比買家更了解商品特質)

  ‣ The buyer runs the risk of being sold a good of low quality (買家因此可能買到低品質的商品)

Example 2: The Lemons Problem (例二: 檸檬車問題)

‣ Explain how adverse selection appears in the market for used cars. (解釋為何二手車市場上會有反淘汰的問題)

‣ The seller knows more than the buyer about the quality of the car being sold. (賣家比買家清楚二手車品質)

  ‣ Owners of "lemons" are more likely to put their vehicles up for sale. (檸檬車的車主更願意把車子拿出來賣)

  ‣ Owners of good used cars are less likely to get a fair price, so may not bother trying to sell. (優質車的車主更不願意賣、買家也不願意去買)

‣ Many avoid buying vehicles in the used car market.

Example 3: Health Insurance (例三: 商業健保)

- ▸ Explain how adverse selection appears in the market for health insurance. (解釋為何商業健康保險市場上會有反淘汰問題)
- ▸ Buyers of health insurance know more about their health than health insurance companies. (買家比賣家更了解自身健康)
- ▸ People with hidden health problems have more incentive to buy insurance policies, so: (健康有問題者更想購買健保)
  - ▸ Policies prices reflect costs of a sicker-than-average person
  - ▸ Discourage healthy people from buying insurance (保費高/健康者不買)

Market Responses to Asymmetric Information (市場本身就是為了解決資訊不透明存在)

- ▸ The Market Itself is a Response to asymmetric information—hidden characteristics of buyers/sellers
  - ▸ Competition results in a market price (競爭市場價格反映買賣方不透明特質)
    - ▸ Buyers with values above this price would buy (買方價值>價格)
    - ▸ Sellers with costs below this price would sell (賣方成本<價格)
  - (彷彿市場擁有所有資訊) ▸ "As if" have full information! So, with a good mechanism,
- ▸ Asymmetric information per se is not a problem! (設計好機制資訊不透明就不是問題)
  - ▸ Question: Do you think markets are the result of "natural selection" or "intelligent design"? (你覺得市場形成是"天擇"還是"智慧設計"?)

Signaling to Convey Private Information (光環傳遞訊息)

▶ Signaling: (光環)

  ▶ Action taken by an informed party for the sole purpose of credibly revealing his private information to an uninformed party (有資訊的一方採取行動傳遞訊息、取得足以讓另一方採信的「光環」)

▶ Effective Signals: (「光環」要有效果，對應的行動必須:)

  ▶ Are costly: not everyone can use it (成本很高、不是每個人都願意去做)

  ▶ Must be less costly, or more beneficial, to the person with the higher-quality product (擁有高品質產品時，成本比較低/好處比較大)

Screening to Uncover Private Information (篩選訊息)

▶ Screening: (篩選)

  ▶ Action taken by an uninformed party to induce informed party to reveal private information (無資訊的一方採取行動誘使另一方揭露訊息)

▶ Some screening is common sense (有些篩選行動只是常識)

▶ Others are more subtle: (另一些篩選比較隱晦)

  ▶ Offer two options of a good/service to induce consumers to reveal their preferences (提供兩種產品選項誘使消費者揭露偏好)

Asymmetric Information and Public Policy (公共政策可否處理?)

- ▸ Asymmetric Information: Inefficient Allocation (分配不效率)
  - ▸ Government can sometimes improve market outcomes (原理#7)
- ▸ Complications of using public policy: (用公共政策來解決的困難點)
  - ▸ Private markets can sometimes deal with the problem using signaling or screening (私有市場有時可以自行解決：光環或篩選)
  - ▸ The government rarely has more information than private parties (政府通常不比各方知道更多資訊)
  - ▸ The government itself is an imperfect institution (政府也有自身問題)

Active Learning 1: Asymmetric Information (主動學習1)

- ▸ For each situation below, identify whether the problem is moral hazard or adverse selection. (下列情況是道德風險或反淘汰?)
- ▸ Explain how the problem has been reduced. (它如何被降低?)
  - A. After 3 years of decreasing profits due to higher premiums, a car insurance company decides to offer two policies: one with low premiums/high deductibles, and one with high premiums/low deductibles.
    (A. 保險公司提供「高自付額、低保費」和「低自付額、高保費」兩種保單。)
  - B. Landlords require tenants to pay security deposits.
    (B. 房客繳交押金給房東。)

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Identify whether the problem is moral hazard or adverse selection, and how it has been reduced: After 3 years of decreasing profits due to higher premiums, a car insurance company decides to offer two policies: one with low premiums/high deductibles, and one with high premiums/low deductibles. (下列情況是道德風險或反淘汰? 這個問題如何被降低? 保險公司提供「高自付額、低保費」和「低自付額、高保費」兩種保單)

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Active Learning 1: Answers, A (主動學習1A: 保險公司提供兩種保單)

A. Car Insurance: low premiums/high deductible or high premiums/low deductibles (高自付額、低保費 vs. 低自付額、高保費)

▶ Adverse Selection: (反淘汰: 高保費讓優良駕駛卻步、買保險的都是危險駕駛)

  ▶ The high premiums pushed safe drivers out, so, the pool of people still buying car insurance were the risky drivers.

▶ Insurance companies reduce the problem by Screening:

  ▶ Safe drivers choose the low premium/high deductible policy,

  ▶ Risky drivers choose the high premium/low deductible policy
    (保險公司使用篩選讓優良駕駛選擇「高自付額、低保費」保單、危險駕駛選擇「低自付額、高保費」保單)

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Identify whether the problem is moral hazard or adverse selection, and how it has been reduced: Landlords require tenants to pay security deposits. (下列情況是道德風險或反淘汰? 這個問題如何被降低? 房客繳交押金給房東。)

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Active Learning 1: Answers, B (主動學習1B: 房客繳交押金給房東)

B. Landlords require tenants to pay security deposits.

▸ Moral Hazard: (道德風險: 房東(當事人)不知道房客(代理人)會如何對待租賃的房屋)

  ▸ The landlord (principal) does not know how well the tenant (agent) treats the apartment.

  ▸ Tenants may not be careful if they can get away without paying for damage they cause. (房客如果不用承擔損失, 比較會不小心)

▸ The security Deposit increases the likelihood the tenant will take care of the property (押金讓房客比較善待房屋)

  ▸ in order to receive his deposit back when he moves out. (否則拿不回押金)

Political Economy (政治經濟學)

▸ Role for the government (政府的角色)

  ▸ Improve the inefficient or inequitable market outcome (改善市場不效率或不公平的結果)

▸ Political Economy (政治經濟學)

  ▸ The study of government using the analytic methods of economics (用經濟學的分析工具來研究政府)

The Condorcet Voting Paradox (康多賽投票悖論)

▸ Choosing between two outcomes (投票二選一)

  ▸ Majority rules (簡單多數決)

▸ Choosing among several outcomes (投票多選一)

  ▸ "Democracy might run into some problems" - Condorcet (康多賽說：「民主可能會出問題。」)

▸ The Condorcet Voting Paradox: (康多賽投票悖論)

  ▸ The failure of majority rule to produce transitive preferences for society. (簡單多數決無法讓全社會的偏好符合遞移律)

  ▸ Transitivity: A > B and B > C, then A > C. (A>B, B>C, 則A>C)

Example 4: The Condorcet Paradox (康多賽投票悖論)

▸ Achong, Wayne, and 33 run for Daibei City Mayor

▸ There are 3 types of voters, each with its own
  rankings of the candidates:

  ▸ Achong, Wayne和33要選呆北市長
  ▸ 有三種選民，偏好如右:

	Voter Type (選民種類)		
	Type 1	Type 2	Type 3
% of all voters (比例)	35%	45%	20%
1st choice (第一志願)	Achong	Wayne	33
2nd choice (第二志願)	Wayne	33	Achong
3rd choice (第三志願)	33	Achong	Wayne

Example 4: The Condorcet Paradox (康多賽投票悖論)

▸ **Suppose pairwise voting:** (兩兩投票)
  ▸ First, Wayne vs. 33: Wayne wins.
    (Wayne打敗33)
    ▸ Overall winner: Achong (最終Wayne獲勝)

▸ Another pairwise voting: (順序改一下)
  ▸ First, Achong vs. 33:
    33 wins. (33打敗Achong)
  ▸ Then, 33 vs. Wayne:
    Wayne wins. (Wayne打敗33)
▸ Overall winner: Wayne
  (最終Wayne獲勝)

▸ Then, Wayne vs. Achong:
  Achong wins. (然後Achong打敗Wayne)

	Voter Type		
	Type 1	Type 2	Type 3
% voters	35%	45%	20%
1st choice	Achong	Wayne	33
2nd choice	Wayne	33	Achong
3rd choice	33	Achong	Wayne

Lessons from The Condorcet Paradox (康多賽投票悖論的啓示)

▸ Lessons: (民主制度所產生的全社會的偏好不見得符合遞移律)

1. Democratic preferences are not always transitive
2. The order on which things are voted can affect the result (投票順序會影響最後結果)
   ▸ Setting the agenda can have a powerful influence over the outcome of a democratic election (設定投票議程在民主選舉影響甚鉅)
3. Majority voting does not tell us what outcome a society really wants (簡單多數決無法告訴我們一個社會真正想要甚麼)

Arrow's Impossibility Theorem (阿羅不可能定理)

▸ Borda Count (波達計數法)
  ▸ Give 1 point for last place, 2 points for second to last, 3 points for third to last, and so on (最後一名1分、倒數第二名2分、依此類推)
  ▸ The outcome that receives the most total points wins
    ▸ Account for (some) preferences (最多分的候選人贏: 把部分偏好列入考慮)

▸ Kenneth Arrow (肯尼‧阿羅)
  ▸ What a perfect voting system would be? (理想的投票制度長怎樣?)

Arrow's Impossibility Theorem (阿羅不可能定理)

▸ Arrow's properties of a voting system: (阿羅: 好的投票制度有下列性質)

1. Unanimity: If everyone prefers A to B, then A should beat B.
2. Transitivity: If A beats B, and B beats C, then A should beat C. (全體一致: 如果所有人都偏好A多於B，投票結果A應該打敗B/遞移律: A打敗B、B打敗C，則A會打敗C)
3. Independence of Irrelevant Alternatives (IIA): The ranking between any two outcomes should not depend on whether a third option is available. (獨立於無關選項: 加入/移除第三選項不該改變A和B的投票結果)
4. No Dictators: There is no person who always gets his way, regardless of everyone else's preferences. (沒有獨裁者: 投票結果不能總是取決於某個特定人的偏好)

Arrow's Impossibility Theorem (阿羅不可能定理)

▸ Kenneth Arrow proved mathematically that no voting system can satisfy all four properties. (肯尼‧阿羅用數學證明得出沒有任何投票制度可以同時符合上述四個性質)

▸ Arrow's Impossibility Theorem: (阿羅不可能定理)

  ▸ A mathematical result showing that, under certain assumed conditions (數學上可以證明，在某些假設條件下，沒有一個投票制度可以加總所有人的個別偏好)

  ▸ There is no scheme for aggregating individual preferences into a valid set of social preferences (形成一個「合理」的全社會偏好)

The Median Voter Is King (中位數選民才是王道!!中間選民不是!!)

‣ Median Voter Theorem: (中位數選民定理)

‣ A mathematical result showing that (數學上可以證明)

‣ If voters are choosing a point along a line (在線段上選擇政策時)

‣ And each voter wants the point closest to his most preferred point, (如果每位選民希望政府執行的政策離心目中的理想政策愈近愈好)

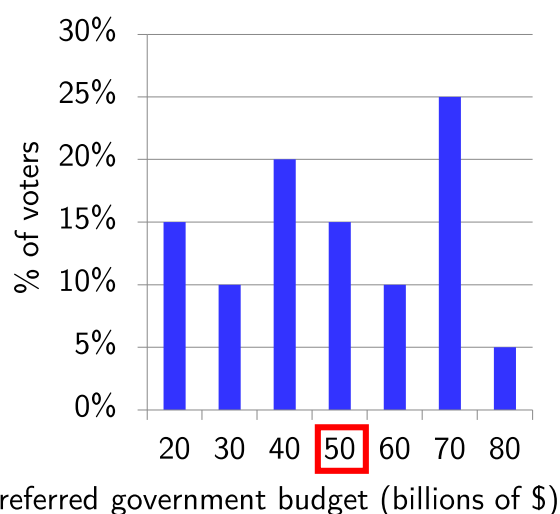‣ Then majority rule will pick the most preferred point of the median voter (簡單多數決會選出中位數選民最偏好的政策)

Example 5: The Median Voter Theorem (例5:中位數選民定理)

‣ The median voter prefers a budget of $50 billion. (中位數選民所偏好的五百億預算總是能在兩兩投票中勝出)

‣ The choice closest to $50 will win any two-way race.

‣ Suppose the choices are $40 and $70. (如果兩個選項是四百億和七百億)

‣ $40 will win, even though more voters prefer $70! (中位數選民所偏好的四百億會打敗更多人喜歡的七百億)

Preferred government budget (billions of $)

The Median Voter Is King (中位數選民才是王道!!中間選民不是!!)

▸ Implications: (政策意涵)

1. In a two-party or two-candidate race, each party will move its position toward that of the median voter. (在兩黨對決或只有兩位候選人的選舉中，雙方陣營都會朝中位數選民偏好的方向去修正自身立場)

2. Minority views are not given much weight. (但也因此少數人的意見會被忽略)

Politicians are People Too (政治人物也是的人)

▸ Politicians: motivated by self-interest, just like firms and consumers. (政治人物跟廠商和消費者一樣，都會將本逐利)

▸ Some politicians motivated by reelection, willing to sacrifice the national interest toward that goal. (有些政治人物為求勝選，寧可犧牲國家的利益)

▸ Others motivated by greed. (另外一些政治人物則為貪婪所驅使)

▸ The lesson: (政策意涵: 制定政府財經政策的並非哲學家皇帝，而是真實的人)

1. Economic policy is not made by benevolent leaders, but by real people with their own all-too-human desires (他們也會將本逐利!)

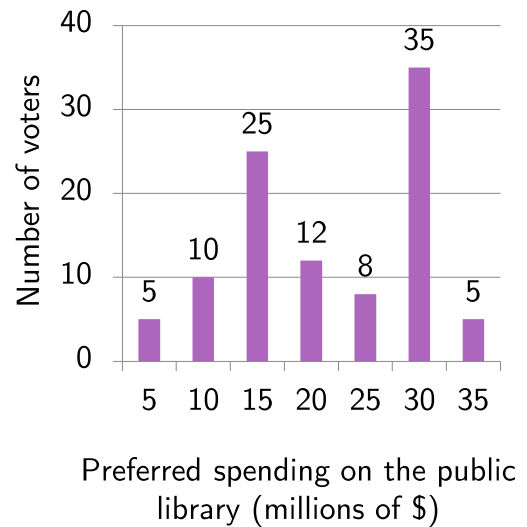2. Fails to resemble the ideals derived in economics textbooks (因此經濟學教科書上理想的財經政策不見得會實現)

Active Learning 2: Let's Build a New Library! (主動學習2)

▸ The preferences of the 100 people voting for the new library budget are listed in the diagram. (圖上顯示100位選民對新圖書館的偏好)

A. What is the median voter's preference? (中位數選民偏好的預算是多少?)

B. There are two proposals: $15 and $30 million budget. Which one will win? (如果1500萬對決3000萬誰會贏?)

Chart — Number of voters vs. Preferred spending on the public library (millions of $):
- 5 → 5
- 10 → 10
- 15 → 25
- 20 → 12
- 25 → 8
- 30 → 35
- 35 → 5

Preferred spending on the public library (millions of $)

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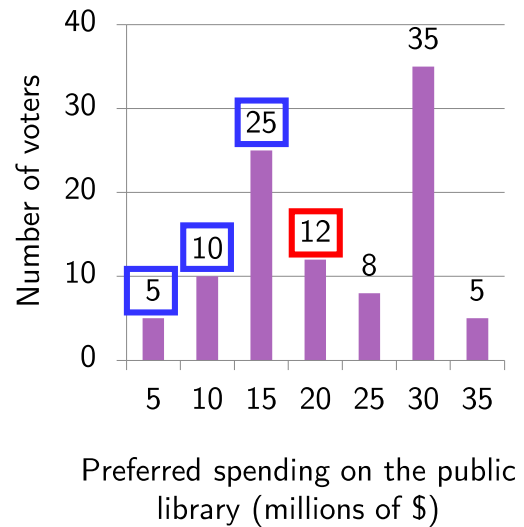
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The preferences of the 100 people voting for the new library budget are listed in the diagram. (圖上顯示100位選民對新圖書館的偏好)
What is the median voter's preference? (中位數選民偏好的預算是多少?)

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Active Learning 2: Answers, A: Median Voter (主動學習2)

▸ **There are 100 voters** (100位選民偏好排序)

▸ Lining up the voters by their preference, the median (50th) voter will choose $20 million

  ▸ 5 voters want $5, 10 want $10, 25 want $15... so the first 40 voters want $15 million or lower

▸ The next 12 voters want $20

  ▸ The median voter is one of these

Preferred spending on the public library (millions of $)

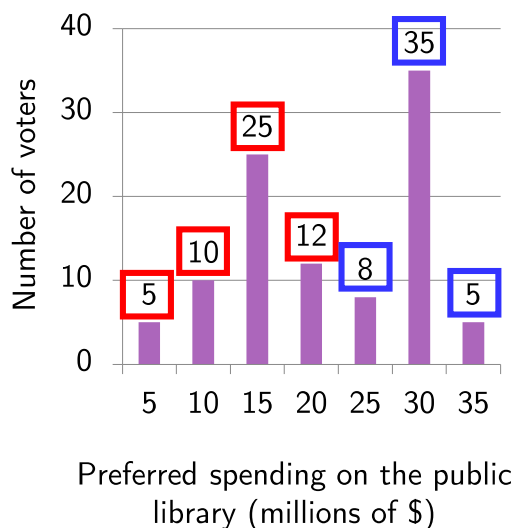2022/11/25   Frontiers of Microeconomics   Joseph Tao-yi Wang

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The preferences of the 100 people voting for the new library budget are listed in the diagram. (圖上顯示100位選民對新圖書館的偏好)
There are two proposals: $15 and $30 million budget. Which one will win? (如果1500萬對決3000萬誰會贏?)

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Active Learning 2: Answers, B: $15m or $30m Budget?

- ▸ $30 million budget is most popular (偏好3000萬的人最多，但中位數選民定理...)
- ▸ BUT: Median Voter Theorem!
- ▸ The $30m budget will get:
  - ▸ $8 + 35 + 5 = 48$ votes (48票投3000萬)
- ▸ The $15m budget will get:
  - ▸ $5 + 10 + 25 + 12 = 52$ votes
- ▸ Winner: $15 million budget (輸給拿到52票的1500萬!!)

Preferred spending on the public library (millions of $)

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Ask The Experts
Behavioral Economics (經濟學家答客問: 關於"行為"經濟學)

- ▸ "Insights from psychology about individual behavior – examples of which include limited rationality, low self-control, or a taste for fairness – predict several important types of observed market outcomes that fully-rational economic models do not."
(心理學對個別決策的洞見，包括有限理性、低自制力或對公平的偏好，能預測一些重要的市場結果，彌補理性經濟模型的不足...)

  - ▸ Do you Agree or Disagree? (你同意嗎?)

- ▸ Do you think Economists Agree or Disagree?(經濟學家會同意嗎?)

Source: IGM Economic Experts Panel, October 19, 2017

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Do you agree or disagree? (你同意嗎?)
"Insights from psychology about individual behavior – examples of which include limited rationality, low self-control, or a taste for fairness – predict several important types of observed market outcomes that fully-rational economic models do not." (心理學對個別決策的洞見，包括有限理性、低自制力或對公平的偏好，能預測一些重要的市場結果，彌補理性經濟模型的不足...)

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Do you think Economists Agree or Disagree? (經濟學家會同意嗎?)
"Insights from psychology about individual behavior – examples of which include limited rationality, low self-control, or a taste for fairness – predict several important types of observed market outcomes that fully-rational economic models do not." (心理學對個別決策的洞見，包括有限理性、低自制力或對公平的偏好，能預測一些重要的市場結果，彌補理性經濟模型的不足...)

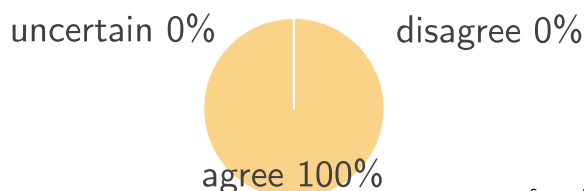ⓘ Start presenting to display the poll results on this slide.

Ask The Experts
Behavioral Economics (經濟學家答客問: 關於"行為"經濟學)

▸ "Insights from psychology about individual behavior – examples of which include limited rationality, low self-control, or a taste for fairness – predict several important types of observed market outcomes that fully-rational economic models do not."

(心理學對個別決策的洞見，包括有限理性、低自制力或對公平的偏好，能預測一些重要的市場結果，彌補理性經濟模型的不足…)

What do economists say?

uncertain 0%   disagree 0%

agree 100%

Source: IGM Economic Experts Panel, October 19, 2017

Economics and Psychology (經濟學與心理學)

▸ aka "Behavioral Economics": (又稱"行為經濟學"…)

▸ Subfield of economics that integrates the insights of psychology (把心理學的洞見引入經濟學的次領域)

▸ Note: Behavioral Economics vs. Non-behavioral Economics

▸ What is Non-behavioral Economics? (但"非行為經濟學"是甚麼碗糕?)

▸ Insights from Behavioral Economics: ("行為經濟學"的洞見)

1. People aren't always rational (人們不總是理性的)
2. People care about fairness (人們在乎公平正義)
3. People are inconsistent over time (人們的選擇會前後不一致)

People Aren't Always Rational (人們不總是理性的)

▸ Studies of human decision find that people make systematic mistakes: (許多人類行為研究發現人們會犯系統性的錯誤)

  ▸ People are overconfident (人們會過度自信)

  ▸ People give too much weight to a small number of vivid observations (人們會過度看中少數印象鮮明的特例)

  ▸ People are reluctant to change their minds (人們不容易改變想法)

    ▸ Confirmation Bias: People tend to interpret evidence to confirm beliefs they already hold (確認偏誤: 人們傾向朝證實自身想法的方向來解讀新證據)

People Care About Fairness (人們在乎公平正義)

▸ People's choices

  ▸ Sometimes influenced more by their sense of fairness than self-interest (人們的選擇受到心目中公平正義的影響，有時會大過自身利益的影響)

  ▸ People are driven in part by some innate sense of fairness

▸ Example: Ultimatum Game (例: 最後通牒談判實驗)

  ▸ Two players who do not know each other have a chance to share a prize of $100 (兩個不認識的人一起決定如何分享100元)

Example 6: The Ultimatum Game (例6: 最後通牒談判實驗)

- The proposer decides what portion of the $100 prize to give to the responder (提議者決定要把100元分多少給回應者)
- The responder can accept or reject the offer (回應者要二選一)
  - Accepts the offer: the money gets split (接受提議: 按照提議分配100元)
  - Rejects the offer: both get $0 (拒絕提議: 兩人都拿到0元)
- If you are a proposer, how much would you offer?
- If you are a responder, what offer will you accept?

  (如果你是提議者，你會怎麼提議? 如果你是回應者，你會接受哪些提議?)

Example 6: Results From the Ultimatum Game (例6: 最後通牒談判實驗結果)

- Predicted Outcome (for rational players) (理論預測: 當人是理性的)
  - Proposer offer a 99-1 split and responder would accept ($1 is better than nothing). (提議者提議給對方1元、自己留下99元，反正1>0所以回應者會接受)
- Actual Outcomes (in lab experiments and in the field!)
  - Responder usually rejects lopsided splits like 99-1 as wildly unfair. (在實驗室和現場實驗的結果: 99-1這種非常不公平的提議通常都會被回應者所拒絕，因此多半)
  - Expecting this, proposer usually offers $30 or $40. (會提議給30-40元)
  - Responder still views this as unfair, but not so much as to abandon his self-interest, so offer is accepted. (仍不公平但勉強可以接受)

People Are Inconsistent Over Time (人們的選擇會前後不一致)

▸ People tend to prefer instant gratification (人們偏好立即回報)

  ▸ Even when delaying would increase gratification (即使等待回報更大)

▸ Result: People fail to follow through on plans to do things that are dreary, take effort, or cause discomfort.

  ▸ People often save less than they plan (結果: 人們計畫要做困難的事卻做不到 像是存不夠退休金)

▸ To help follow through, people look for ways to commit themselves to their plans. (要會用各種事前承諾的方式來做到)

  ▸ Worker has money taken out of paycheck before he ever sees it (像是在薪資入帳前直接扣除要存的退休金，所以員工根本沒看到那筆要存的錢)

Think-Pair-Share
You are Playing the Dictator Game... (分享題: 在獨裁分配賽局...)

It starts with the premise of the Ultimatum game, but the responder cannot reject the offer, the responder can only say "thank you" and accept any offer made. (跟最後通牒談判實驗很像，但回應者不能拒絕、只能感恩接受。最後通牒談判實驗的提議者通常給對方30-40元)

A. While in the Ultimatum game, most proposers would offer a "fair" $30 or $40 to the responder, how will their answer change in the Dictator game? (但是在獨裁分配賽局的提議者會怎麼選?)

B. How will your answer change if, as a proposer, you would have the ability to not only give money but also to take money (up to $50) from the responder? (如果提議者可以搶對方的錢呢?)

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While in the Ultimatum game, most proposers would offer a "fair" $30 or $40 to the responder, how will their answer change in the Dictator game? (最後通牒談判實驗的提議者通常給對方30-40元，但是在獨裁分配賽局的提議者會怎麼選?)

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How will your answer change if, as a proposer, you would have the ability to not only give money but also to take money (up to $50) from the responder? (如果提議者可以搶對方的錢、至多搶走50元，你會怎麼選?)

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How do you think proposers in the lab would behave if they have the ability to not only give money but also to take money (up to $50) from the responder? (如果提議者可以搶對方的錢、至多搶走50元，你覺得實驗中的真人提議者會怎麼選?)

ⓘ Start presenting to display the poll results on this slide.

Chapter In A Nutshell

▸ In many economic transactions, information is asymmetric.

▸ When there are hidden actions, principals may be concerned that agents suffer from the problem of moral hazard.

▸ When there are hidden characteristics, buyers may be concerned about the problem of adverse selection among the sellers.

▸ Private markets sometimes deal with asymmetric information with signaling and screening.

Chapter In A Nutshell

- Government policy can sometimes improve market outcomes, governments are imperfect institutions.
  - The Condorcet paradox shows that majority rule fails to produce transitive preferences for society.
  - Arrow's impossibility theorem shows that no voting system can be perfect.
- Democratic institutions will produce the outcome desired by the median voter, regardless of the preferences of the rest of the electorate.

Chapter In A Nutshell

- Individuals who set government policy may be motivated by self-interest rather than the national interest.
- The study of psychology and economics reveals that human decision making is more complex than is assumed in conventional economic theory.
- People are not always rational; they care about the fairness of economic outcomes (even to their own detriment), and they can be inconsistent over time.

Chapter 22: Frontier of Microeconomics

- ▸ Asymmetric Information
  - ▸ Experiment 13 is a "lemon" market!
- ▸ Political Economy
  - ▸ Political candidates act like "location" firms!
- ▸ Economics and Psychology
  - ▸ aka "Behavioral" Economics
    - ▸ vs. Non-behavioral Economics (What is that?)
  - ▸ What Theory Says
    - ▸ vs. What People Actually Do

Chapter 22: Frontier of Microeconomics

- ▸ My own research agenda is on these frontier!
  - ▸ Talk to me after class if you interested...
- ▸ Homework: Mankiw, Ch.22, 2, 3, 5-7, 9
- ▸ Challenge Questions (Past Finals)
  - ▸ 2007 - Part 5
  - ▸ 2018 - Essay D
  - ▸ 2020 - Essay C4
  - ▸ 2012 - Essay B6-B7
  - ▸ 2019 - Essay D7-D8
  - ▸ 2021 - Essay C1-C5, D1-D9

Audience Q&A Session

ⓘ Start presenting to display the audience questions on this slide.

My Research on these Frontier

▸ Asymmetric Information,

▸ Political Economy,

▸ Economics and Psychology

▸ Strategic Information Transmission

GEB: Overcommunication

AER: Eyetrack people when they cheap talk (lying)

REE: Level-k model (for cheap talk games)

GEB: Decipher conflicting messages of 2 senders?!

APSR: Legislative committee design: Open vs. closed rule

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My Research on these Frontier

▸ Political Economy Experiments

  PER: Pivotal-voting games

    ▸ Design legal prediction markets

  CPE: Choice behind veil of ignorance

▸ Behavioral Game Theory and Eyetracking

  AER: Eyetrack people when they cheap talk (lying)

  JEEA: Learning to play normal form games,

  Psych Science: Answering Trivia questions, and

  GEB: Playing spatial beauty contest games

My Research on these Frontier

  JEBO: Confucianism and Time/Risk Preferences

▸ LUPI Game and Other Learning Experiments

  AEJ-micro: Least Unique Positive Integer (LUPI) game

  EL: Lowest Unique Bid Auction (LUBA) games

  GEB: Imitation learning in winner-take-all games

  T&D: Learning to overcome the Monty Hall problem

11/25/2022

My Research on these Frontier

▸ **Classroom Experiments and Replication**

<u>PER</u>: Pivotal-voting games

<u>REE</u>: Level-k model (for cheap talk games)

<u>Nature Human Behaviour</u>: MobLab replicates results of continuous double auctions and ultimatum game

<u>Bargaining Book Chapter</u>: Replicates continuous bargaining experiments and analyze with machine learning (LASSO)

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Recommendation for Further Studies

1. **Take good courses such as:**
   ▸ 古慧雯 or 駱明慶's Intermediate Microeconomics
   ▸ 陳旭昇 + 駱明慶's Statistics and Econometrics
   ▸ My Experimental Economics or (Graduate) Micro Theory I
2. **Start to do research/write thesis (學士論文)**
   ▸ Even replicating a classic experiment is great!
3. **BESAP**: Visit UC-Berkeley's Econ Dept.
   ▸ Challenge: Pay their tuition!
   ▸ SAPFS (教育部人社學術人才跨國培育計畫) can fund you!

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