

# 經濟學是甚麼？

台大經濟系 王道一老師  
Joseph Tao-yi Wang

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## 什麼是經濟學？ What is Economics?

- ▶ 課本上的定義：
- ▶ 經濟學研究一個社會如何管理稀少資源
  - ▶ Mankiw (2021)
- ▶ 古早課本的定義：
- ▶ 經濟學研究一個社會如何善用稀少資源來生產有價值的財貨，分配給不同人
  - ▶ Samuelson (1948)



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## 什麼是經濟學？ What is Economics?

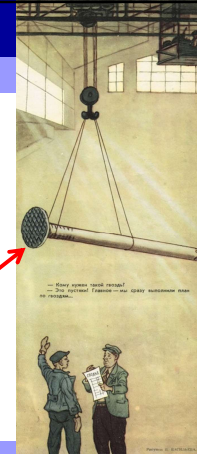
- ▶ **傳統看法**: 經濟學研究「一個社會如何生產和分配財貨來滿足其成員的需要與渴望」
- ▶ **現代看法**: 經濟學研究「制度與人類行為」(對制度的反應), 也就是:
  - ▶ 「**上有政策, 下有對策**」



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## 「上有政策, 下有對策」

- ▶ 若計劃經濟要求生產一噸鐵釘
  - ▶ 「如果上級的計劃只有敘明產出應有的噸數, 那...
  - ▶ 大家自然有誘因要**不管設計、外觀或品質方面的考量**, 以便**專注在噸數上**。」
    - ▶ Heilbroner (1970), *The Economic Problem*
- ▶ 「**上有政策, 下有對策**」確實會出現一噸鐵釘, 但...
  - ▶ 俄國鱷魚雜誌(Krokodil)諷刺漫畫



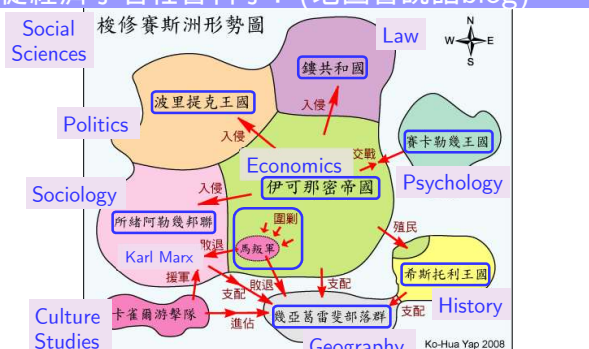
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## 什麼是經濟學？ What is Economics?

- ▶ 為何「**上有政策, 下有對策**」？
  - ▶ 因為人們對誘因(incentives)有反應!
- ▶ 這表示市場機制只是諸多「制度」之一...
  - ▶ 其他機制: 拍賣(Auctions)、配對分發(Matching),
  - ▶ 其他制度: 政府(Government)、國會(Congress)、全民健康保險(National Health Insurance)、家庭(Families)、社會規範(Social Norms)
- ▶ 那經濟學豈不是包山包海？

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## 從經濟學看社會科學？ (地圖會說話blog)



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從經濟學看社會科學?

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從 LUPI 彩券看何謂經濟學

- ▶ LUPI 彩券(瑞典/2007年)
- ▶ Lowest Unique Positive Integer (LUPI) Game
- ▶ 最小唯一者勝的賽局
- ▶ 請選擇 1 到 100 之間的一個正整數
- ▶ 誰選到**最小**且**沒有其他人選**的數字就贏了!
- ▶ 贏家的獎勵?

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請選擇 1 到 100 之間的一個正整數

① Start presenting to display the poll results on this slide.

從 LUPI 彩券看何謂經濟學

再來一次?

- ▶ LUPI 彩券(瑞典/2007年)
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- ▶ 贏家的獎勵?

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(再來一次!) 請選擇 1 到 100 之間的一個正整數

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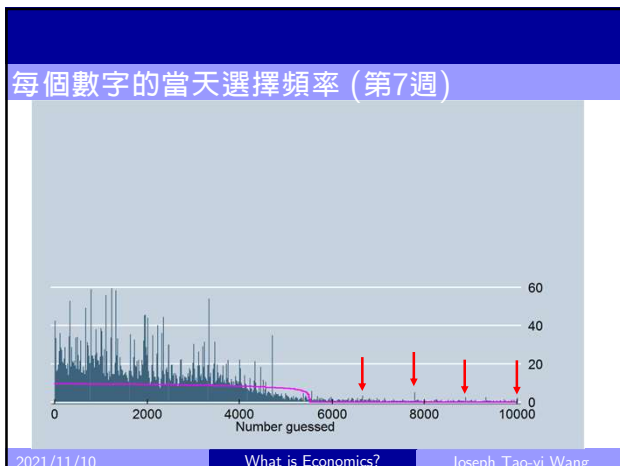
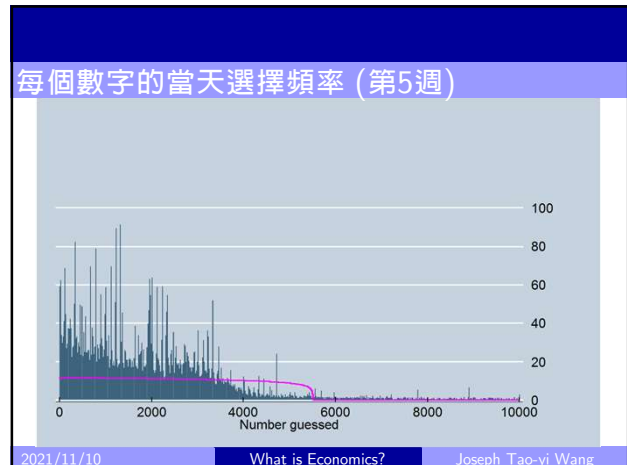
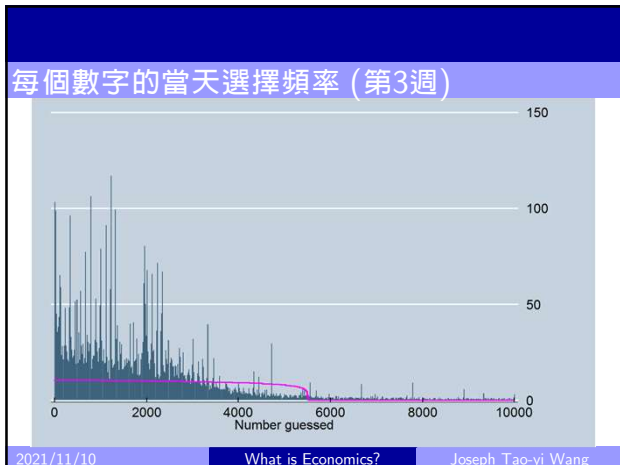
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(最後一次!) 請選擇 1 到 100 之間的一個正整數

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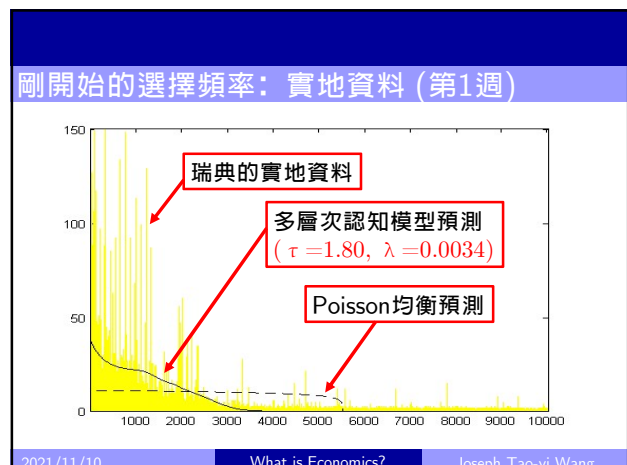
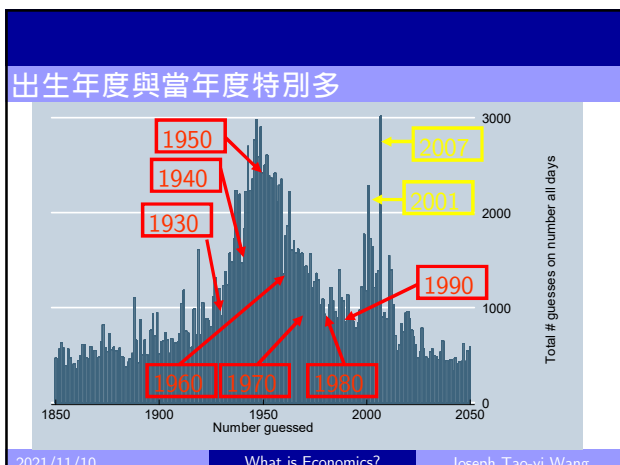




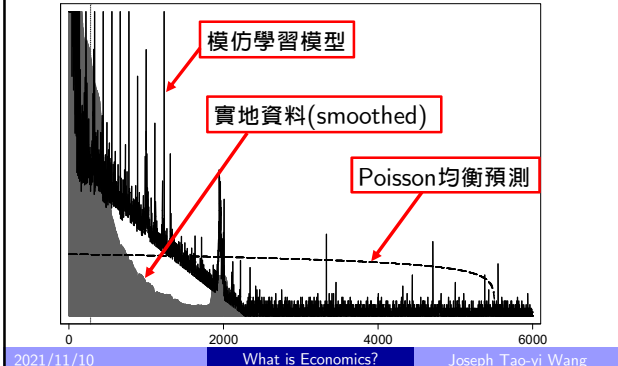
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5. 實證資料是否支持你的預測?
  - ▶ 蒐集資料來看看「整個社會」的結果如何
6. (資料中的)個別差異能否被解釋?
  - ▶ 個別資料是否有差異? 理論有改進的空間嗎?

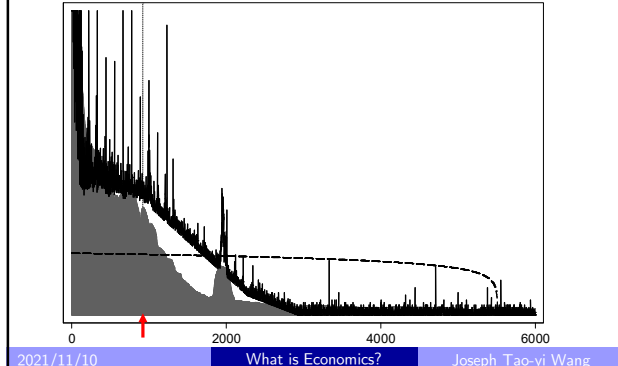
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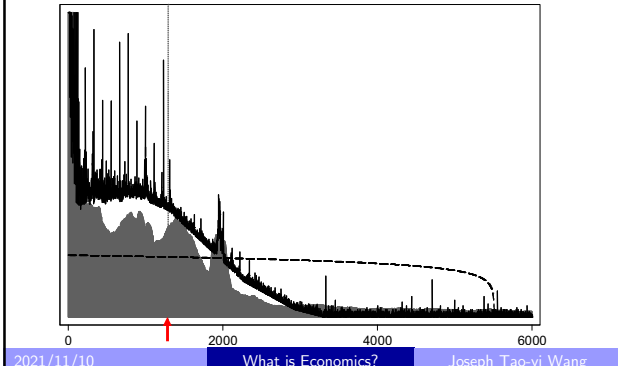
模仿學習模型 vs. 實地資料 (第1週) - Day 2



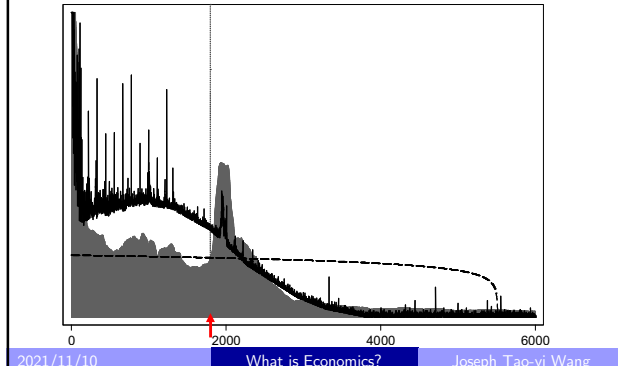
模仿學習模型 vs. 實地資料 (第1週) - Day 3



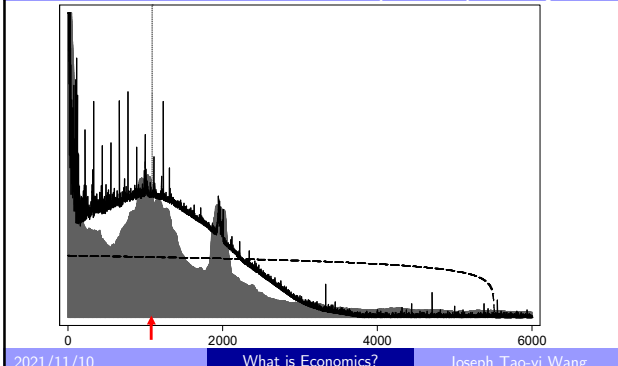
模仿學習模型 vs. 實地資料 (第1週) - Day 4



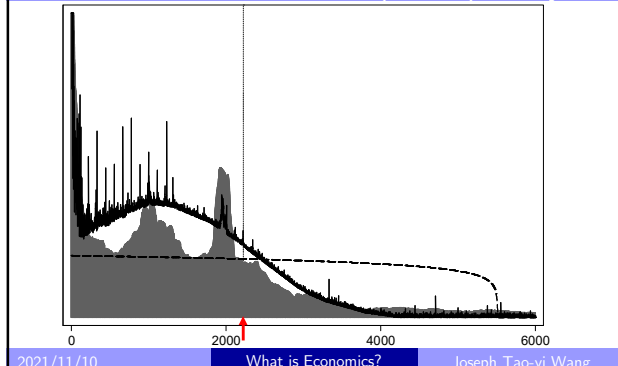
模仿學習模型 vs. 實地資料 (第1週) - Day 5



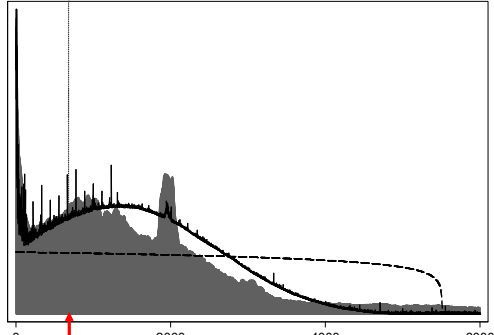
模仿學習模型 vs. 實地資料 (第1週) - Day 6



模仿學習模型 vs. 實地資料 (第1週) - Day 7

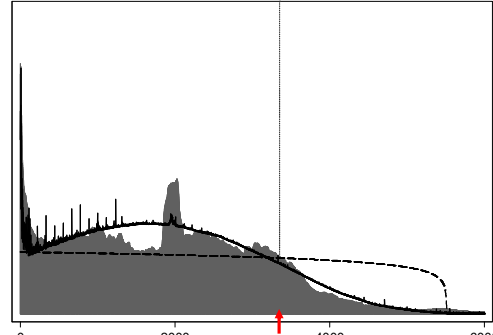


模仿學習模型 vs. 實地資料 (第2週) - Day 14



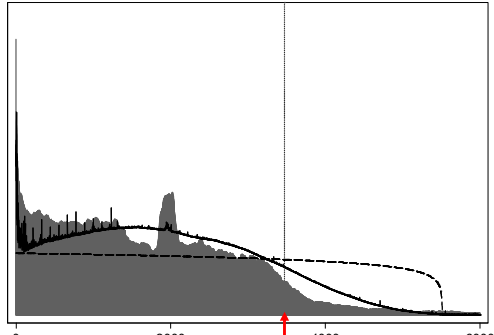
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模仿學習模型 vs. 實地資料 (第3週) - Day 21



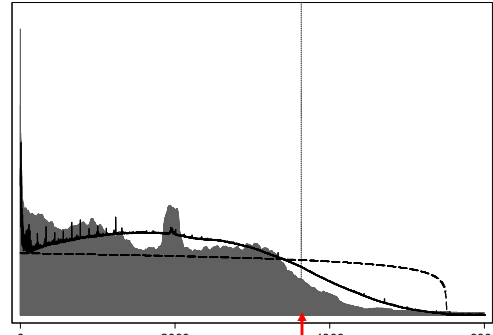
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模仿學習模型 vs. 實地資料 (第4週) - Day 28



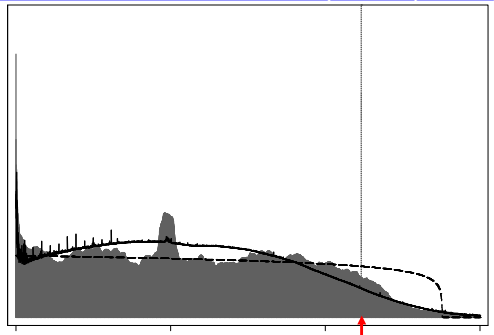
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模仿學習模型 vs. 實地資料 (第5週) - Day 35



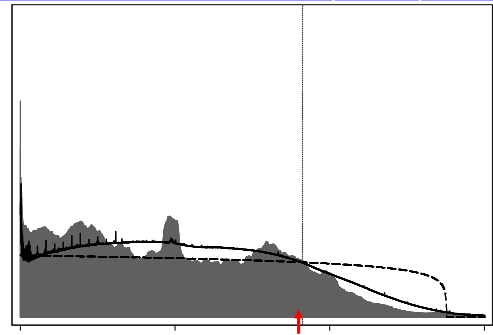
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模仿學習模型 vs. 實地資料 (第6週) - Day 42



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模仿學習模型 vs. 實地資料 (第7週) - Day 49



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## 從 LUPI 彩券看何謂經濟學

5. **實證資料是否支持你的預測?**
  - ▶ 蒐集資料來看看「整個社會」的結果如何
6. **(資料中的)個別差異能否被解釋?**
  - ▶ 個別資料是否有差異? 理論有改進的空間嗎?
7. **制度(遊戲規則)有沒有可以改進的地方?**
  - ▶ 工程師思維: 如果下次還要做, 該如何設計?
8. **這套制度是哪裡來的?**
  - ▶ 人文思考: 歷史? 習慣? 現況的邏輯是什麼?

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## 小結

- ▶ 舊經濟時代聚焦在資源有限, 經濟學處理
  - ▶ **生產和消費**: 解決資源有效運用的問題
- ▶ 但在知識經濟時代, 資源不再是重點
  - ▶ 更重要的是**人們對資訊、對制度的反應**
- ▶ 因此, 現代經濟學研究的是
  - ▶ 「**上有政策, 下有對策**」
  - ▶ 在一套遊戲規則下, 人們如何謀求自身最佳; 看實證資料如何印證理論, 並思考這個制度如何改進、從何而來。

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## 如何在考慮「下有對策」之下來設計制度?

- ▶ 這也是「成功改變的三個必要條件」...
1. **瞭解現況的邏輯**
    - ▶ 知道為甚麼現在是這樣的光景(誘因哪裡出問題)
  2. **有從上帝而來的智慧, 知道突破點在哪裡**
    - ▶ 如何調整現有制度讓大家更好(且用實驗驗證!)
  3. **說服有能力改變的人來改變**
    - ▶ 這是比較容易的, 因為前兩者根本是互斥的!

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## 但...(人生就是有這個BUT)

- ▶ 每個單位面對的挑戰, 其實不太一樣...
  - ▶ 「你不了解 X X 單位的 O O 業務有多 X X O O ...」



- ▶ 國情不同, 橘逾淮為枳!!
  - ▶ 美國可以, 不代表我們也可以(真的嗎?!)

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## 但...(人生就是有這個BUT)

- ▶ 家家有本難念的經, 為什麼還是有人可以幫別人做婚姻協談、諮商輔導?
- ▶ 因為婚姻:

1. **有共通原則**
2. **可觀摩案例**
3. **能觸類旁通**

- ▶ 那政策呢?



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## 甚麼是「經濟學實驗」?

- ▶ 定義: **經濟學實驗**是建構一個**控制的環境**,
- ▶ 在有**真實誘因**的情況下, 觀察**人們如何做決定**(經濟決策), 為要回答研究者提出的問題,
- ▶ 檢驗哪個假說或理論比較符合現實。
- ▶ 建構控制的環境, 有**四大要素**:
  1. **真實後果或誘因**
  2. **對照組的設計**
  3. **隨機分組**
  4. **完全不欺騙受試者**

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Q&A時間

關於這個部分，我想要問...

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關於這個部分，我有問題想要問王道一老師...

① Start presenting to display the audience questions on this slide.

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事先溝通(Pre-play Communication)有用嗎？


- ▶ 如果你是兩位參賽者之一，你該如何說服對方平分獎金？
  - ▶ 英國的電視節目：黃金球 (Golden Balls)
  - ▶ 有多少人真的選擇全拿？為什麼？
  - ▶ 如何避免被對方全拿或兩敗俱傷？
- ▶ 如果你希望大家都更好，你會怎麼做？
  - ▶ 從未想過會出現的談判過程，結果是...
    - ▶ <http://www.youtube.com/watch?v=S0qjK3TWZE8>
    - ▶ 中文字幕版: <https://youtu.be/W5qz8SNO7Wc>

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事先溝通(Pre-play Communication)有用嗎？

- ▶ 合作對大家都好，但競爭對手可不見得領情
  - ▶ 雖然消費者其實樂見廠商之間的激烈競爭
- ▶ 事先溝通談判實例：
  - ▶ WSJ:航空公司常常禮拜一晚上放出便宜機票
    - ▶ 競爭對手禮拜二早上被迫跟進
    - ▶ 上網買機票最佳時間：美東時間禮拜二下午三點
  - ▶ 若事先講好本周不要放出便宜機票有用嗎？
  - ▶ 當博客來網路書店打出全館79折...
    - ▶ 金石堂書店全面八折、讀冊生活也打出本日66折

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**Market Forces**  
 Equilibrium

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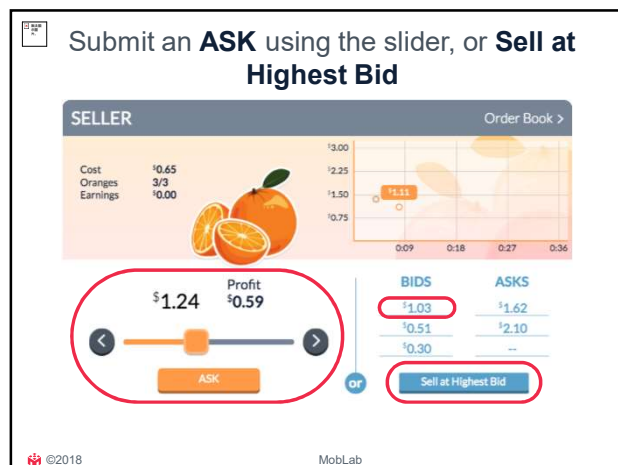
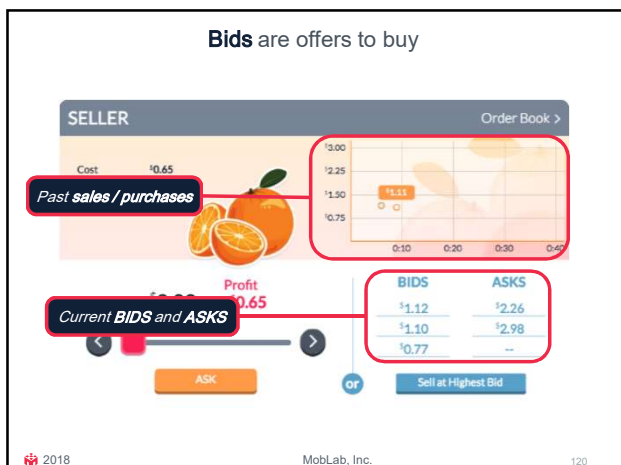
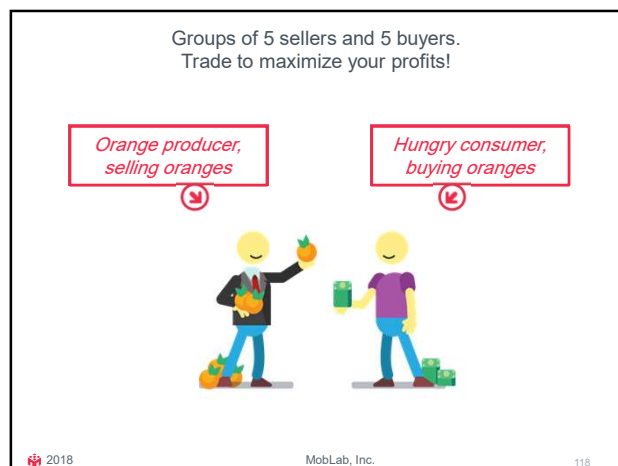
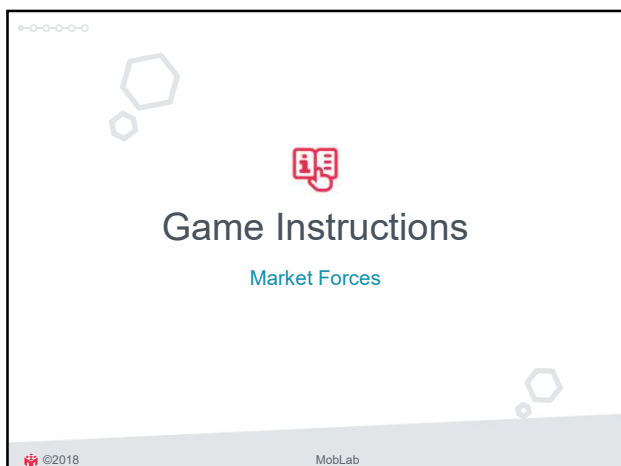
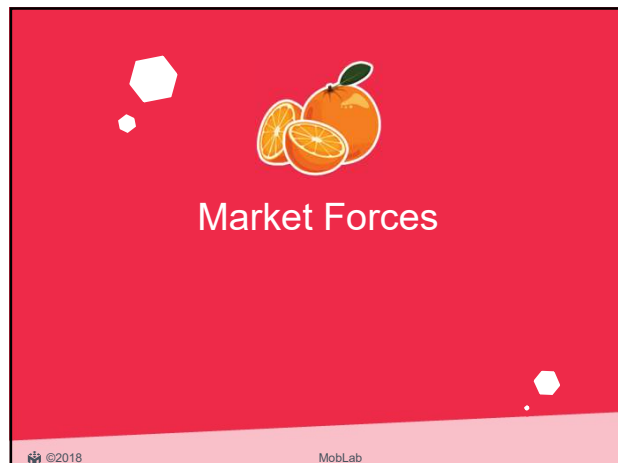
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**Seller's Profit = Sale Price – Cost**

**SELLER** Order Book >

Cost \$0.65  
Oranges 3/3  
Earnings \$0.00

Profit \$0.59

\$1.24

ASK

BIDS ASKS  
\$1.03 \$1.62  
\$0.51 \$2.10  
\$0.30 --

Sell at Highest Bid

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Submit a **BID** using the slider, or **Buy at Lowest Ask**

**BUYER** Order Book >

Value \$1.38  
Oranges 0/3  
Earnings \$0.00

Profit \$0.34

\$1.04

BID

BIDS ASKS  
\$0.34 \$0.87  
\$0.23 \$0.90  
-- \$1.03

Buy at Lowest Ask

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**Buyer's Profit = Value – Purchase Price**

**BUYER** Order Book >

Value \$1.38  
Oranges 0/3  
Earnings \$0.00

Profit \$0.34

\$1.04

BID

BIDS ASKS  
\$0.34 \$0.87  
\$0.23 \$0.90  
-- \$1.03

Buy at Lowest Ask

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When does a transaction occur?

- Someone uses **Buy at Lowest Ask** or **Sell at Highest Bid**
- A Buyer places a **BID** higher than the lowest outstanding Ask (Purchase Price at Lowest Ask)
- A Seller places an **ASK** lower than the highest outstanding Bid (Sale Price at Highest Bid)

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What happens when a transaction occurs?

- Buyers
  - The value for the next orange is lower than the previous orange
- Sellers
  - The cost to supply the next orange is greater than the previous orange

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As a **seller**, what is your profit if someone accepts your ask of **\$1.24**?

**SELLER** Order Book >

Cost \$0.65  
Oranges 0/3  
Earnings \$0.00

Profit \$0.59

\$1.24

ASK

BIDS ASKS  
\$1.03 \$1.62  
\$0.51 \$2.10  
\$0.30 --

Sell at Highest Bid

*Sale Price – Cost = \$1.24 - \$0.65 = \$0.59*

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As a **buyer**, what is your profit if you "Buy at Lowest Ask"?

**BUYER** Order Book >

Value: \$1.38  
Oranges: 0.00  
Earnings: \$0.00

Profit: \$0.34

BIDS	ASKS
\$1.04	\$0.87
\$1.23	\$0.90
...	\$1.03

**Value - Purchase Price = \$1.38 - \$0.87 = \$0.51**

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Game Time!

Market Forces

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What was the Equilibrium Price and Quantity of your market?

**Supply/Demand Chart**

Equilibrium P: \$1.12    Equilibrium Q: 13

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What was the actual Price and Quantity?

- You were told to maximize your own profits.
- The Law of Supply and Demand predicts your group's behavior.
- Was the prediction be accurate?
- Let's take a look!

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Results Discussion

Market Forces

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Concept Review

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What if the market price were above the equilibrium price?

The Invisible Hand drives prices down.

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What if the market price were below the equilibrium price?

The Invisible Hand drives prices up.

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Which statements are true in equilibrium?

- All buyers willing to purchase an orange at equilibrium price are able to.
- There will be a shortage of oranges, there are less oranges in the market than people want to buy.
- All sellers willing to sell an orange at equilibrium price are able to.
- There will be a surplus of oranges, so that there are more oranges in the market than people want to buy.

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Which statements are true in equilibrium?

- **All buyers willing to purchase an orange at equilibrium price are able to.**
- There will be a shortage of oranges, there are less oranges in the market than people want to buy.
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- There will be a surplus of oranges, so that there are more oranges in the market than people want to buy.

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### Key Takeaways

- *Market Equilibrium* occurs when quantity supplied is equal to quantity demanded
  - *Equilibrium Price and Quantity*: the price and quantity when market equilibrium occurs
- *Law of Supply and Demand*: prices adjust until market equilibrium is achieved

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Completed!

Market Forces

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# Shifts in Supply and Demand

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## What will happen to Price and Quantity?

Let's find out:

- Suppose that a hurricane hits Florida and devastates this year's orange harvest.

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Markets

### Florida Orange Crop Plunges to 71-Year Low After Hurricane Irma

By Alan Bierga and Marvin G. Perez  
 October 12, 2017, 9:00 AM PDT  
 Updated on October 12, 2017, 11:34 AM PDT

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## Game Time!

### Shifts in Supply and Demand

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## What happened to Price and Quantity?

Before Hurricane

**P: \$1.12    Q: 13**

After Hurricane

**P: \$1.35    Q: 6**

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## Results Discussion

### Shifts in Supply and Demand

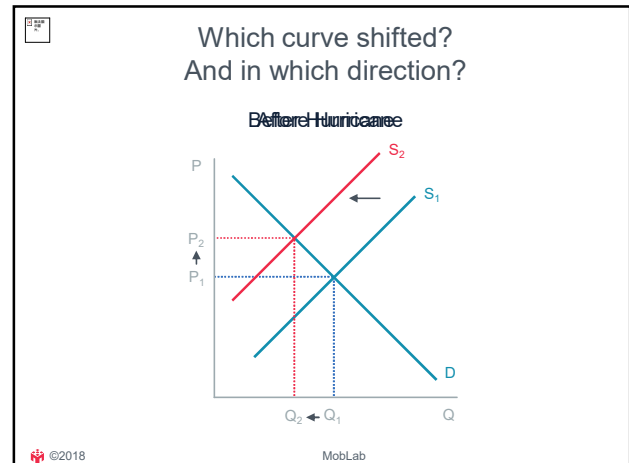
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Concept Review

Shifts in Supply and Demand

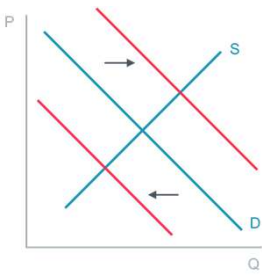


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What shifts demand?

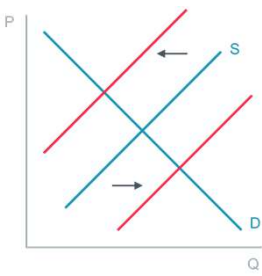
- Income
- Prices of complements and substitutes
- Tastes
- Expectations
- Number of Buyers
- Price of the product itself? NO!



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What shifts supply?

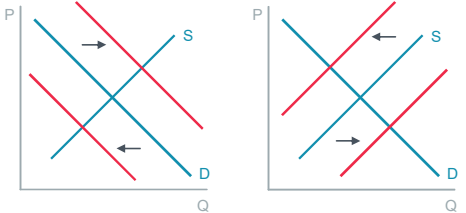
- Prices of Factors of Production
- Technology
- Expectations
- Number of Sellers
- Price of the product itself? NO!



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Which way does the curve shift?

- Demand increases: Shifts right.
- Demand decreases: Shifts left.
- Supply increases: Shifts right - NOT UP!
- Supply decreases: Shifts left - NOT DOWN!



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Completed!

Shifts in Supply and Demand

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