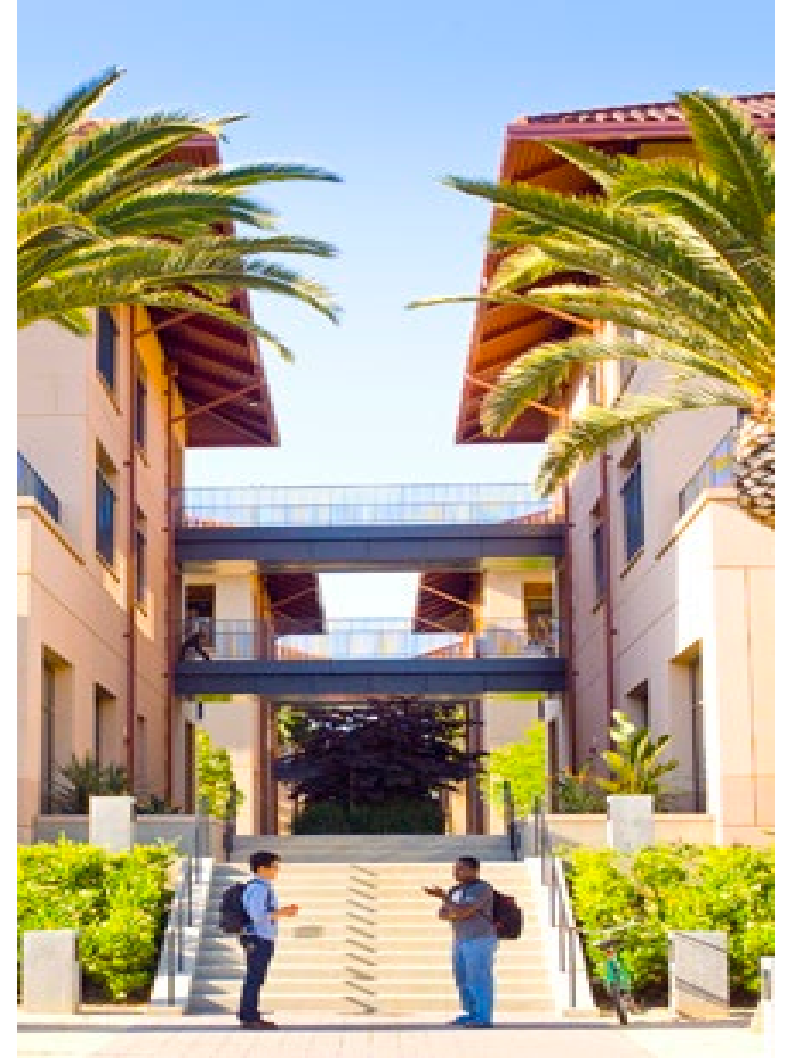


ECONOMICS – MARKETS AND INFORMATION

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Agenda

Step 1

The most famous picture in Economics

Step 2

Information and Incentives in Markets

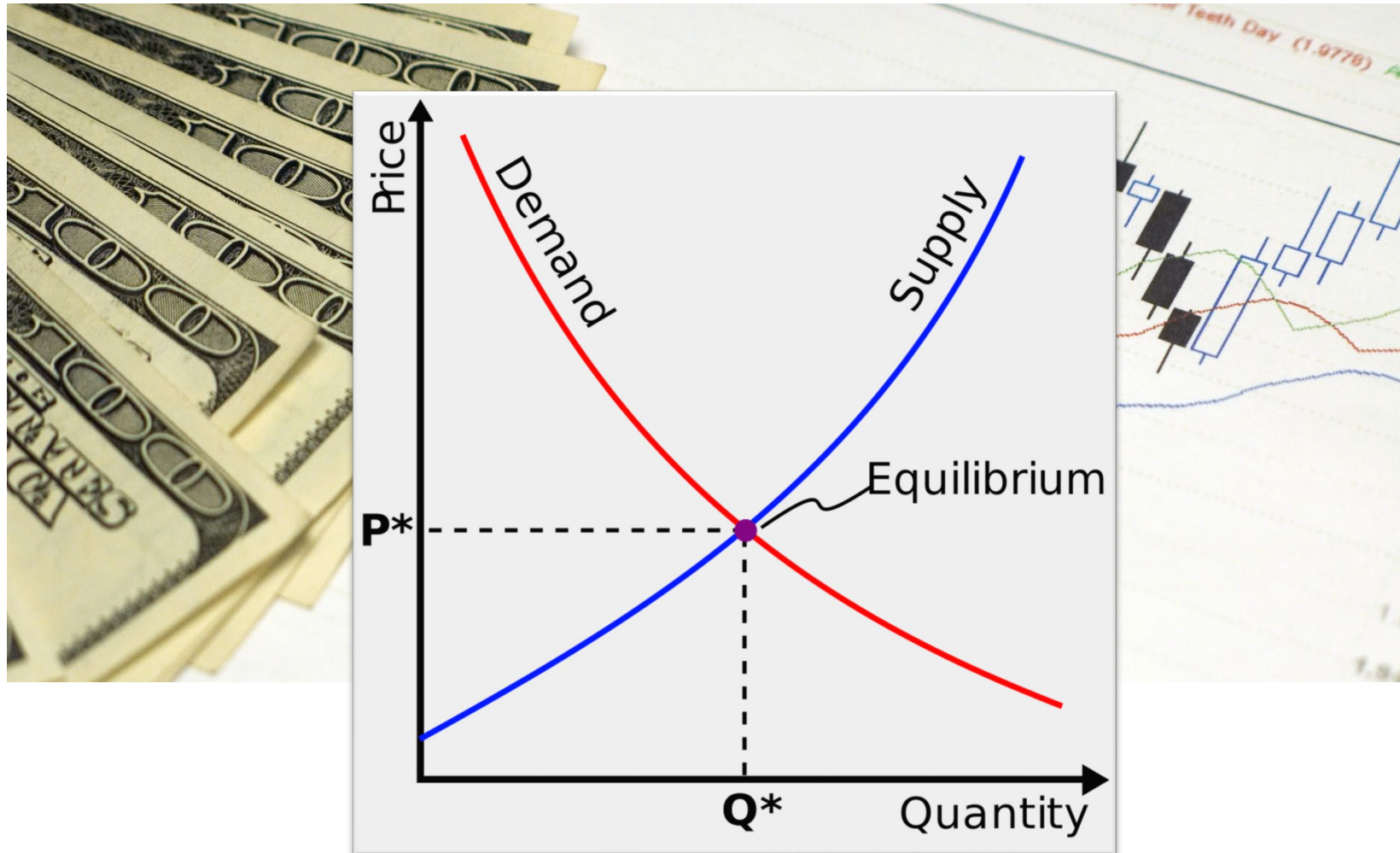
Step 3

Data Causation vs. Correlation and Other Tips



The most famous picture in Economics

01



Competitive Market

A Two-Sided Auction



01 *There are producers, consumers and traders.*

02 *We are running multiple separate markets.*

03 *Each market has an equal split of consumers/ producers and a few traders.*

04 *A widget can be redeemed for its opportunity cost which appears on it (production cost).*

05 *A consumer can get their (private) reservation price if they purchase a widget.*

06 *A consumer can only get the reservation price for one widget, other widgets are worth their opportunity cost.*

07 *You will be asked to pay if you owe more than you earned.*

The Rules



RULE 1

Anyone can **bid** for a widget (bid between \$0 and \$10, \$0.1 intervals)

RULE 2

If you own a widget (as a producer or if you bought one) you can **ask** for a price for your widget.

RULE 3

The system records the **highest bid** and **lowest ask** as bids come in.

RULE 4

You may have put a higher bid, but by the time it clears the queue on the server, there might have been a higher bid preceding it.

RULE 5

You can also take an ask (buying the widget offered at that ask), or take a bid (sell your widget at the current bid).

RULE 6

Whenever a transaction is made, all bids/asks are cleared and you can start bidding/asking for the next widget.

RULE 7

There is a clock running indicating when the market closes. I might pause the market if the need arises or extend the time if needed.

RULE 8

You cannot go below a balance of -\$20.

**What were you
thinking?**



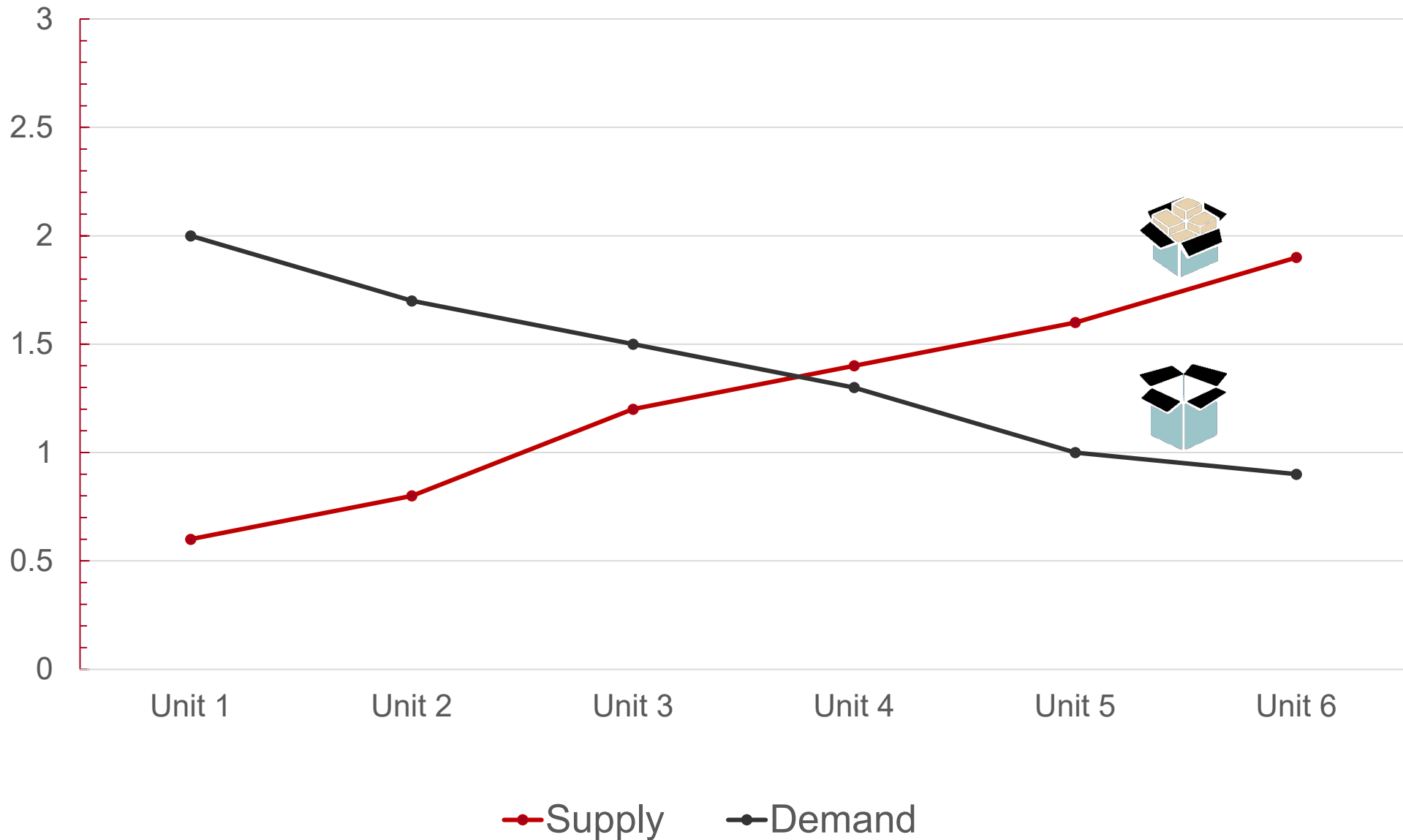
Information and Incentives in Markets

02



What was going on?

Supply and Demand



What makes it difficult to trade?



Above the surface

Lack of Information



Below the surface

No incentive to reveal private information and no incentive to trust others



Subliminal

Strategic behavior, indirect signaling and posturing, indirect deductions



Value

Perceptions, expectations



Agency Problems

Who is making the decision and what are their incentives

Lack of Information



What information was missing?



Were there any indirect signals?

Data – Causation vs. Correlation

03



Interpreting Information: Causation and Correlation

What do people do?



And WHY

Analyzing behavior is asking WHY

Interpreting Information: Causation and Correlation



A/B Testing is essential, but spend the time and resources on figuring out also WHY people prefer A to B

Set up tests that not only capture behavior, but give you enough data dimensions to track causation, for example:



Questions?