



Price Bubbles Experiment



Instructions:

In this game, participants are divided into five teams. Each team is given three assets (three paper houses) and 2000 cents. There will be ten trading periods each lasting two minutes. The participants will engage in a double auction, meaning teams can both buy and sell their assets. Each bid must be higher than the previous bid, and each ask must be lower than the previous ask. At the end of each round, teams will receive a 100 cent dividend for each house they possess. After receiving their dividends, teams will roll a die, and if it lands on one, their asset will be destroyed. Teams will receive 600 cents for every remaining asset left after the tenth trading period.

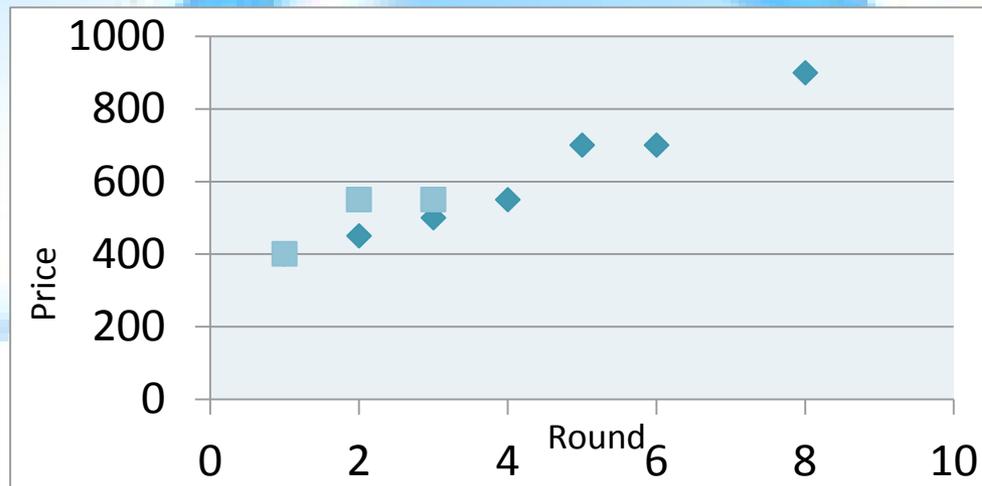
Theory:

This game often produces price bubbles. A price bubble occurs when prices rise steadily and then unexpectedly crash. This typically happens when traders anticipate that the price of their asset will increase, and therefore will purchase assets at lower prices initially, with the intention to sell their asset for more money at a later period. The fact that this mindset is shared by all or most traders can be the cause of the crash in the price of the asset. However, there is no one explanation for this result, and it may have various causes.

There is an expected value of the asset, which remains constant throughout all ten rounds. This price can be derived through backwards induction, meaning by starting analysis at the tenth round. The equation is:

$$\text{Price}(t) = 1.00 + [5/6] \times \text{Expected Price } (t+1)$$

If this equation is used, it can be calculated that the expected price for all rounds is six dollars.



Analysis:

Our classroom results do not reflect the predicted price bubble. In our experiment, the prices began below the expected cost, and began to rise, as predicted by the price bubble. However, the price of the asset never experienced a sudden crash. Instead, it continued to rise throughout the game. In some of the periods no trades were made at all.