Irrationality in digital markets? The endowment effect in Non-Fungible Tokens

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Background

The endowment effect, in which sellers' willingness to pay is significantly lower than buyers' willingness to accept, is one of the best documented effects in cognitive and consumer psychology. This effect has been documented in both physical and non-physical goods, including online goods. Non-Fungible Tokens (NFTs) are a relatively new digital asset, cryptographic tokens that are stored on the blockchain. As the asset is stored on the blockchain the ownership and authenticity of the NFT can be verified. As this explicit ownership is seen as a benefit of the NFTs, does the endowment effect occur when buying and selling these NFTs?

Methods

Participants were randomly assigned to either the buy condition or the sell condition, they were then shown an image and told the image was an NFT from a massively multiplayer online roleplaying game and could be used as a profile picture and in game avatar. Participants were told the item was either for sale for them to buy or in their collection and they could sell it, depending on the condition assigned. They were also told the price it last sold for or the price they paid for it, again depending on the participant's condition. After viewing the image for 60 seconds participants were then asked to provide the price at which they would buy or sell the avatar.

Results

Descriptive statistics indicated participants in the sell category indicated higher prices than those in the buy category ($M = 86.589, SD = 92.313$ and $M = 30.959, SD = 143.588$, respectively). The planned Bayesian directional paired $t$-test ($Buy < Sell$) found moderate evidence that the data was more likely under the alternative hypothesis ($BF_{10} = 3.947$) which indicates the presence of an endowment effect. The other factors of knowledge and opinion were examined at an exploratory level; however, the present study lacked the power to properly investigate them.

Conclusions

There is evidence of an endowment effect for Non-Fungible Tokens.