

# Review of: "Characterizing the Initial and Subsequent NFT Sales Market Dynamics: Perspectives from Boom and Slump Periods"

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Potential competing interests: No potential competing interests to declare.

This paper considers decoupling the initial and subsequent sales markets on the largest NFT market platform, OpenSea, and examining the markets across the two distinct periods in the NFT market history: the boom period of January 2022 and the slump period of June 2022. It is overall interesting. Here are some comments for the authors to consider in revision:

1. Comment on data: This paper considers the sales markets on the largest NFT market platform, OpenSea. A question is how typical the data set is, in particular how large the difference is among the data from different sources. Some discussions may be made by the authors on this, which may help to understand how typical the findings from this paper are for the NFT markets.
2. Comment on data collection: It is stated on Page 11 that "The OpenSea API events endpoint was used to obtain all successful sales transactions for January 2022 and June 2022". It seems not that clear what are the starting and end dates of the data set considered.
3. Comment on equations: The equations should be made more professionally. For the example, Equation 1 looks a bit strange, not putting the equation on the same line. Also, pay attention to the necessary punctuation, either a comma (,) or a full stop (.) at the end of each equation, depending on if a sentence is finished or not. As I can see, all equations (1)-(8) lack the necessary punctuations.
4. Comment on LDA: It is stated that "This study uses LDA when maximising the F-statistics in Equation 7. No scaling on original regressors is required before the LDA since it aims to maximise the F-statistics, not variance." I suggest the authors make it more clearly with respect to what maximising the F-statistics is made. Also, you are considering the price return data, which are time series data that are dependent in time. Can this dependence affect the the LDA analysis?
5. It appears the analyses in the paper are quite preliminary, lacking some careful time series analysis. Can the authors explain why it is done so? Is it because the data set is too short, or any other possible reason? If possible (say, data available), I would suggest the authors do some more careful analysis of the data by some advanced time series analysis techniques.

