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Peer Review

# Review of: "Pareto-Nash Allocations Under Incomplete Information: A Model of Stable Optima"

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This paper offers a thoughtful and original exploration of Pareto–Nash allocations under incomplete information, blending theoretical modeling with empirical analysis. The author constructs a dynamic duopoly game that captures strategic interaction in multimarket competition and extends it with the concept of a Pareto–Nash core allocation. The theoretical framework is rigorous and well-supported, and the paper successfully connects it to real-world firm behavior by incorporating empirical analysis grounded in data from UK business surveys.

The ***empirical section is a strong complement to the theory, but it would benefit from clearer distinctions between the use of actual survey data and simulated data.*** While the regression models and simulation results are insightful and well-motivated, the paper should more explicitly state that the cross-sectional GLM analysis is based on real data from the BEIS Longitudinal Small Business Survey (LSBS) and the UK Household Longitudinal Study (UKHLS), with variables like Endowment and Export Intensity directly derived from these sources, and the information asymmetry index constructed from survey-based proxies. In contrast, the panel data used in the fixed-effects regression is simulated and should be described as such, including how the simulation was calibrated to reflect the empirical distributions observed in the real data. Clarifying this distinction would significantly enhance the transparency and reproducibility of the findings. Overall, ***this is a valuable contribution to the field and merits publication*** after these clarifications are addressed.

## Declarations

**Potential competing interests:** No potential competing interests to declare.



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