

The Welfare Loss of Information Manipulation on Consumers in Online Retail: Evidence from Incentive-Compatible Experiments*

Hajime Oiso, Hirohide Sakaguchi, Takanori Ida, and Toshifumi Kuroda

April 23, 2026

Abstract

We estimate the welfare loss from fake reviews through an online experiment. Our experiment shows that consumers anticipate higher utility than true utility under the fake-review treatment. This effect is more pronounced for products with large fake reviews and for products with low prices. This misperceived product quality not only reduces consumer surplus but also reduces the sales of high utility products. The loss of consumer surplus from the distortion of ordering is negligible in our study. The educational treatment does not work to prevent the effects of fake reviews but reduces demand on the website. These results suggest that policymakers should encourage platforms to reduce the welfare loss from fake reviews to protect consumers and firms' incentives to improve product quality.

JEL code: M30, D18, L81, D91, C91

Keywords: Fake reviews, search cost, platform, online retail

*Kuroda: Department of Economics, Tokyo Keizai University, 1-7-34, Minami-cho, Kokubunji-shi, Tokyo 185-8502, Japan. kuroda@tku.ac.jp. Acknowledgements: We gratefully acknowledge the financial support from JSPS KAKENHI grant numbers 22K01485 and Fukuzawa Fund. We are also grateful for the comments from participants of the JEA, JEMIOU, ABEF, and SWIE, and Katsunori Yamada and Shuhei Kitamura for their helpful comments. At the time of the research, Kuroda served as an Economist at the METI from 2021 to 2023. Oiso has served as an official for the Ministry of Internal Affairs and Communications, Japan (MIC) and other public bodies since 2004 but this research has been conducted under his other titles of Associate Professor (non-tenured) in the Faculty of Environment and Information Studies of Keio University until March 2024 and Senior Researcher of Keio Research Institute at SFC followingly. The views and opinions in this paper do not represent those of public bodies such as METI or MIC. AEA trial registration: AEARCTR-0011020. IRBs: Global Survivability Studies Unit, Center for the Promotion of Interdisciplinary Education and Research, Kyoto University. IRB Approval Date: 2023-03-13. IRB Approval Number: 202307.