NBER Digital Economics and AI Tutorial Application

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Since starting my Ph.D. program in Applied Economics and Management at Cornell University in 2021, I have completed two years of graduate coursework. To fulfill our Ph.D. program requirement, I have taken Ph.D. level *microeconomics*, *macroeconomics*, *mathematical economics*, *applied microeconomics*, *game theory*, *general equilibrium*, and three-semester *econometrics*. In addition, I have taken other methodology courses, including *dynamic optimization*, *topics in machine learning and econometrics*. Moreover, related to digital economics, I have taken courses such as *digital marketing*, *AI strategy and applications*, and other Ph.D. seminars and workshops in the field of digital economics. I also have been TA for *digital platform strategy* for Professor Chris Forman for three years.

My research interest lies in the topic on digital platforms, especially user-generated content platforms, and how they affect socio-economic outcomes, such as consumer decision-making. Under the supervision of my advisor, Professor Chris Forman, my second year paper focuses on the role digitization plays in the consumer decision-making process. In specific, we would like to explore the potential effects of the interaction of state-dependence term (consumer inertia behavior) and online consumer reviews on purchasing decisions at an individual level. Combining an individual-level GPS location tracking data and Yelp dataset in Boston from January 1, 2019 to February 29, 2020, we apply a discrete choice model to investigate the joint effects of consumer inertia and online consumer reviews. The granular level data allows us to observe consumption behavior patterns at an individual level.

Our preliminary results show that consumer previous purchasing behavior is significantly positively correlated with the probability of choosing the restaurant, but online consumer review is only significantly positively correlated when interacting with the state dependence term. In the next step, we plan to apply a control function approach to address the endogeneity problem in online consumer reviews, and address the unobserved heterogeneity which may lead to spurious state dependence instead of true state depen-

dence by using more flexible models, such as nested logit, adding random coefficients, etc.

Our research contributes to a better understanding of how digitization plays a role in consumer decision-making process and how it interacts with consumers previous purchasing behavior. Although existing research has shown that online consumer reviews can be regarded as an additional input in the demand function at a product/service aggregated level(Chevalier and Mayzlin, 2006; Duan et al., 2008), there is a lack of empirical evidence on how the decision-making process is jointly affected by online consumer reviews and consumer inertia behavior at an individual level. We hope that our findings by this fall will contribute to the discussion with professors and graduate students in the Digital Economics and AI Tutorial. The tutorial provides substantial exposure to frontier research in digital economics and AI, while allowing me to interact with colleagues and researchers in related areas, which would be of great value to my own study and research. I am sincerely looking forward to the opportunity to join this prominent event in the Economics of Digitization.

References

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