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Research Statement

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As a quantitative marketing strategy researcher with an interest in new technologies, my research focuses on how new technologies and innovations shape marketing decisions and make a societal impact. My two main areas of research are *Consumer Mobility* and *Artificial Intelligence.* My research provides data-driven insights that are not only academically robust but also strategically relevant for both industry practitioners and policymakers. I apply quantitative methods, including causal modeling, applied econometrics, machine learning, and deep learning in my research.

Research Agenda

My current research focuses on new technologies and innovation, particularly how new forms of consumer mobility, such as e-scooters and electric vehicles, impact consumption decisions, as well as an emerging stream of work on artificial intelligence. I have initiated and developed several research projects in these domains.

My first paper (co-authored with Dr. Unnati Narang) entitled "*How E-Scooters Impact Shared Mobility and Consumer Safety*" is **invited for 3rd round review for the *Journal of Marketing*.** This paper also received the 2022 AMA Summer Conference's **Best Paper Award** in the Innovation and New Product Development Track, as well as recognition as a winner in the **Business for a Better World Dissertation Proposal Competition**. Using the entry of e-scooters in parts of Chicago in 2019 and a difference-indifferences analysis with propensity score matching, this paper examines the effects of the entry of e-scooters on other incumbent shared mobility services in the sharing economy (i.e., ridesharing and bikesharing) and on overall consumer safety (i.e., crimes and crashes). Our results reveal a dual effect of e-scooters. First, the entry of e-scooters increases the number of short rideshare trips by 4.79%, but decreases the number of bikeshare trips by 13.53%. Second, the entry of e-scooters increases the number of crimes (e.g., vehicle break-ins) by 9.78% and crashes (e.g., bike crash) by 56.23%. Importantly, the effects are heterogeneous and asymmetric by the age and racial composition of a neighborhood. Overall, e-scooters contribute about $4.7 million in ridesharing revenues but they also have an unintended negative environmental effect amounting to about 510 metric ton carbon emissions per year.

My second research project (co-authored with Dr. Unnati Narang, Dr. Daniel McCarthy, and Dr. Aric Rindfleisch), entitled "*How Electric Vehicle Charging Networks Impact Consumers' Auto Purchases,*" examines how the expansion of charging stations for electric vehicles in Texas between 2015 and 2019 impacted the sales of both EVs and non-EVs. In recent years, the electric vehicle market is growing rapidly with an 80% rise in global sales. While automakers like Tesla and Ford have started to produce more EVs, consumers face issues related to the lack of fast charging points, driving range anxiety, and higher initial costs. Given the recent emergence of EVs, an expansion of infrastructure supporting EVs

(e.g., the network of charging stations) can invigorate consumer demand for EVs. However, the effects of the expansion of EV infrastructure by one brand of automakers on car sales are unclear. Using a unique dataset comprising the entry of Tesla charging stations, dealer networks, and individual-level car sales and registrations from the Texas Department of Motor Vehicles (DMV), this paper shows that the entry of charging stations significantly increases the purchases of EVs but does not affect the purchases of non-EVs.

In another emerging stream of research, I also investigate how the rise of artificial intelligence (AI) will impact marketing and society. I have recently co-authored a paper with Dr. Unnati Narang and Dr. Vishal Sachdev, which is entitled "*When AI Wears Many Hats: The Role of Generative Artificial Intelligence in Marketing Education*" and **under the second round review for the *Journal of Public Policy & Marketing***. We draw on Role Theory and the Community of Inquiry model, widely recognized in education research, to propose that GenAI can assume the role of a marketing tutor, teammate, or tool and in turn, amplify or diminish teaching, social, and cognitive presence in marketing courses depending on the learning objective and marketing topic. By influencing the educational experience, GenAI can impact students' learning outcomes and work readiness in terms of their acquired competencies in marketing courses. Our research has practical implications for marketing educators, policymakers, and those working at the intersection of marketing, AI, and education policy.

In my projects on new technologies, I make a concerted effort to capture both economic and societal outcomes. As such, I have increasingly become interested in consumer wellbeing. In a separate project, I started collaborating with Dr. Ying Bao on a research project entitled "*Nutrition Label and Price Elasticity: The Impact of Health Claims on Price Sensitivity in the Yogurt Industry.*" Consumer awareness and preferences for healthy and sustainable food products have dramatically shifted, leading manufacturers to increasingly highlight nutritional attributes through various labeling claims such as non-GMO, fat-free, sugar-free, organic, gluten-free, and locally sourced. These claims are intended not only to inform consumers but also to influence their purchasing decisions. This study leverages a rich dataset from Nielsen to investigate how these nutrition labels affect consumer price elasticity within the yogurt industry. This research contributes to the literature on nutritional information and price elasticity, offering implications that could assist marketers and policymakers in effectively shaping consumer choices toward healthy andsustainable consumption patterns.

Future research plan

In the long run, I have a broad interest in quantitative marketing strategy with data-driven decisions and conceptual contributions. In particular, my research will concentrate on examining the impact of new technologies in marketing and enhancing quantitative methodologies. I aim to explore the broader impacts of cutting-edge new technologies on consumers, firms, and society. Concurrently, I plan to develop quantitative models that integrate causal inference with machine learning and deep learning methods, to provide deeper insights into data-driven marketing strategies.