



THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY
DEPARTMENT OF MARKETING

Causal Inference in Unstructured Data: The Case of Impossible Meat Launch

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Date: 21st Apr 2023 (Friday)

Time: 10:30 am – 12:00 pm

Online via Zoom

Venue: ~~Room G003, Lee Shau Kee Business Building, HKUST~~

Abstract:

We propose a novel strategy to causally identify the impact of news coverage on product entries in local markets via intermediaries. Our identification relies on interacting the common time-series of the global social media discussion obtained from a semi-supervised topic model with the local shares of media consumption irrespective of the products being studied. We demonstrate our identification strategy in the case of the early-stage launching of impossible meat, a novel food technology that synthesizes meat substitutes by closely simulating the texture, flavor, and appearance of real meat. To study the impact of social media news on restaurant adoption of impossible meat products, we construct a novel location-specific adoption metric that accurately measures the decisions of local standalone restaurants and stores using their social media announcements. We further construct the exogenous measure of county-quarter-level intensity of topic-specific news coverage as the interactions between the global time series of social media discussion about various aspects of impossible meat products (e.g., financials of the key manufacturer, Beyond Meat) during 2015-2019 and local share of genre-specific media consumption in 2014 (e.g., percentage of financial content in social media news among food industry). Arguably, the constructed measures are exogenous to local demand shocks given the local share of media consumption is pre-determined thus irrespective of the new product being studied. We further control for county and quarter fixed effects, local-dynamic confounders, and cross-regional information spillovers. Our results suggest that local news coverage on financing of the new technology is the most impactful topic among all news topics in increasing the regional launching of impossible meat products.