

# THE HONG KONG POLYTECHNIC UNIVERSITY DEPARTMENT OF MANAGEMENT AND MARKETING

## Departmental Research Seminar



### Shifting Standards or Changing Preferences? Unraveling Review Polarization via LLMs

By

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**Date : 5 Mar 2024 (TUE)**  
**Time : 10:30 am – 12 noon**  
**Venue : N001**

#### Abstract

This paper studies the dynamics of online review polarization – the trend of increasingly extreme reviews over time – and its economic impacts. Analyzing Yelp reviews from 2005 to 2022 through a predictive approach with Large Language Model (LLMs) embeddings, we distinguish between shifts in rating standards (scale effects) and changes in consumer preferences (content effects). Our results indicate a dominant scale effect in the surge of 5-star reviews, while the increase in 1-star reviews is mainly attributed to content changes. We find minimal influence of societal trends such as political polarization on review polarization. To evaluate the economic impact, we match Yelp reviews to Texas restaurant sales data. Our analysis shows that polarized reviews significantly affect sales. Notably, consumers' restaurant choices are more significantly influenced by observed ratings than preferences revealed in review content, highlighting the significant impact of the scale effect of review polarization.

**Dr Chunhua Wu** is an Associate Professor and the Division Chair of Marketing and Behavioural Science at the UBC Sauder School of Business, University of British Columbia. He is also honored with the Finning Junior Professorship in Marketing.

Chunhua's research primarily focuses on quantifying the economic and market impacts of technology. His work has been published on top tier marketing journals covers topics such as mechanism designs in online advertising platforms, the economic value of online reviews, the influence of online secondary markets on sports marketing, behavioural pricing in the online diamond market, and the impact of mobile hailing apps on taxi drivers.

In his teaching role, Chunhua delivers courses on Pricing Analytics, Market Research, Data Visualization, and Business Analytics to a diverse range of students, including undergraduates, graduates, MBAs, and PhD candidates. He serves as a faculty lead for the MBA Global Immersion Experience (GIE) program at UBC Sauder. His dedication to teaching has been recognized with the prestigious UBC Killam Teaching Prize.

Chunhua earned his Ph.D. in Business Administration from Washington University in St. Louis and holds a B.S. degree from Fudan University.

**All interested are welcome.**



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