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COMBINING MACHINE-BASED AND ECONOMETRICS METHODS FOR POLICY ANALYTICS INSIGHTS

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ABSTRACT

Computational Social Science (CSS) has become a mainstream approach in the empirical study of *policy analytics issues* in various domains of e-commerce research. This article is intended to represent recent advances that have been made for the discovery of new policy-related insights in business, consumer and social settings. The approach discussed is *fusion analytics*, which combines machine-based methods from Computer Science (CS) and explanatory empiricism involving advanced Econometrics and Statistics. It explores several efforts to conduct research inquiry in different functional areas of Electronic Commerce and Information Systems (IS), with applications that represent different functional areas of business, as well as individual consumer, social and public issues. Recent developments and shifts in the scientific study of technology-related phenomena and Social Science issues in the presence of historically-large datasets prompt new forms of research inquiry. They include blended approaches to research methodology, and more interest in the production of research results that have direct application to industry contexts. This article showcases the methods shifts and several contemporary applications. They discuss: (1) feedback effects in mobile phone-based stock trading; (2) sustainability of top-rank chart popularity of music tracks; (3) household TV viewing patterns; and (4) household sampling and purchases of video-on-demand (VoD) services. The range of applicability of the ideas goes beyond the scope of these illustrations, to include issues in public services, healthcare, product and service deployment, public opinion and elections, electronic auctions, and travel and tourism services. In fact, the coverage is as broad as for-profit and for-non-profit, private and public, and governmental and non-governmental institutions.

Keywords: Causality, Computational Social Science, data analytics, econometrics, e-commerce, empirical research, fintech, fusion analytics, music popularity, stock trading, policy analytics, TV viewing, video-on-demand (VoD)

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