ISB | **Srini Raju Centre for IT and the Networked Economy**

CODE - 2019

Conference on the Digital Economy (CODE, 2019)

Book of Abstracts

ITC Royal Bengal – Kolkata
December 28-29, 2019

Conference on the Digital Economy

The Srini Raju Centre for Information Technology and the Networked Economy (SRITNE) at the Indian School of Business (ISB) is hosting the 12th edition of Conference on the Digital Economy (CODE) on December 28 - 29, 2019 at ITC Royal Bengal, Kolkata, India.

Detailed Program Agenda

Date: Dec 28, 2019

Hours	Description
8:00 am – 8:50 am	Breakfast
8:50 am – 9:00 am	**Welcome Remarks by Conference Chairs**
9:00 am – 10:30 am	**Online Commerce and Platforms** Multi-Armed Bandits with Inference Considerations – **Sandeep Gangarapu**, Prof. Edward McFowland III, and Prof. Ravi Bapna Effect of Service Time Anchoring on Platform and Sellers – Arslan Aziz and **Prof. Amit Mehra** Network and Geographic Market Expansion and Interaction Effects in the Evolution of an Online to Offline (O2O) Platform – Prof. Yeji Lim and **Prof. Murali Mantrala**
10:30 am – 10.45 am	Tea Break
10.45 am – 12:45 pm	**Digital Advertising** Managing Product Returns in Omnichannel Retailing: Product Categories and Return Channel Choices – **Prasenjit Mandal**, Preetam Basu and Kushal Saha Does the use of Twitter promote transparency by constraining earnings management? A large-scale analysis of firms – **Prof. Adrija Majumdar**, Prof. Indranil Bose and Prof. Alvin Chung Man Leung The Antecedents and Rebroadcast Consequences of Clickbait – **Prof. Prithwiraj Mukherjee**, Souvik Dutta and Prof. Dalhia Mani Competitive Poaching in Search Advertising: A Randomized Field Experiment – **Siddharth Bhattacharya**, Prof. Jing Gong and Prof. Sunil Wattal
12:45 pm – 1:45 pm	Lunch
1:45 pm – 2:45 pm	**Research Methods** A Linguistic Analysis of Forward-looking Firm Vocabulary, its effect on Marketing Intent and on Market Responses – **Prof. Sudhir Voleti** Multimodal Opinion Mining With Weak Supervision – **Sumeet Kumar** and Prof. Kathleen M.Carley
2:45 pm - 3:00 pm	Tea Break
3:00 pm – 4:30 pm	**Business Value of IT** IT Labor and Firm Performance: Role of Trade Credit – **Suvendu Naskar**, Prof. Preetam Basu, Prof. Palash Deb and Anup K Sen Exploring the role of Government E-Participation in enabling Economic Growth and Development – **Prakrit Silal** and Prof. Debashis Saha Repeated Exchange & Alliance Formation Between Computer Services Companies: A Heterogeneous Network Model – Prof. Carla Fernandez and **Prof. Ramanath Subramanyam**

4:30 pm - 4:45 pm	Tea Break
4:45 pm - 6:15 pm	**Business Value of IT** Does Congestion Always Hurt? Managing Loyalty Discount under Congestion – Prof. Rajib L. Saha, **Prof. Sumanta Singha** and Prof. Subodha Kumar Role of IT in Information Alertness and Search in Shaping Competition Networks – **Prof. Abhishek Kathuria,** Prof. Mariana G. Andrade Rojas, Prof. T. Ravichandran Return Shipping Insurance: Free Versus For-a-fee? – Prof. Yiming Li, Prof. Gang Li and **Prof. Giri Kumar Tayi**
7:00 pm onwards	Gala Dinner (Barge)

Date: Dec 29, 2019

Hours	Description
8:00 am – 8:45 am	**Breakfast**
8:45 am – 10:45 am	**Technology Innovation and Entrepreneurship** Friends with Benefits? Impact of Network Position on Entrepreneurial Finance – Prof. Anand Nandkumar, Prof. Deepa Mani, **Abhishek Bhatia** Ethical Dilemmas: Do Programming Tasks Bias Your Moral Judgement? – **Prof. Kartik Krishna Ganju** and Prof. Jui Ramaprasad Reconfiguring for Agility: Examining the Performance Implications of Project Team Autonomy through an Organizational Policy Experiment – **Prof. Indranil Bardhan** IPR infringement, Enforcement and Innovation – **Prof. Sougata Poddar** and Sr. Lecturer. Dyuti Banerjee
10:45 am – 11:00 am	Tea Break
11:00 am – 12:30 pm	**Fintech – Content and Implications** Cryptocurrency Innovations and Returns – **Vasundhara Sharma**, Prof. Ashish Agarwal, Prof. Anitesh Barua Human-AI Hybrids in the Initial Coin Offering Market – Saunak Basu, **Prof. Aravinda Garimella** and Prof. Wencui Han Is a megapixel worth a few thousand words? An Empirical Assessment of Image Sentiments on Philanthropic Crowdfunding Success – **Saunak Basu**, Prof. Ramanath Subramanyam, Prof. Mehmet and Prof. Eren Ahsen
12:30 pm – 1.30 pm	Lunch
1:30 pm – 2:30 pm	**Technology and Policy** Human Vulnerabilities in Collaborating with AI: An Experimental Investigation into the Future of Work – Prof. Andreas Fugener, Prof. Jorn Grahl, **Prof. Alok Gupta** and Prof. Wolfgang Ketter The Digital Disruption of Higher Education – **Prof. Ravishankar Sharma**
2:30 pm - 2:45 pm	Tea Break
2:45 pm – 4:15 pm	**Technology Strategy** Understanding the Digital Strategic Posture of Firms: A Behavioral and Agency Theoretic Perspective – **Prof. T Ravichandran** and Liang Zhao Understanding Content-Based User Engagement in e-learning Platforms: Evidence from Randomized Field Experiments – Prof. Swanand Deodhar, **Ayushi Tandon**, Abhas Tandon and Abhinav Tripathi Data Sharing, Privacy and Rule Hiding – Prof. Syam Menon, Prof. Abhijeet Ghoshal and **Prof. Sumit Sarkar**

Online Commerce and Platforms

Multi-Armed Bandits with Inference Considerations

Sandeep Gangarapu, *Ph.D Candidate, Carlson School of Management, University of Minnesota, USA*
Prof. Edward McFowland III, Carlson School of Management, University of Minnesota, USA
Prof. Ravi Bapna, Carlson School of Management, University of Minnesota, USA

Abstract

Multi-armed bandits (MAB) are sequential experimentation procedures that use a combination of exploration and exploitation techniques to reduce allocations to interventions with sub-optimal outcomes. Compared to A/B testing, MAB's are very effective in reducing the regret of the experimentation process, especially in the presence of multiple policy levers. However, unlike A/B testing, MAB's may fail to accurately estimate the parameters of treatment eﬀect distributions of interventions (Nie et al., 2017). In many Marketing, Clinical Trials, and Public Policy settings, estimating the parameters of treatment effect distributions is as important as that of identifying the best intervention for reasons ranging from feedback for intervention designers to making ROI decision for marketers.

In this paper, we propose a new MAB algorithm called UCB-INF that solves the above problem. We show that UCB-INF has regret comparable to the best MAB algorithms while having the parameter estimation properties of A/B testing.

Effect of Service Time Anchoring on Platform and Sellers

Arslan Aziz, Ph.D. Candidate at the Heinz College, Carnegie Mellon University, USA
Prof. Amit Mehra, *Naveen Jindal School of Management, The University of Texas at Dallas, USA*

Abstract

Most online retailers ship their products to consumers and speed of delivery is a critical component of service quality. Prior literature has established that when consumers face long wait-times to receive a product or service, it leads to a loss of sales (Cachon and Harker 2002, Shang and Liu 2011, Allon et al.2011). Further, improvements in service quality through rapid shipping have been shown to have a positive impact on revenues (Fisher et al. 2019). While faster shipping increases sales, it is worth noting that establishing a quicker supply chain is a costly investment for firms and is not always feasible. A relatively low-cost approach to enhance consumer satisfaction would be to manage their expectations strategically. Consumers react to the deviation between their expectations and reality, and such expectation disconfirmation has been shown to play an important role in consumer satisfaction (Ho et al. 2017).

In this study, we investigate the role that delivery expectations play in determining consumer satisfaction with service quality. With the growth of cheap real-time location tracking and prediction technology, firms have an opportunity to strategically set service expectations. In this paper, we investigate the impact of meeting service expectations on future purchases and consumer satisfaction. Our data is from a large online food delivery platform. We observe over 1 million individual transactions on the platform over a period of 10 consecutive weeks. For each transaction, we observe timestamps, unique user and restaurant ids, restaurant displayed rating, restaurant feedback rating, and delivery feedback rating. Further have the estimated time to delivery for that transaction as well as the actual time to delivery. We also observe the time delay between the completion of a delivery and when the consumer provides their feedback rating.

Network and Geographic Market Expansion and Interaction Effects in the Evolution of an Online to Offline (O2O) Platform

Prof. Yeji Lim, University of Missouri at Columbia, USA
Prof. Murali Mantrala, *University of Missouri at Columbia, USA*

Abstract

In recent years, the spectacular early growth stories of digital platforms such as Uber, Airbnb, and Groupon have attracted much attention from analysts, investors, and scholars while inspiring many budding digital entrepreneurs. It is well-known that in the growth of such two-sided market platforms, same-side ('direct') as well as cross-side ('indirect') network effects play an important role. Quantitative assessment of the relative strengths of these network effects over time and understanding their evolution in response to management actions is important for developing and managing platform firms' growth strategies. So far, however, systematic empirical research on network effects in digital platform firms' growth and diffusion is very limited. In one notable study of a C2C e-commerce platform (Taobao), Chu and Manchanda (2016) found that significant and positive indirect or cross-market network effects (CMNEs) were the primary drivers of growth on both sides of the platform and its overall revenue growth. Further, they found that these CMNEs were asymmetric, i.e., the installed base of sellers had a much more significant effect on the growth of buyers than vice versa. Chu and Manchanda also found that the CMNE of sellers on buyers increases and then decreases to reach a stable level, while the CMNE of buyers on sellers is more constant over time. A key implication of these findings for Taobao's management was to become more 'seller friendly' to accelerate growth.

We analyze our data employing a novel and powerful Time-Varying Parameter Structural Vector Autoregressive (TVP-SVAR) Model approach that has been used earlier in macroeconomic analyses (Primiceri, 2005) but not in the Marketing literature and find: (a) variation in the time-patterns of significant DNEs and CMNEs over the platform lifecycle; (b) geographic expansion effects are more influential drivers of growth than CMNEs; (c) DNEs are more influential than CMNEs; (d) intra-city DNEs are more influential than inter-city DNEs or CMNEs; and (e) inter-city CMNEs are more influential than intra-city CMNEs. The strategic implications of these findings are discussed.

E-Commerce and Digital Marketing

Managing Product Returns in Omnichannel Retailing: Product Categories and Return Channel Choices

Prof. Prasenjit Mandal, *Indian Institute of Management Calcutta, India*
Prof. Preetam Basu, Indian Institute of Management Calcutta, India
Kushal Saha, Ph.D Candidate, Indian Institute of Management Calcutta, India

Abstract

In the last decade, the traditional retailing industry has been disrupted by the rapid emergence of e-commerce channels. The conventional wisdom is that the traditional retailing is gradually dying in the advent of web-based digital channels. But these digital channels bring their own disadvantage: the inability of customers to touch and feel" a product to identify if it fits their tastes and requirements. Especially, this problem is acute for several product categories, such as fashion apparel that possess many intangible and non-digital attributes, such as colour and comfort. This category of products faces high customer returns (Nageswaran et al. 2017). On the other hand, products such as mobiles and books are highly standardized, and hence, the return rate is typically very low.

When customers return products, retailers incur a substantial amount of cost in managing returned merchandise (cost of transporting, sorting, and processing the returned products). Customers too find the process of returning misfit products troublesome. In a Forrester survey, 51% of online customers expresses their concerns towards product returns. Moreover, some retailers impose a return penalty for product returns (e.g. - H&M charges $5.99).

To address these problems, many retailers have started adopting a omnichannel product distribution approach that offers a more flexible, personalized, and seamless shopping experience to customers across both online and online channels. For example, Alibaba have expanded their oine arms by building a large number of physical stores. In this paper, we study two omnichannel strategies that can reduce customers' risk (unavailability of sufficient product fitness information) of online purchases, which, in turn, leads to lower product re-turns. One such strategy is to establish "showrooms" (such as Warby Parker and Bonobos), where customers can evaluate a product and subsequently, gather su-cient product infor- mation required for purchasing it (Bell et al. 2014). Another popular omnichannel strategy that has received increased attention is "Buy-Online-Return-In-Store" (BORS) (Nageswaranet al. 2017, Gao et al. 2018). These brick-and-mortar (B&M) stores (examples include J.C. Penny and Alibaba) allow customers a flexibility to return their online purchases.

Does the use of Twitter promote transparency by constraining earnings management? A large scale analysis of firms

Prof. Adrija Majumdar, *Indian Institute of Management Ahmedabad, India*
Prof. Indranil Bose, Indian Institute of Management Calcutta, India
Prof. Alvin Chung Man Leung, College of Business, City University of Hong Kong, Hong Kong

Abstract

In 2013, the US Securities and Exchange Commission (SEC) announced that firms may use social media to announce key financial information in compliance with Regulation Fair Disclosure (SEC, 2013). Social media sites offer firms the opportunity to communicate with investors on a frequent and real-time basis (Blankespoor, Miller, & White, 2014). The SEC acknowledges the importance of social media and the internet as valuable tools for investors that are used to research on particular stocks, look up background information of investment advisors, receive real-time news, and discuss the market with others (SEC, 2015). The circulation of information on social media by firms has several benefits; it results in the reduction of dissemination costs for the organisations, increases the speed and flexibility of dissemination and helps to reduce the information acquisition costs for investors (Jung, Naughton, Tahoun, & Wang, 2017). Thus, it is evident from the above arguments that social media is being increasingly used as an important information channel in the finance domain. Extant research (Blankespoor et al., 2014; Prokofieva, 2014) has also shown that the use of social media reduces information asymmetry and improves the information environment. Thus, in such a developed information environment the incentive to manage earnings will be less for firms, and it will curb earnings management tendency. Owing to the connectedness of the platform, investors can discuss the market with one another and locate improper actions of the firms. Prior research states that social media can empower individuals to be effective monitors and the institutional investors and other regulatory government bodies can track social media platforms to raise important issues highlighted by individual investors (Wu, Ang, & Tang, 2016). Furthermore, the connectedness of the platform enables any bad news to spread rapidly like a wildfire that can deter firms from engaging in earnings management practices as it can rapidly tarnish its reputation. The above arguments suggest that social media has the ability to reduce a firm's earnings management tendencies.

Our findings provide a signal to the investors that firms that are active on social media are less likely to manage their earnings and to be trusted. At a policy level, the SEC can invite more firms to use social media actively to divulge news about their company. Our results signify that the use of social media decreases the likelihood of earnings management, and hence decision makers should encourage firms to use social media. Additionally, SEC is resource constrained and a channel like Twitter that helps in screening and provides information about firm's transparency will help the policy makers to allocate resources in areas to chase extreme cases of earnings management that require urgent attention. Thus, our findings not only contribute to the academic literature and help the industry practitioners, but it provides useful guidelines to policy makers as well.

The Antecedents and Rebroadcast Consequences of Clickbait

Prof. Prithwiraj Mukherjee, *Indian Institute of Management Bangalore, India*
Souvik Dutta, Indraprastha Institute of Information Technology, Delhi, India
Prof. Dalhia Mani, Indian Institute of Management Bangalore, India

Abstract

In the past decade, there has been a seismic shift in the business models of news organizations. For instance, between 2006 and 2011, US print media lost about 20% of their paid subscribers (Pattabhiramaiah, Sriram, & Sridhar, 2017) and saw a 50% decline in ad revenue between 2007 and 2012 (Lambrecht & Misra, 2016). Reasons could be competition from free online portals as well as cannibalization of sales from the newspapers' own online portals. Today, media companies, not just new-age web-only companies like Buzzfeed and Mashable, but also century-old news organizations like The New York Times and The Guardian, have to rely on per-impression advertising revenues, where advertisers pay them every time a unique reader lands on a given article. To compete for readers' attention in such an environment, media outlets often use a tactic called "clickbait" – designing headlines to arouse readers' curiosity, thus inducing them to click on their links. The rise of clickbait exemplifies the changes in the new digital era and several news organizations were unable to make this shift and did not survive or were sold for "rock-bottom prices" or underwent massive restructuring. Indeed, journalism as a profession has felt itself under attack, fighting what seems a losing battle to maintain professional investigative standards, when readers are more likely to click on entertainment-oriented bite-sized news.

We contribute to current research on sharing by adding an organizational-level perspective to understand this phenomenon. By bringing an organizational perspective, we address the issue of how individuals judge the impression management possibilities of an article. We predict and find that readers assume that articles published by firms with an editorial focus are more likely to be credible, and hence "safe" to be shared without causing the sharer embarrassment. In addition, an organizational perspective allows us to ask the crucial managerial question of the ultimate consequence of following an editorial or market logic. Journalists and scholars writing on this topic assume that following an editorial logic might involve sacrificing market reach, and hence is a luxury in the new digital era. Our research indicates the opposite – although firms with an editorial logic produce fewer clickbait articles, they garner a larger number of shares. Finally, our research contributes to prior theory on the effect of impression management and arousal on sharing, by testing the contrasting predictions of these theories on the relationship between clickbait and sharing. We find that, after controlling for arousal, the negative impression management effect of clickbait decreases sharing.

Competitive Poaching in Search Advertising: A Randomized Field Experiment

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Prof. Sunil Wattal, Fox School of Business, Temple University, USA

Abstract

A key strategy that firms are increasingly following in search advertising is to generate traffic by bidding on not only their own keywords but also competitors' keywords. This strategy, known as competitive poaching, is prevalent in multiple industries. However, little research has empirically examined the effectiveness of competitive poaching, and what factors increase its effectiveness. Moreover, what types of ad copy designs work best in this context remains an open question. The objective of our research is to examine the effectiveness of ad copy variations in driving click-throughs in the context of competitive poaching, where the focal advertiser (i.e., the poaching brand) bids on the keywords of competitors (i.e., the poached brand) to generate traffic. We specifically explore how the quality of the brand that the consumer is searching for impacts the relation between the type of ad copy and the click-throughs that the ad generates in competitive poaching. In other words, we examine whether a brand should provide different types of ad copies when poaching consumers from a high-quality competitor versus a low-quality competitor.

Our main research questions are as follows

1) How does the quality of the poached brand play a moderating role in the effect of ad copy variation on number of clicks in the context of competitive poaching in search advertising?

2) How does the poached brand's own ad copy and those of other competing advertisers impact the number of clicks if the poached brand is bidding on its keywords?

Research Methods

Differentiation in Online Product Reviews: A Machine Learning Based Analysis

Prof. Madhu Viswanathan, *Indian School of Business, India*
Tianyu Gu, Doctoral Student, Eller College of Management, The University of Arizona, USA
Prof. Yong Liu, Eller College of Management, The University of Arizona, USA

Abstract

Online review of products and services has become a prevalent information source for consumers. This paper examines a key aspect of reviews and reviewer behavior: whether and how the content of a review systematically differs from reviews posted earlier. Content differentiation is particularly important when more reviews are posted as newer star ratings tend to converge providing limited room for the newer reviews to stand out.

The authors apply machine learning and deep learning to classify restaurant reviews on Yelp.com. Employing first-difference models that account for dynamic panel bias, the analysis provides strong evidence for review differentiation: when previous reviews write more about the food (or non-food) dimension, a later review tends to write less about it. Review differentiation is greater as more reviews are published, when the star rating associated with the review deviates more from previous star ratings, and for regular (versus established) reviewers. The authors also show that review differentiation helps enhance the impact of a review. These findings suggest two important but distinct motivations for review differentiation: to enable a review (and its reviewer) to stand out from the crowd and to provide support for star ratings. Implications for reviews and review platforms are discussed.

* Not presented

A Linguistic Analysis of Forward-looking Firm Vocabulary, its effect on Marketing Intent and on Market Responses

Prof. Sudhir Voleti, *Indian School of Business, India*

Abstract

Firms' (specifically, their senior managements) develop worldviews based on how they interpret changing market environments matched to internal firm capabilities. Management's (natural language) responses to questions about past and future firm strategy and performance are public and available on-record. A linguistic analysis of such responses (contained in quarterly analyst call transcripts) could yield information about firm worldviews and intent. Market reactions to management's forward-looking intent affects firm value, a key outcome quantity.

We apply linguistic techniques to the analysis of natural language at scale to a large corpus (80000 observations) of call transcripts of firms covering a sizeable swathe of the US economy (S&P 1500) over a reasonable period (15 years). We examine the marginal impact on firm value of Marketing Intent inferred from forward-looking firm vocabulary.

Multimodal Opinion Mining With Weak Supervision

Sumeet Kumar, *Research Assistant, School of Computer Science, Carnegie Mellon University, USA*
Prof. Kathleen M. Carley, School of Computer Science, Carnegie Mellon University, USA

Abstract

Opinion mining is a growing research field with many applications, including analyzing product reviews and understanding opinion of users on controversial topics. In this research, we explore opinion mining for controversial issues, also called stance mining. Most existing studies on stance mining take a simplistic view that assumes a sentence (e.g., from a Tweet) holds a perspective that is independent of the context and the author. This approach leaves three crucial unresolved challenges: 1) Discussion topics change fast, and new issues emerge, making it difficult to reuse prior labeled data. How do we train stance-learning models on new topics with minimal labeling effort? 2) How to use multiple interaction modalities for stance mining? Users' opinions are evident in different types of interactions, e.g., 'tweeting', or 'following'. Most recent research on opinion mining considers only one interaction modality, which is the text content in the social media posts. However, other interactions like users' followers' networks are also instrumental in predicting stance. 3) The current approach to stance learning ignores important network factors such as the interactions of social media users (e.g., a person's preference can also be known from his friends' preferences). Therefore, there is a need to effectively learn from multiple interactions and users' networks.

To resolve these challenges, we proposed a joint network science and machine learning-based method for stance learning that removes the need for hand-labeling, which is not only tiresome but also usually very expensive. We develop a weakly supervised approach to stance mining, which predicts the opinion of users using just a few labeled hashtags. The proposed approach tackles the challenges using a new co-training method that allows combining stance signals given by a few hashtags and unlabeled data in social networks. In this approach, we train two types of models: 1) a label propagation model on networks, and 2) a node classification model using text features. We jointly train the two classifiers iteratively, such that the more confident predictions of an iteration are used to expand the training set for the next iteration. This approach resolves the challenges discussed earlier and also results in very accurate models of stance predictions (83-91 % accuracy), as evaluated on a dataset with labeled tweets on three controversial topics.

Business Value of IT

IT Labor and Firm Performance: Role of Trade Credit

Suvendu Naskar, *Indian Institute of Management Calcutta, India*
Prof. Preetam Basu, Indian Institute of Management Calcutta, India
Prof. Palash Deb, Indian Institute of Management Calcutta, India
Anup K Sen, Indian Institute of Management Calcutta, India

Abstract

Trade credit arises when a buyer firm delays payment for products or services purchased. In the book of accounts trade credit is entered as accounts receivable. Trade credit is an essential component of regular operation. Such arrangements instead of upfront cash payments from buyers also benefit secured product sales and customer stickiness. However, growing complexities of the business environment due to rapidly changing customer demand, liquidity crises, and other factors are making management of trade credit more challenging. Implications of such factors are reflected in outcome like liquidity crises, missing payable commitments, or delayed delivery by seller firm. Hence, finding remediation which can facilitate superior receivables management is gaining management focus. Large companies are exploring alternative arrangements, e.g., engaging third parties (i.e., factors) to outsource sub-processes within receivable management (e.g., receivable follow-up). Equally important is to explore internal factors that have a significant influence in managing the trade credit. Prior studies established IT investment impacts firm performance by influencing intermediate operational metrics (e.g., inventory cycle). Following resource-based view of an organization, IT labor has all characteristics to deliver sustainable competitive advantage by absorbing, assimilating, and internalizing the various unstructured information generating from internal and external sources.

In this study, using data on US-based manufacturing firms, we explored the relationship between IT labor investment, trade credit, and firm performance. Our results indicate IT labor investment has a significant positive impact on current year firm performance and indirectly impacts subsequent year performance. The accounts receivable cycle mediates the indirect effect of IT labor investment on firm performance. Our research is one of the early researches which empirically tests the impact of IT labor investment on the accounts receivable cycle. Using the structural equation method, we add to the existing literature and current understanding of IT-related intangibles and its long-term firm-level benefits.

Exploring the role of Government E-Participation in enabling Economic Growth and Development

Prakrit Silal, *Ph.D Candidate, Indian Institute of Management Calcutta, India*
Prof. Debashis Saha, Indian Institute of Management Calcutta, India

The advent of ICT has enabled governments and citizens to participate, interact and engage online. The internet is replete with evidences of such interactions in government-sponsored fora, e-portals, and social-media platforms such as Facebook and Twitter (Phang et al. 2014). E-Participation, which entails such use of online tools by governments and citizens, can be deployed by policy-makers for sharing information (e-information sharing), seeking consultation and feedback from citizens and key experts (e-consultation), and/or involving citizens in policy-related implementation decisions (e-decision-making) (Krishnan et al. 2017). Per the United Nations (UN) report of 2016, 183 out of 193 member-states have already implemented government e-information services, 152 have developed e-consultation channels using social media, while 120 have already implemented e-decision making capabilities (Zolotov et al. 2018). While E-Participation has been associated with positive outcomes such as greater political participation (Phang et al. 2014) and improved trust in government (Medaglia 2012), these outcomes surely hold greater meaning provided they lead to macro-level impacts, such as economic growth and development (EGD). Despite considerable research dedicated to the study of E-Participation, it is interesting to note that the broader quest of exploring macro-level impacts of E-Participation seems to be less explored specially at the national level. Our study seeks to address this gap in E-Participation research by assessing the contribution of Government E-Participation (GEP) efforts in enabling EGD.

Our results lend strong support (p<0.05) to our three hypotheses and therefore provides empirical evidence of GEP's effectiveness in enabling EGD. However, GEP's direct effect loses significance in presence of CPI. Furthermore, these findings were robust across alternate measures of corruption and EGD. Summarily, corruption control was found to fully mediate the effect of GEP on EGD. In doing so, we highlight the role of corruption control as a bridge for GEP to positively influence EGD. Based on the empirical findings, we derive few implications that seek to inform academics and practitioners working in the E-Participation domain. Firstly, our study extends the scope of analysis of GEP impacts to include higher-order impacts. Secondly, we conceptualize the mechanism linking GEP and EGD. Thirdly, our findings highlight the need for governments to direct their GEP efforts at enabling corruption control to subsequently achieve EGD.

Repeated Exchange & Alliance Formation Between Computer Services Companies: A Heterogeneous Network Model

Prof. Carla Fernández-Corrales, INCAE Business School, Costa Rica
Prof. Ramanath Subramanyam, *Gies College of Business, University of Illinois, USA*

Abstract

Predicting the potential alliance partner of a firm is a rigorous exercise with seemingly innumerable possibilities; yet, this is an activity strongly associated with outcomes such as firm performance (Anand & Khanna 2000; Wassmer, Li & Madhok 2017) and product innovation (e.g., Hoang & Rothaermel 2005). Investors, stakeholders and practitioners in general consider this as a critical strategic activity. Not surprisingly, strategic alliances have steadily increased in frequency over the last three decades as popular instruments for interfirm cooperation. Consistent with this trend, different, and often complementary, streams of literature that examine this phenomenon have emerged over this period. More specifically, there are competing and complementary theoretical bodies of work that have addressed alliance formation.

The question of "who allies with whom" has been mainly approached from the perspective of social networks (Ahuja 2000; Ahuja, Polidoro, & Mitchell 2009; Gimeno 2004; Gulati 1999; Rothaermel & Boeker 2008; Stuart 1998). This stream of research revolves mainly around the concept of network embeddedness that establishes a connection between a firm's previous relationships (relational embeddedness), its position in the network (structural embeddedness), and its subsequent strategic alliances. This network-based perspective, while substantively contributing to our understanding of the formation of new alliances, also brings forth some limitations. First, the methods and applications of social network analysis predominantly assume a homogeneous network with only one type of node (i.e. firms). Therefore, much semantic richness is lost because measures such as network centrality or network position are mainly able to consider the relationships between firms and rarely provide insights on other contingent factors. Second, when other factors have been included in the analysis, such as in the case of network measures being incorporated into traditional regression-based frameworks, it raises questions about the endogeneity of such measures (Ahuja, Soda, & Zaheer 2012; Ghosh, Ranganathan, & Rosenkopf 2016; Stuart & Sorenson 2007). Finally, the homogenous networks approach adopted by these studies is limiting in terms of helping researchers dig deeper into the predictive causes, including role of repeated (prior) exchange, in explaining alliance formation.

Does Congestion Always Hurt? Managing Loyalty Discount under Congestion

Prof. Rajib L. Saha, *Indian School of Business, India*
Prof. Sumanta Singha, Indian School of Business, India
Prof. Subodha Kumar, Fox School of Business, Temple University, USA

Abstract

Cloud computing has emerged as a disruptive game changer after Web 2.0, redefining and transforming businesses globally. As a result, cloud market has become fiercely competitive, bringing unique challenges and opportunities. However, despite much advances, network congestion remains a key concern for most businesses, leading to reduced service quality and a potential loss of customers. One potential challenge for cloud service providers is how to mitigate this risk of congestion. Loyalty discount has been a useful mechanism to stimulate demand and reward customer loyalty. However, when congestion is present, the choice of discount is not straight forward as customers are both congestion and discount sensitive.

We address this issue under two popular types of contracts, namely quantity discount and market share contracts and provide important managerial insights regarding when one contract is better than the other. Our results show that a market share contract performs better when the customer's congestion and discount sensitivity are both high. We also seek answers to questions like whether network congestion always hurts the buyer when customers are more intolerant to congestion, or should a seller always lower the discount even when customers are more price sensitive. This focus of this paper is to study how discount affects the demand and firm profitability when congestion is present.

Role of IT in Information Alertness and Search in Shaping Competition Networks

Prof. Abhishek Kathuria, *Indian School of Business, India*
Prof. Mariana G. Andrade Rojas, Nanyang Technological University, Singapore
Prof. T. Ravichandran, The Lally School of Management at Rensselaer, USA

Abstract

A critical category of strategic decisions taken by managers are decisions regarding market participation. Such decisions, which include competitive actions such as market entry, market exist, and enhanced or reduced market participation, shape the structure of competition networks. We examine the evolution of competition networks, which are networks that arise from the competitive relationships between firms.

Market participation decisions require managers to 'discover' opportunities. Such 'discovery' can happen through two means – alertness for information or systematic search for information. We posit that alertness, which is to 'notice without search', benefits from IT-enabled Sensing Capability. On the other hand, we posit that systematic search, which is 'the search for known information sources', benefits from IT-enabled Searching Capability. This is because IT enables critical sources of data that may be elusive or subtle (implying hidden or weak signals) to be available or amplified. This is augmented by the ability to handle increased amounts of information (improved information processing capacity), while not being overwhelmed by its quantity or complexity (improved information overload capacity). Thus, we posit that higher IT-enabled Sensing and higher IT-enabled Searching Capabilities will result in higher market participation by firms.

Return Shipping Insurance: Free Versus For-a-fee?

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Abstract

Return Shipping Insurance (RSI) has been widely used by online retailers like Taobao.com and JD.com to compensate online consumers return shipping fee. In practice, there are two types of RSI, i.e., free RSI where firms cover the RSI premium and for-a-fee RSI where consumers pay the premium.

This paper studies the optimal free RSI and for-a-fee RSI strategies for a monopolistic online retailer. First, we find that for both types of RSI, the firm adopts the RSI strategy if and only if the RSI premium is relatively small. Second, we find the free RSI strategy does not change the firm's return policy, i.e., the refund equals to the product salvage value. While, with the for-a-fee RSI strategy, the firm changes its return policy strategically. Third, we find that the free RSI strategy dominates the for-a-fee RSI strategy from the profit and social welfare perspectives. Whereas, from the customer surplus perspective, the for-a-fee RSI strategy is possibly better.

Technology Innovation and Entrepreneurship

Friends with Benefits? Impact of Network Position on Entrepreneurial Finance

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Abstract

In this paper, we take a social network approach to study the potential impacts of interpersonal relationships, specifically educational connections between startups and their financiers on the funding outcomes of entrepreneurial firms. We first establish the effects of educational links between companies and investors on short-term funding outcomes, specifically with respect to the quantum of funds raised as well as the diversity of incoming investor base. We then offer a potential explanation for the significance of educational connections in entrepreneurial fundraising by investigating the conditions under which such impacts get amplified or reduced. Finally, we examine whether the arrangements between connected investors and investee start-ups reflect sweetheart deals or not by investigating the long-term effect of financing on entrepreneurial firms' survival.

Using a dataset of more than 25,000 equity financing deals of over 11,000 U.S.-based startups, we find that conditional on funding connected startups raise higher amounts. Closeness to investors results in increased funding from investors outside the city of focal startups as well as an investors-base with a diverse set of preferences. Further, the impact of educational connections on funding amount is higher in cases of high uncertainty about either the start-up or the founders. For example, the marginal effect of connection is higher for startups that are young and are in earlier rounds of their funding lifecycle. Moreover, the impact of educational relationship is enhanced in the absence of observable signals of startup quality such as patents and signals of founding team quality such as the absence of a serial entrepreneur and lower work experience of the team. We also find that startups that raise funds from connected investors exhibit more successes and fewer failures. This relationship between the success (or failure) and the educational connection is moderated solely through the access to higher funds or high-quality investors, suggesting the absence of enhanced monitoring and mentoring of startups by VC firms as a result of educational connections.

Ethical Dilemmas: Do Programming Tasks Bias Your Moral Judgement?

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Abstract

Algorithms are widely used to aid decision making: aiding judges with sentencing decisions (Cowgill 2018), matching jobs with job-seekers (Cowgill 2019) and determining localities that police should patrol (Angwin et al. 2016). Algorithms are currently being trained for more difficult tasks including as drivers of autonomous vehicles. This ubiquitous use of algorithms has raised concerns on how algorithms will handle tricky trade-offs that need to be made (Bonnefon et al. 2016). Perhaps the most well-known of these trade-offs occurs when algorithms in autonomous vehicles will have to decide whether to harm multiple lives to save one. This dilemma is similar to the class of philosophical questions known as the trolley problem (Foot 1967, Thomson 1985). In this problem, a trolley is about to hit and kill five people -- but a decision-maker can pull a lever, redirecting the train to kill another person but save the five. Choosing to kill one in lieu of five is considered to be a utilitarian response to these moral dilemmas.

Prior research has identified a host of factors that influence the decision-maker in choosing between these two outcomes. These factors fall into two groups. The first group involves the framing of the dilemma. Factors in this group include the spatial and cultural proximity of the decision maker to the dilemma and if the decision to harm an individual is mechanically mediated (Cushman et al. 2006, Moore et al. 2008). The second group of factors involves the cognitive disposition of the decision maker: their blood-alcohol content (Duke and Bègue 2015), cognitive load (Greene et al. 2008) and stress (Starcke et al. 2011). Studies have also shown that individuals with brain lesions overwhelmingly choose one or the other outcome (Ciaramelli et al. 2007). These studies indicate that a decision maker's response to moral dilemmas is contextual and can be influenced by their cognitive state.

To examine if programming tasks changes the individual's utilitarianism, we conduct an experiment using Amazon Mechanical Turk. Our treatment group codes two programs and responds to a moral dilemma similar to the trolley problem. Our control group performs a task unrelated to programming and then answers the same moral dilemma. For the moral dilemma, respondents can either choose to sacrifice one life to save five (the utilitarian choice) or do nothing and let the five people perish (known as the deontological choice).

Reconfiguring for Agility: Examining the Performance Implications of Project Team Autonomy through an Organizational Policy Experiment

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Abstract

Agile software development, a paradigm that emphasizes project team autonomy and the value of responding to changes over following standardized processes, has gained prominence in the software industry. Prior investigations on the adoption of an agile paradigm for software operations and their performance implications have typically focused on isolated aspects of software development processes. In this study, we adopt a configurational perspective of software operations and assess the causal impacts of an organizational policy change that grants higher levels of autonomy to project teams. Building upon the equifinality framework proposed in organizational studies, we posit that an organizational policy that provides higher levels of autonomy for software teams engenders performance-enhancing adaptations through agile reconfiguration of project operations.

To test our hypothesis, we collaborated with a commercial software firm and collected data from a policy experiment at the firm. We collected a unique, longitudinal dataset from a policy experiment at a global software firm that spanned a fifty-month observation period (2013-2018). During this period, the firm experimented with a policy change that targeted the adoption of an agile paradigm for its software operations. The policy experiment marked the beginning of a significant shift for the firm from a centralized, control-oriented governance approach, under which the firm regulated project teams for strict compliance with organizational-level prescriptions, towards granting more autonomy to project teams. Utilizing longitudinal data from 461 commercial projects executed by the firm, we examined the performance implications of the organizational policy change. Our analysis shows strong support for our prediction that an organizational policy granting higher levels of project autonomy would lead to better performance, and we estimate that the projects teams at the firm, ceteris paribus, enhanced their output by about 17 Function Points per quarter and improved their customer satisfaction scores by five points (on a ten point Likert scale), on average, as a result of policy change at the firm.

Innovation, Diffusion and Shelving

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Abstract

In an oligopoly model with an outside innovator and two asymmetric licensees, we consider a story of technology transfer of a cost reducing innovation where the licensees have asymmetric absorptive capacities of the new innovation. In particular, we assume the innovation only reduces the cost of the inefficient firm, but not the efficient firm.

In that context, we explore the strategic incentives of the efficient firm to acquire the technology. We find situations where the efficient firm acquires the technology, however shelves it and situations where it does not shelve it and further licenses it to the inefficient firm. We also see the impact of technological diffusion (or no diffusion) from innovation on consumer welfare and industry profits; and find the optimal mode of technology transfer of the innovator. We extend the analysis where the innovation affects the production cost of both firms, but in a non-uniform way, and find the optimal mode of licensing and technology transfer.

Fintech – Content and Implications

Cryptocurrency Innovations and Returns

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Abstract

Cryptocurrencies have rapidly evolved into financial platforms with the potential to upend many traditional exchange models. However, wild fluctuations in the value of cryptocurrencies and the lack of accountability on the supply side have led to an uncertain future. The nascency of the phenomenon and the contrast with traditional asset classes have further led to increased uncertainty regarding the drivers of cryptocurrency value. It is therefore critical to understand the fundamental factors that impact the value of these currencies. In this paper, we explore whether and how the innovation activities associated with cryptocurrencies inform their valuation. With a comprehensive data set we created from multiple sources, we demonstrate that technological activities such as forking have a significant impact on the valuation of cryptocurrencies. Though many have alluded to the cryptocurrency phenomenon as madness, we find that there is "a method in (this) madness". Most technological initiatives of a cryptocurrency are open source projects which are hosted on Github that provides the developers with the opportunity to collaborate as well as to experiment with existing repositories using unique social networking-like functions such as follow, watch, clone, and fork. Forking is one of the common ways to develop a new project on open source platforms. Developers fork projects on Github for two primary reasons. First, a fork may be created to make changes in the existing codebase independently and to merge it with the original codebase. Second, a repository may also be forked so that developers can use it as a starting point for new ideas. For example, the Linux kernel has been forked more than one thousand times in Github, with some used for application development on Linux, and others to create similar but distinct products.

In this study, we try to understand the effects of forking on the financial returns of the cryptocurrencies. Using the description of the forked repositories, we categorize the forks into two groups: (i) new product innovations (Type A), (ii) same product innovations (Type B). We discuss these measures further in the following section. The contributions of our study are two-fold. First, given that the codebase of a cryptocurrency is open source and the production process decentralized, understanding the implication of developers' activities, who are responsible for maintaining as well as enhancing the technology and its relationship with returns is important for the investors. Second, our study helps provide insights into the incentives of developers to participate in different kind of innovation efforts for cryptocurrencies.

Human-AI Hybrids in the Initial Coin Offering Market

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Abstract

Initial coin offering (ICO) is a fundraising mechanism, in which an issuer uses blockchain or distributed ledger technology to create a new digit coin or token, and then sells them to backers of their projects. The ease of creating new crypto tokens using an existing blockchain platform (e.g., Ethereum or Waves) has led to a surge in the number of ICOs in recent years. In 2018, companies around the globe have raised $6.3 billion dollars through ICO. ICOs have provided an innovative way for entrepreneurs to raise capital utilizing block chain technology, and for consumers to acquire right to future products or services, and for investors to access a new asset class. Amidst all the success and increasing impact, a major concern has been the risk and uncertainty associated with ICOs. Although ICO provides an easy way of fundraising and investing, investors often don't have a clear and informed path to invest in ICOs with assurance. Even domain experts who have been providing consultancy and advice on online review platforms have been largely inconsistent. An interesting and new phenomenon in this space is the deployment of Artificial Intelligence (A.I.) to evaluate ICOs. Artificially intelligent systems can be trained using algorithms to evaluate the potential of these blockchain-based projects alongside humans. However, there is little research examining the efficacy of this model in which A.I. and human domain experts co-assess the potential of blockchain-based ICO projects. What should be the role of A.I. in the evaluation of ICO projects? What effect does the evaluation by the A.I. system have on human experts' decision making?

In this paper, we empirically examine, in this highly risky and volatile Blockchain ecosystem, does A.I. influence domain experts' evaluations of ICOs? If yes, how? In addition, we investigate the effect of going through a pre-ICO phase, in which fundraisers have the opportunity to provide additional information on their projects before the fundraising begins. Finally, we investigate how the complexity of evaluation of a project impacts experts' judgment. Our study provides an early understanding of the interplay of human experts and A.I. bots in the evaluation of ICOs. Our results have important implications for future entrepreneurs to take advantage of this innovative fundraising avenue for investors to navigate this volatile market.

Is a megapixel worth a few thousand words? An Empirical Assessment of Image Sentiments on Philanthropic Crowdfunding Success

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Prof. Mehmet Eren Ahsen, University of Illinois at Urbana-Champaign, USA

Abstract

In this paper, we examine donor behavior and donation success on a philanthropic healthcare crowdfunding platform which caters to the need of patients across geographic borders. We have compiled a relatively large dataset on funding requests, images posted for each project, patient publicly-shared data, the details of their illnesses, and funds required for complete cure. We develop a two-stage framework for examining donation success. In the first stage, we generate image sentiment features from each project page to create image attributes. In the second stage, we combine image features in conjunction with other hypothesized factors that predict donation success.

Our empirical analysis suggests a strong role played by the project page images, as well as attributes that highlight transparency of the funding usage, in predicting funding success. Implications for platform creators as well as intermediary organizations and platform participants are generated based on detailed econometric modeling outcomes.

Technology and Policy

Human Vulnerabilities in Collaborating with AI: An Experimental Investigation into the Future of Work

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Prof. Wolfgang Ketter, University of Cologne, Germany

Abstract

There are huge expectations, and there is a lot of uncertainty and fear about how AI will change the workplace. Thought leaders, scientists and policy makers have come to see AI as a general purpose technology or a new type of electricity (McAfee and Brynjolfsson 2017, Brynjolfsson and Mitchell 2017, Knowledge@Wharton 2018) that fuels innovation on a broad scale and in diverse domains including medicine (Kononenko 2001, Peek et al. 2015, Esteva et al. 2017, Hosny et al. 2018), trans- portation (Chen et al. 2015, Kahlen et al. 2018), problem-solving, games and cognition (Schölkopf 2015, Silver et al. 2016, Moravˇcík et al. 2017), and perceptual tasks, such as processing images, text, and speech (Hinton et al. 2012, Deng and Yu 2013). Earlier generation of AI techniques, that relied on building explicit rules for decision making, suffered from what Autor (2014) calls Polanyi's paradox – the fact that humans make a lot of decisions that they themselves do not know how they reached at. However, the broad applicability of modern techniques like deep learning (LeCun et al. 2015, Schmidhuber 2015, Goodfellow et al. 2016) seems to imply a challenge for humans in the workforce, in the future. However, as Brynjolfsson et al. (2018) point out that likelihood of complete automation of complex human decision-making processes is still challenging and perhaps the best prediction that we can make is that humans would work with algorithms for a foreseeable future in most work environments.

Given that in most human decision environments even ground truth is not available, we agree with the general sentiment that while AI will be embedded in day-to-day life in the future, and that the performance of AI will improve further, humans will be an integral part of the work environments. Therefore, research efforts that only consider direct comparisons between humans and AI will rarely provide surprising answers. Put differently, if we approach questions about employment with an "us versus them" mindset and ask questions like: "will the AI outperform humans in this task, or will humans outperform the AI?", the answer will ever more often be that the AI outperforms humans. This line of arguments supports a grim outlook on employment, and it emphasizes the frictions that can arise from accepting and adopting AI. Polanyi's (1966) observations also point to another important facet of human decision making that is vastly ignored in literature that compares AI and human performance – when there is discord in human decision making due to differences in experiences and outcomes, the complementarity provided by human thinking that connects the dots in yet unexplained manner will be hard to replicate until truly evolutionary AI models are developed.

Robots and Employment: Country and Industry-Level Analysis

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Abstract

While automation has been a critical issue, in terms of substituting for labor, the use of robotics is starting to become a trend (Decker et al., 2017; Wajcman, 2017). However, the impact of robots on employment is not clear. Further, we do not know how the use of robots affects employment in various industries. While intuitively, it might seem that robots could have differing impacts on employment in developed vs. emerging markets, research and empirical data is lacking.

The results of this study indicate that both developed and emerging markets face differential impact of automation on employment levels based on industry. In general, the data suggests that the negative impact of robotics is higher in emerging markets than in developed markets. Overall, robot purchase is positively associated with employment in the health, manufacturing, hotel and food industry, while being negatively associated with employment in the agricultural industry.

*Not Presented

Technology Strategy

Understanding the Digital Strategic Posture of Firms: A Behavioral and Agency Theoretic Perspective

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Abstract

With digitization playing an increasingly important role in business success, senior executives such as CEOs are directly involved in and responsible for the digital strategy in firms (Bharadwaj et al. 2013). They oversee and direct IT resource allocation as this is a critical strategic lever to shape digital strategies. While the evolving technological landscape offers firms novel opportunities to leverage IT to compete (Han and Ravichandran 2006, Ravichandran et al. 2017), they also escalate the resources firms commit to IT. In fact, long-term trends suggest that IT has become the largest capital investment firms make each year and has substituted for other investments such as R&D and plant & equipment (Mithas et al. 2012).

A critical question facing firms is: how much resources to allocate towards IT, which we refer to as a firm's digital strategic posture. Some firms invest more intensively in IT than others with significant variance seen in the intensity with which even firms in the same industry invest in IT. Research exploring these differences have argued that IT investment decisions are influenced by institutional pressures (Ravichandran et al. 2009), environmental determinism (Ravichandran and Liu 2011) and firm's strategic choices such as the level of diversification (Dewan et. al 1998) and vertical integration (Ray et al. 2013). However, these studies assume a rationalist perspective and do not account for behavioural issues in managerial decisions.

Understanding Content-Based User Engagement in e-learning Platforms: Evidence from Randomized Field Experiments

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Abhas Tandon, Industry
Abhinav Tripathi, Industry

Abstract

In digital platforms, the content has emerged as one of the primary vehicles for user engagement. In this regard, researchers have examined three distinct actions, namely, content generation (CG) (e.g., uploading a video on YouTube), content consumption (CC) (e.g., watching a video on YouTube), and content organization (CO) (e.g., constructing a personalized playlist of videos). Collectively, these actions form the "ladder of engagement" (Oestreicher-Singer & Zalmanson, 2013). While prior work has extensively looked at the predictors of CG, relatively less attention has been paid to CC and CO, as is evident from the recent studies examining these actions (Bapna et al., 2018). In the present study, we build on this literature by exploring the antecedents of CC and CO. The baseline consideration of our work is that in digital settings, CC and CO actions are rarely taken in a vacuum. On the contrary, users may base these actions on rich information structures that online platforms provide. IS literature has long depicted the behavioral implications of the information signals that online platforms offer (Forman et al., 2008). Specifically, the study relies on two distinct information signals that are prevalent across online platforms. First, observational learning (OL) signals—discrete cues about the actions of other users— may drive the focal user's behavior (Chen et al., 2011; Duan et al., 2009). The OL argument suggests that if several users have consumed specific content, then the focal user is more likely to follow their lead and consume content. The second information signal that we rely on refers to Expert Recommendation (ER) that typically conveys the opinions of Experts, who possess authoritative knowledge in a given domain (Spence & Brucks, 1997). While the OL signal provides an aggregate view of other users' actions, the ER signal represents that of experts, making the two signals comparable yet distinct. As depicted in recent empirical findings, these two signals exert complex and non-trivial influence on user behavior (Goh & Yndurain, 2015), which may also depend on the nuances of the type of online platform (Huang et al., 2017).

Building on this stream of work, we estimate the influence OL and ER information signals result on CC and CO actions. In this study, we address this question in an e-learning context. Such settings are particularly interesting to study the contrast between the OL and ER information signals because a typical is user is looking to enhance skills and expertise using e-learning platforms and hence are likely to be positively predisposed towards information originating from an Expert source (i.e., ER signal).

Data Sharing, Privacy and Rule Hiding

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Abstract

Effective data governance strategies play a critical role in determining organizational success. Ladley (2012) posits that a business case for data governance is best made by illustrating business value, which usually comes from identifying opportunities where data governance supports business programs by increasing revenues, lowering costs, and reducing risk. In an increasingly data-centric world, an important data governance issue is that of sharing data across business partners. A critical consideration therein is to accomplish this for mutual benefit without undermining the privacy concerns of the data owner (e.g., by the revelation of information deemed sensitive by the owner).

The phenomenon of data sharing is not new in itself, and has been discussed in several contexts, such as collaborative forecasting and replenishment (e.g., Croson and Donohue 2003, Aviv 2007). The ease with which transactional data could be shared took a major step forward in 1992, when Walmart introduced Retail Link to become the first retailer to deploy a retail portal (Askuity 2018). Since then, an increasing number of retailers are sharing transactional data with their suppliers, with Home Depot, Lowe's, and Target being some prominent examples (RetailVelocity 2019).