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Research Spotlights

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Research Spotlights

Secret Admirers: An Empirical Examination of Information Hiding and Contribution Dynamics in Online Crowdfunding (p. 478)

Gordon Burtch, Anindya Ghose, Sunil Wattal

Many social websites allow users to conceal or reveal information about themselves in a flexible, granular manner. Examples of this include (i) LinkedIn, which typically informs users about others who have recently viewed their profiles, yet also allows those viewers to anonymize or reveal their identities at will, or (ii) Quora, which allows individuals to identify or anonymize themselves with each question they post. Although concealing information may make the user more comfortable, this also has the potential to negatively influence other, observing users' willingness to engage with the website, particularly if those other users infer the presence of an unseen risk. The authors evaluate this possibility using proprietary data drawn from a leading reward-based crowdfunding website, which allows campaign contributors to conceal their identities or contribution amounts in the public record of campaign backers. The authors find that as more individuals conceal information on their identity or contribution amounts, this increases the likelihood that subsequent individuals will conceal the same type of information. Furthermore, the authors find that as more individuals conceal identity, in particular, this decreases the average amount of money that subsequent backers contribute to the campaign, as well as the likelihood that subsequent campaign visitors will contribute anything at all.

The insight for management: When users transact anonymously, this can have detrimental impacts on engagement by other users; website operators should carefully consider the design of information controls and their provision to users, e.g., to discourage anonymous activity, websites might specify revelation as a default, or design incentives to encourage users to disclose themselves.

Do Incentive Hierarchies Induce User Effort? Evidence from an Online Knowledge Exchange (p. 497)

Paulo B. Goes, Chenhui Guo, Mingfeng Lin

Incentive hierarchies, or a sequence of consecutive goals (ranks), are now increasingly common for online

communities. These hierarchies allow users to accumulate points from making contributions on the website, and bestow increasingly higher ranks as they reach different thresholds—with the hope that these increasingly glorious titles will encourage users to contribute. Using data on a random sample of users from a leading online question-and-answer website, the authors find that users ramp up their efforts as they approach the threshold of ranks, but significantly decrease their efforts upon goal attainment. The drop in their efforts actually starts as soon as the users expect their cumulative points will pass the thresholds. The positive impact on user efforts, therefore, is only temporary. More interestingly, these effects are increasingly smaller for higher ranks. An analysis of the incentive hierarchy's introduction also shows that the short-term impact is very limited. For administrators of online communities or other "gamification" contexts, this study suggests that incentive hierarchies, despite its popularity, should not be blindly adopted.

Managing Co-Creation in Information Technology Projects: A Differential Games Approach (p. 517)

Emre M. Demirezen, Subodha Kumar, Bala Shetty

Projects in information technology and other service industries generally require critical input from both clients and vendors on an ongoing basis, the client or the vendor gets utility from the project throughout the development period, and the effort levels of both parties are generally not verifiable if they are not monitored. What type of contract is better for a client firm in such a dynamic value co-creation environment? The authors examine the performance of effort based and output based contracts and find that if the output is relatively more sensitive to vendor's effort, the output dependent contract is better. The authors also present several other results. For example, when the project becomes more dependent on either party, the effort levels should not be necessarily increased or decreased, and making the project more dependent on either party's effort can actually decrease the overall net value of the project.

Insights for management: (i) if the project depends more on the vendor, the output dependent contract should be preferred, and (ii) the behaviors of the client and vendor, and the overall net value of the project

do not necessarily increase or decrease with changes in the characteristics of the parties and the project.

The Impact of Competing Ads on Click Performance in Sponsored Search (p. 538)

Ashish Agarwal, Tridas Mukhopadhyay

We study the impact of competing ads on the click performance of an ad in sponsored search. Using data from Yahoo sponsored search auctions; we measure the impact of the quality of competition on click-through rate of sponsored search advertisements. We find that competing high quality ads, appearing above the focal ad, have a lower negative effect on the click performance as compared to competing low quality ads. We also find that competing high quality ads have a lower negative effect at low positions as compared to high positions. Furthermore this effect is more substantial for specific keywords. The results help advertisers better evaluate their relative performance for different positions for different types of keywords. Specifically, we show that a high quality advertiser ad for a keyword has higher incentive to be near the top for maximizing clicks. Furthermore, advertisers can more appropriately choose keywords initially from the wide variety of keywords by focusing on keywords where they are preceded by high quality ads as compared to low quality ads. The results also suggest how search engines can get higher click performance and higher revenue by arranging ads in the decreasing order of ad quality.

Implementation of an Information and Communication Technology in a Developing Country: A Multimethod Longitudinal Study in a Bank in India (p. 558)

Viswanath Venkatesh, Hillol Bala, V. Samabamurthy

Do organizations in developing countries, such as China and India, enjoy the same benefits of information and communication technology (ICT) implementation that organizations in developed countries enjoy? If not, what are some unique challenges that organizations in developing countries experience as they go through large scale ICT implementations? What factors drive successful ICT implementations in these countries? The successful implementation of ICTs in these countries is likely to hinge on a set of institutional factors that are shaped by environmental tension created by two competing forces, emergent catalysts, such as new economic policies and reform programs, and traditional challenges, such as infrastructure and traditional value systems. To unearth the temporal dynamics underlying the success and failure of ICT implementations in organizations in developing countries, the authors conducted a two-year multimethod study of an ICT implementation at a large bank in India. The authors found, rela-

tive to pre-implementation levels for up to 2 years post-implementation, that they characterized as the shakedown phase: (1) operational efficiency did not improve, (2) job satisfaction declined, and (3) customer satisfaction declined. In-depth interviews of the top management, employees, and customers indicated that these outcomes could be attributed to the strong influence of a set of institutional factors, such as ICT-induced change, labor economics, Western isomorphism, parallel-manual system, and technology adaptation. The interplay between these institutional factors and environmental tension posed a formidable challenge for the bank throughout the implementation that led to the poor and unintended outcomes.

The insights for management: Organizations in developing countries may not enjoy the traditional benefits of ICT implementations because of institutional factors that are shaped by two competing forces, emergent catalysts and traditional challenges in these countries. Managers need to carefully identify these institutional factors during an ICT implementation, understand their interplay, and develop intervention strategies to manage them during the implementation.

Should Online Content Providers Be Allowed To Subsidize Content?—An Economic Analysis (p. 580)

Soohyun Cho, Liangfei Qiu, Subhajyoti Bandyopadhyay

Recently, Internet service providers (ISPs) such as AT&T or Verizon started allowing consumers to stream certain content for free. Such practices, in which content providers typically subsidize or sponsor the bandwidth cost of their data, are known as “zero rating” plans. To study the topic, we developed a game-theoretical model and analyzed the impact and incentives of this type of data sponsorship given three players: a monopolist ISP, two content providers who want to maximize their customer reach, and consumers. Our finding is that consumers and smaller content providers both stand to lose while the ISP always stands to gain if the content providers are subsidizing Internet connectivity costs. Our study also examines a controversial issue: whether the zero rating plans violate the Federal Communications Commission’s net neutrality rules. While these plans do not strictly violate net neutrality, we contend that they may undermine the underlying philosophy of net neutrality. Our research should help policy makers better understand the social impact of zero rating plans, and help ISPs and content companies analyze their participation in such plans.

Pricing Data Services: Pricing by Minutes, by Gigs, or by Megabytes per Second? (p. 596)

Ying-Ju Chen, Ke-Wei Huang

The unit of pricing (pricing metric) is an important factor that affects the profitability in practice

yet the profit-maximizing pricing metric selection has been underexplored in the academic literature. This study develops a game-theoretic model to examine the optimal pricing metric in the context of Internet service provider pricing. We examine three options for the monopoly seller to conduct the second-degree price discrimination (indirect price discrimination with quantity discount): by minutes, by gigabytes, and by megabytes per second. Our results can be applied to price various modern cloud computing services, such as cloud storage, Web hosting, and software-as-a-service. Our analysis suggests that in addition to traditional considerations for second-degree price discrimination, there are two new considerations for the pricing managers to juggle. First, buyers may overconsume along the dimensions of unchosen pricing metrics that are not unspecified in the pricing contract, an effect similar to a restaurant buffet, which adversely affects the seller's profitability. Second, this overconsumption may make price discrimination more challenging because customers become more heterogeneous in their valuation of the service. In other words, the seller should choose the pricing metric that can better alleviate the overconsumption to maximize the overall profit from price discrimination.

Open Content, Linus' Law, and Neutral Point of View (p. 618)

Shane Greenstein, Feng Zhu

The diffusion of the Internet and digital technologies has enabled many organizations to use the open-content production model to produce and disseminate knowledge. We examine whether the open-content production model helps achieve a neutral point of view (NPOV) using data from Wikipedia's articles on U.S. politics. Our null hypothesis builds on Linus' Law, often expressed as "Given enough eyeballs, all bugs are shallow." Our findings are consistent with a narrow interpretation of Linus' Law, namely, a greater number of contributors to an article makes an article more neutral. No evidence supports a broad interpretation of Linus' Law. Moreover, several empirical facts suggest the law does not shape many articles. The majority of articles receive little attention, and most articles change only mildly from their initial slant. Many organizations believe that they could improve their knowledge production by taking advantage of the wisdom of crowds. We show that in the case of Wikipedia, there are aspects such as NPOV that the crowd does not help achieve successfully. The results suggest that organizations, particularly those developing open content for educational purposes, should devote extra efforts to check bias when crowds produce controversial content.

Research Note: IT Outsourcing and the Impact of Advisors on Clients and Vendors (p. 636)

Ravi Bapna, Alok Gupta, Gautam Ray, Shweta Singh

There exist significant information asymmetries in information technology (IT) outsourcing between clients and vendors. This gives rise to opportunities for third party advisors to intermediate between clients and vendors. Such third party advisors can help clients by using their knowledge of the vendor space to match client requirements with vendor capabilities and design appropriate contracts. However, whether and how advisors create value in IT outsourcing was hitherto unaddressed in the literature. Our empirical analysis suggests that advisors can reduce information asymmetry between clients and vendors. We find evidence that supports the expectation that by appropriately matching client requirements with vendor capabilities, advisors are associated with higher revenue for vendors and higher likelihood of contract success. A number of devices have been discussed in the literature about how to mitigate information asymmetry: Category Maturity Model ratings, vendor location, vendor reputation, technological diversity, etc. The key contribution of this paper is to examine the presence of an advisor, in mitigating this information asymmetry.

Research Note: Designing Promotion Ladders to Mitigate Turnover of IT Professionals (p. 648)

Frank MacCrory, Vidyanand Choudhary, Alain Pinsonneault

Chronic excessive turnover among information technology (IT) professionals has been costly to firms for decades with annual turnover rates as high as 24%. Two important factors affecting turnover under the firm's control are boundary-spanning roles and low promotability. We show that promotability is better thought of as two distinct constructs, the likelihood of promotion and benefit from promotion, and demonstrate that each has a distinct role in affecting turnover rates. We show that firms can trade-off between increased compensation, promotion incentives, and turnover. This trade-off is particularly salient when replacement costs are high or employees' skills are valuable and transferable to multiple firms. This result can be used to reduce the turnover of employees in firms that have high turnover without increasing total compensation cost, for example, by increasing the number of steps in the job ladder. We also offer an explanation for the observation that jobs characterized by boundary-spanning activities have higher turnover, and show that such jobs are more sensitive to the effect of likelihood of promotion on turnover. We test our hypotheses on a detailed dataset covering 5,704 IT professionals over a five year period, and confirm our predictions for likelihood of promotion boundary spanning activities.