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Research Spotlights

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Research Spotlights

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Know Where to Invest: Platform Risk Evaluation in Online Lending (p. 765)
Zhao Wang, Cuiqing Jiang, Huimin Zhao

Although enjoying rapid development, online lending also endures some unusual risk, that is, *platform risk.* We address a new problem at the macro platform level, *platform risk evaluation*, and explore types of information and methods that are effective in predicting platform risk. We identify four types of information, that is, platform characteristic, risk management, commercial competition, and online word of mouth, and examine their utilities, separately and jointly, in predicting platform risk. We also propose the use of survival analysis, especially the mixture survival model, in predicting whether and when a platform will default. We carry out a cross-stage analysis using data crawled from two leading web portals for online lending in China with the two stages separated by the recent dramatic policy intervention. The results reveal the differences among the four identified factors in terms of predictive utility, the heterogeneity between the two types of default platforms, and differences between the start-up and stable periods of platform development. Based on the results, we derive some insights and examine the cross-stage changes and commonalities. We provide both lessons learned from the past and practical implications for market managers and lenders in the current online lending market.

Pay-What-You-Want Pricing in the Digital Product Marketplace: A Feasible Alternative to Piracy Prevention? (p. 784)
Byung Cho Kim, So Eun Park, Detmar W. Straub

In pay-what-you-want (PWYW) pricing, buyers are allowed to pay any amount they want, often including a price of zero. Standard theory predicts that buyers are driven solely by their own interest and will always choose to pay nothing, making PWYW pricing impractical to use. Nonetheless, PWYW pricing has been consistently occurring in the marketplace. We build and analyze a theoretical model to explain the presence of PWYW pricing in the marketplace and identify the situations under which businesses are better off adopting it over the traditional posted pricing. Because the digital product domain is a particularly good fit for PWYW pricing because of its constant exposure to piracy threats, we focus on digital product firms and examine PWYW pricing as an alternative to their piracy prevention efforts. We show that PWYW pricing becomes a superior pricing strategy when the pirate version is quite similar to the authentic product and it is costly for the firm to improve its product quality. Moreover, if network externalities are present, PWYW pricing can outperform posted pricing only when the network externalities are weak. The results explain why PWYW pricing is rare in the established digital product marketplace, which exhibits strong network externalities.

Bidding on a Peer-to-Peer Energy Market: An Exploratory Field Study (p. 794)
Anselma Wörner, Verena Tiefenbeck, Felix Wortmann, Arne Meeuw, Liliane Ableitner, Elgar Fleisch, Inês Azevedo

Faced with the challenge of increasing the share of renewable energy generation, many countries have put local peer-to-peer (P2P) energy markets on their political agenda for driving the adoption of renewable energy. This is the first study to examine this concept empirically in a real-world P2P market, in which renewable energy was auctioned among households in a local area. Over the duration of an entire year, this field study investigated whether households engaged in the bidding and trading of energy, and which prices emerged on the P2P energy market. The results show that the market outcomes were efficient and that households engaged surprisingly actively in bidding, despite energy being a low-involvement good. The findings indicate that P2P energy markets can have a positive impact on balancing demand and supply, thereby addressing the fundamental challenge of distributed renewable energy systems.

Second Screening—The Influence of Concurrent TV Consumption on Online Shopping Behavior (p. 809)
Oliver Hinz, Shawndra Hill, Amit Sharma

The practice of using a "second screen" while concurrently watching television (TV) has become a widespread phenomenon. People use a smartphone, a tablet, or a laptop while watching TV to conduct research on the show that they are watching, to communicate with their friends, or to do online shopping. Whereas work on multitasking suggests that TV consumption may lead to lower online sales, research in the area of impulse buying suggests the opposite. Our finding, based on a panel data set following 100,000 consumers in the United States and a Big Data set from browsing behavior, shows on the aggregate and the individual level that second screening can lead to higher sales for low-complexity goods (e.g., beverages, food, detergents) but causes lower sales of highly complex goods like financial products and consumer electronics. If a TV program appeals to a large TV audience, then this results in fewer immediate sales of high-complexity products (1% increase in TV consumption leads to −2.2% sales) and more sales of low-complexity products (1% increase in TV consumption leads to +8.8% sales).

Information Asymmetry Among Investors and Strategic Bidding in Peer-to-Peer Lending (p. 824)
Kai Lu, Zaiyan Wei, Tat Y. Chan

Peer-to-peer (P2P) lending became a global phenomenon in recent years. Despite their prominence in the "FinTech" era, P2P platforms remain a risky investment because of the high default rate of unsecured personal loans funded on such platforms. In contrast, the rate of return can be much higher than that of other investments if P2P loans are repaid. Therefore, investors of P2P loans need information about borrowers' ability to repay. An important channel is to learn from other investors who may have information advantages. We argue that, because collective effort from investors is required in P2P lending, it could be optimal for informed investors to bid early in projects with the purpose of signaling the quality. With a unique data set from Prosper.com, we find that informed investors are indeed more likely to bid in the early stage of a project with a low probability of being funded, whereas uninformed investors will follow. The "squatting" behavior (early bidding) of informed investors facilitates information spillover to uninformed investors, benefitting the investors and borrowers who otherwise may not raise sufficient funding. Our findings also have implications for P2P lending platforms on how to manage the information asymmetry and strategic behaviors of investors.

Information Control for Creator Brand Management in Subscription-Based Crowdfunding (p. 846)
Yu-Kai Lin, Arun Rai, Yukun Yang

Digital content creators, such as podcasters, musicians, writers, and YouTubers, are increasingly using subscription-based crowdfunding (SBC) platforms to attract backers and obtain recurring funding from them. Unlike conventional crowdfunding, a hallmark of SBC is the recurring funding scheme structured as a creator-centered freemium model. Empowering creators to build their person brands, SBC platforms are providing creators with novel features to control the information that they share with their backers or fans or conceal from them. Based on a large-scale study on Patreon, an SBC platform, we show how creators can effectively leverage two types of information controls—earnings concealment and private postings—to build their person brands and thereby develop their backer base and fan engagement. Interestingly, we also find a reinforcing relationship in which the increases in backer base and fan engagement further stimulate creators to leverage information controls in their SBC campaigns to grow their person brands. In sum, although information controls are effective in aggregate to build person brands on SBCs, creators need to dynamically adjust the extent of use of information controls based on changes in their backer base and fan engagement.

Flourish or Perish? The Impact of Technological Acquisitions on Contributions to Open-Source Software (p. 867)
Wei Chen, Fujie Jin, Ling Xue

This study examines how acquisitions of open-source software (OSS) firms may impact the internal and external contributors to the OSS projects of acquisition targets. We find that, for target firms, acquisitions hurt internal contributions from their employees to their OSS projects but attract more external contributions from outside developers. Therefore, managers of merged entities should strive to maintain the incentives of target firms' internal developers after acquisitions, and they can also leverage acquisitions to attract external developers. We also find that acquirers with prior OSS experiences and similar OSS projects with target firms are in an advantageous position to attract contributions from both target firms' internal developers and external developers in the OSS community. In this regard, managers of acquirers can consider building their OSS experiences and selecting appropriate target firms before acquisitions. Moreover, our study suggests that acquisitions of OSS firms can also benefit the whole OSS community by motivating the contributions of internal and external developers to other projects in the community. Therefore, for both practitioners and policy makers, acquisitions should have important implications for nourishing the entire OSS community.

Do You Really Know if It's True? How Asking Users to Rate Stories Affects Belief in Fake News on Social Media (p. 887)
Patricia L. Moravec, Antino Kim, Alan R. Dennis, Randall K. Minas

Research shows that *consuming ratings* influences purchase decisions in e-commerce and also has modest effects on belief in news articles on social media. We find that the act of *producing ratings* reduces belief in news articles on social media and induces social media users to think more critically. We propose this intervention as a method to encourage users to realize that, unlike in the product rating setting, social media users who submit their ratings for news articles typically lack firsthand knowledge of the events reported in the news, making it difficult for most users to rate news articles accurately. We asked 68 social media users to assess the believability of 42 social media articles and measured their cognitive activity using electroencephalography. We found that asking users to rate articles using a self-referential question induced them to think more critically—as indicated by increased activation in the medial prefrontal cortex and dorsolateral prefrontal cortex—and made them less likely to believe the articles. The effect extended to subsequent articles; after being asked to rate an article, users were less likely to believe other articles that followed it whether they were asked to rate them or not.

IT Knowledge Spillovers, Absorptive Capacity, and Productivity: Evidence from Enterprise Software (p. 908)
Peng Huang, Marco Ceccagnoli, Chris Forman, D.J. Wu

This paper shows that the productivity effects of knowledge flows related to the implementation and use of enterprise software are critically moderated by a firm's prior IT investments, the nature of external IT knowledge flows, and their interaction. To do so, we adopt a novel measurement strategy that allows us to examine activity in an online discussion forum. Our results have several managerial implications. First, firms that fail to account for the indirect effects of their IT investments will likely underestimate their productivity implications. Further, the circumstances that we identify where prior investments are most valuable—for knowledge related to new applications—are precisely those in which firms are most likely to seek external knowledge because of a lack of codified best practices. That is, our results highlight how firms without prior related knowledge are likely to struggle in deploying frontier applications. Our results also provide insights on why firms participate in online communities. Consistent with some prior findings, our results suggest that firms will benefit from participating in communities not only through inflows but also through contributions, because making contributions results in the accumulation of related IT knowledge.

Socialize More, Pay Less: Randomized Field Experiments on Social Pricing (p. 935)
Haibing Gao, Subodha Kumar, Yinliang (Ricky) Tan, Huazhong Zhao

We propose *social pricing*, a novel pricing framework under which consumers with higher social capital enjoy a better price. Conceptually, social pricing enables firms to achieve price discrimination based on a consumer's social value. This is in sharp contrast with traditional price discrimination strategies where price differentiation typically hinges on consumers' personal value. We design and conduct two randomized field experiments on a leading online fresh food retailer to understand the value of social pricing. Social pricing has been commonly credited for its effectiveness in new customer acquisition. Interestingly, our study reveals that it is also highly effective on existing consumers. Our analysis shows that social pricing can increase an online retailer's profit by 40% solely from existing consumers, compared with regular firm-offered discounts. Exploration of the underlying mechanisms reveals that *perceived engagement* and *social cost* are the main drivers, which not only help to increase purchasing frequency but also induce higher order value per purchase. In a follow-up experiment, we vary the rules of social interactions by requiring heterogeneity in consumers' purchasing frequencies. The results suggest that a heterogeneity-based strategy can further amplify the benefits of social pricing.

Does Social Media Accelerate Product Recalls? Evidence from the Pharmaceutical Industry (p. 954)
Yang Gao, Wenjing Duan, Huaxia Rui

This study scrutinizes the rarely-studied relationship between customer voices on social media and the speed of product recalls in the context of the pharmaceutical industry. Using FDA drug enforcement reports and social media data crawled from online forums and Twitter, we investigate whether social media can accelerate the product recall process in the context of drug recalls. Results based on discrete-time survival analyses suggest that more adverse drug reaction (ADR) discussions on social media lead to a shorter time to recall. To better understand the underlying mechanism, we propose the information effect, which captures how extracting information from social media helps detect more signals and mine signals faster to accelerate product recalls, and the publicity effect, which captures how firms and government agencies are pressured by public concerns to initiate speedy recalls. Estimation results from two mechanism tests support the existence of these conceptualized channels underlying the acceleration hypothesis of social media. This study offers new insights for firms and policymakers concerning the power of social media and its influence on product recalls.

Seems Legit: An Investigation of the Assessing and Sharing of Unverifiable Messages on Online Social Networks (p. 978)
Jake London Jr., Siyuan Li, Heshan Sun

Unverifiable messages abound on the Internet. As policymakers and social media platforms grapple with the spread of misleading, false, or otherwise harmful messages, it is important they better understand why users share messages they cannot verify. This article reports on two studies that shed light on such issues. In the first study, the authors leverage secondary data collected from Twitter to show that true and false unverifiable messages have different characteristics and that those characteristics are predictive of retweeting. In the second study, they conduct a controlled experiment to explain why such characteristics influence resharing. Jointly, these studies show that leaks (i.e., true-but-unverifiable) tend to be more plausible, more vivid, and are sent by more credible senders than rumors (i.e., false-but-unverifiable). Further, the relationships among these variables is multiplicative such that the effects of vividness and sender credibility are strengthened for plausible and weakened for implausible messages. Finally, message recipients use these characteristics to determine whether an unverifiable message is novel and/or helpful. In sum, the authors find that social media users are likely to reshare unverifiable messages when they exhibit characteristics of plausibility, vividness, and sender credibility, which signal the novelty of helpfulness of the message.

How Is Mobile User Behavior Different? A Hidden Markov Model of Cross-Mobile Application Usage Dynamics (p. 1002)
Shaohui Wu, Yong Tan, Yubo Chen, Yitian (Sky) Liang

Driven by the ubiquity and strong context dependence of mobile app use, Internet companies are in a race of cross-industry expansion to build a seamless ecosystem incorporating various contexts. This paper offers several insights on improving app use in the era of mobile Internet. In contrast to PC Internet, in addition to hedonic and utilitarian states, we uncover a novel social state that is prevalent but transient, indicating mobile users have a fundamental need for frequent light-social activities. Thus, one strategy to increase use is to enrich an app's social components, specifically on light-social functionalities. In addition, our results show that app use interdependence is the strongest under the hedonic state. This indicates the strategic value of boosting current app use is the highest in the hedonic state, providing guidance to companies on better spending of their limited marketing resources. Furthermore, we show that these internal states are interdependent of each other and their dynamic is affected by contextual factors that are distinct in the mobile context. Thus, companies should put more weight on tailoring their engagement strategies under different contexts in the ear of mobile Internet than the traditional PC context.

Risk Disclosure in Crowdfunding (p. 1023)
Keongtae Kim, Jooyoung Park, Yang Pan, Kunpeng Zhang, Xiaoquan (Michael) Zhang

How should crowdfunding platforms alleviate information asymmetry between creators and crowdfunders? In traditional financial markets, public companies are required to disclose potential risks to their investors, and such risk disclosure requirements are enforced by legal and fiduciary regulations. In the crowdfunding context, however, such information asymmetry concerns are often addressed by crowdfunding platforms. In this study, we examine whether and how a regulation to increase the salience of project risks in crowdfunding affects crowdfunders' funding decisions. We find that increasing the awareness of project risks is associated with inferior funding outcomes of crowdfunding projects, and the effect exists mainly for high-risk projects but not much for low-risk projects. In addition, high-risk projects benefit from a risk disclosure with relevant information, authentic language, and balanced tones that are not overly negative or optimistic. Despite the negative short-term effects, technology funders tend to interpret risk disclosures rationally over time, suggesting a positive long-term effect. Implications for research and insights for practitioners are discussed, particularly the fact that disclosure policies may make crowdfunding markets more sustainable by reducing information asymmetry and helping crowdfunders make more informed decisions.

How Does Intelligent System Knowledge Empowerment Yield Payoffs? Uncovering the Adaptation Mechanisms and Contingency Role of Work Experience (p. 1042)
Liwei Chen, J. J. Po-An Hsieh, Arun Rai

Intelligent systems—incorporating computational tools, learning algorithms, and statistical models—can generate knowledge to empower employees in how they conduct their work and increase their job performance. How can organizations realize this potential? Our in-depth study of transformation of work with intelligent systems in a technology maintenance service company provides managerial insights to this question. Although knowledge from intelligent systems can empower employees, employees will need to adapt how they work with intelligent systems to improve their job performance. Interestingly, they can leverage the empowerment to adapt in two ways: *maximize benefits*, where they use the system to its full potential in conducting work, and *minimize disturbances,* where they reduce role conflict with the system in conducting work. Although inexperienced employees leverage the empowerment to use the system to its full potential, experienced employees leverage the empowerment to minimize role conflict with the system. How empowered employees realize job performance gains requires understanding how employees channel their empowerment: maximize benefits through use of the system or minimize disturbances through role conflict with the system. Differentiating how inexperienced and experienced employees channel empowerment to increase job performance will enable managers to effectively manage the transformation of work for these two groups.

The Dark Side of Technological Modularity: Opportunistic Information Hiding During Interorganizational System Adoption (p. 1072)
Sanjith Gopalakrishnan, Moksh Matta, Hasan Cavusoglu

To drive competitive advantage in today's fast-paced and disruptive business environment, firms are increasingly investing in the modularization of their technology infrastructure. In a rapidly changing and interconnected business environment where flexibility is key, modularity is often hailed as a foundational pillar of information technology systems of the future. For networked firms, modularity has been traditionally viewed as unambiguously beneficial because it allows for closer alignment with partner firms and also mitigates risk by lowering partner switching costs. However, we find that in interfirm networks undergoing technology transitions in the form of adoption of new interorganizational systems such as blockchains, modularity can also engender additional risks. Specifically, the early stages of IOS adoption are characterized by information asymmetries, and we find that high levels of technological modularity can render firms more susceptible to opportunistic information withholding by network partners. Our findings run counter to the traditional view of modularity as a capability that can improve the efficiency of IOS adoption, or as a governance mechanism that reduces risks associated with IOS adoption. As optimism and investments toward modularity grow, by identifying associated risks, our work cautions managers to adopt a more qualified view of this capability during technological transitions.

Space Norms for Constructing Quality Reviews on Online Consumer Review Sites (p. 1093)
Jinghui (Jove) Hou, Xiao Ma

As consumer-generated online reviews are recognized as an essential component of many e-commerce websites, practitioners and digital platforms strive to elicit high-quality reviews. Yet research so far mainly focuses on what drives consumers to submit reviews, whereas little has been done to help understand why review writers construct high-quality reviews versus post poor review content. This paper demonstrates that the behavior of writing quality reviews is largely directed by space norms, a distinct instantiation of social norms inferred from locally observing how others write reviews in the digital space (i.e., the review site). The perception of the space norm begets a sense that one should write reviews in accordance with the norm and induces the corresponding behavior on the given site. Our work lends insights to practitioners and digital platforms: managers looking to elicit quality reviewing behavior should devise the local website environment to foster the space norms for the desired behavior. We offer several cost-effective methods to foster space norms, including a machine learning approach.