



Information Systems Research

Publication details, including instructions for authors and subscription information:
<http://pubsonline.informs.org>

Research Spotlights

To cite this article:

(2026) Research Spotlights. Information Systems Research 37(1):iv-xiii. <https://doi.org/10.1287/isre.2026.resspot.v37.n1>

Full terms and conditions of use: <https://pubsonline.informs.org/Publications/Librarians-Portal/PubsOnLine-Terms-and-Conditions>

This article may be used only for the purposes of research, teaching, and/or private study. Commercial use or systematic downloading (by robots or other automatic processes) is prohibited without explicit Publisher approval, unless otherwise noted. For more information, contact permissions@informs.org.

The Publisher does not warrant or guarantee the article's accuracy, completeness, merchantability, fitness for a particular purpose, or non-infringement. Descriptions of, or references to, products or publications, or inclusion of an advertisement in this article, neither constitutes nor implies a guarantee, endorsement, or support of claims made of that product, publication, or service.

Copyright © 2026, INFORMS

Please scroll down for article—it is on subsequent pages



With 12,500 members from nearly 90 countries, INFORMS is the largest international association of operations research (O.R.) and analytics professionals and students. INFORMS provides unique networking and learning opportunities for individual professionals, and organizations of all types and sizes, to better understand and use O.R. and analytics tools and methods to transform strategic visions and achieve better outcomes. For more information on INFORMS, its publications, membership, or meetings visit <http://www.informs.org>

Research Spotlights

<https://doi.org/10.1287/isre.2026.resspot.v37.n1>

Copyright: © 2026 INFORMS

Can Providing Algorithmic Performance Information Facilitate Humans' Inventory Ordering Behaviors? (p. 1)

Yingda Lu, Xueming Luo, Liqiang Huang, Danni Wang

Over recent years, companies have been increasingly adopting algorithmic decision systems (ADS) to replace humans. In this paper, we focus on how ADS facilitates human managers' decision making rather than replacing humans altogether in the context of inventory ordering decisions, specifically on the effect of providing ADS performance information to human managers. Using a pair of field experiments, our results suggest that providing ADS performance information can improve their inventory ordering decisions. Interestingly, providing both positive and negative ADS performance information enhances human managers' inventory ordering decisions, with the latter proving even more effective. Our analyses reveal that compliance and deliberation are two mechanisms through which ADS performance transparency influences inventory ordering decisions. Furthermore, we explore the heterogeneous effect and find that disclosing ADS performance information is more helpful for human managers overseeing products with lower sales and higher uncertainty, thus solving the pain points where human managers rely on algorithmic recommendations the most. Our results also show that ADS performance information serves as an equalizer that benefits low-performing managers more. These results demonstrate the importance of algorithm performance transparency in the human adoption of ADS and shed light on the managerial implications of using ADS within corporations.

"Extortionality" in Ransomware Attacks: A Microeconomic Study of Extortion and Externality (p. 20)

Debabrata Dey, Atanu Lahiri

Ransomware attacks have emerged as one of the biggest threats to cybersecurity. Faced with business disruptions, many organizations accede to ransom demands, and in doing so, they embolden the attackers to launch more attacks, elevating the chance of a future breach for others. We study this externality using a multiperiod game among multiple firms, each of which has a choice to pay or not pay if breached in a particular period, its

action having implications for future periods. How should a policymaker intervene to mitigate this externality, and is prohibition necessary? What might work or how it might work as a policy tool depends critically on the behavior of the attacker (extortionist). If the attacker is not strategic, fiscal interventions could work, and a complete prohibition on ransom payment is unnecessary. If the attackers are strategic, though, they may respond to the policymaker's tax/subsidy in a manner that could increase victims' propensity to pay, rendering fiscal intervention ineffective as a policy lever. In such a case, prohibition may be the only way to mitigate the externality. Overall, our analysis provides a framework for comparing different types of policy interventions and raises concerns for policymakers and social planners to pause and ponder.

The Impact of Transparency-Inducing Management Information System Use on Employees' Daily Work Performance (p. 44)

Sascha Alavi, Matthias Weiss, Julia Backmann, Arnd Vomberg, Christina Desernot

This study examines the impact of management information systems (MIS) on employee performance, emphasizing the role of transparency induced by MIS. The study highlights the importance of balancing transparency with privacy to maximize MIS benefits. Managers should create environments that foster self-directed transparency, where employees have access to their own performance data. This allows employees to self-assess and improve their performance based on accurate and timely information, likely to enhance the positive outcomes of effective MIS use on employee performance. Thus, managers should encourage this type of transparency by providing tools and training that help employees understand and utilize their performance data effectively. In contrast, team-directed transparency induced by MIS should be carefully managed to avoid negative impacts on performance. This kind of transparency can lead to feelings of surveillance and privacy invasion, with negative consequences for the performance outcomes of employees' MIS use. Managers should therefore be cautious about which and how much performance data are shared among team members, for example, by establishing clear guidelines

and policies defining what information is shared among colleagues and how it is used.

Optimal Dynamic Advertising Policies in Digital and Traditional Channels: A Control-Theoretic Approach (p. 63)

Rui Guo, Yonghua Ji, Zhengrui Jiang

This study applies optimal control theory to investigate a monopolistic firm's optimal allocation of advertising efforts across digital and traditional channels. By considering the competitive relationship between advertising efforts in different channels in satisfying consumers' informational needs, this study explicitly models their substitution effect. Furthermore, we propose an alternative approach to incorporate different decay rates of incremental goodwill in the two channels, allowing the system dynamics to be directly represented by the firm's total goodwill without separating it into multiple channel-specific components. Technically, this approach leads to the system dynamics being governed by an integro-differential equation rather than an ordinary differential equation. Our analysis reveals that the marginal value of goodwill in the digital channel is greater than that in the traditional channel due to a lower decay rate. However, this comparative advantage of the digital channel progressively diminishes over time. As a result, the firm should always invest in digital advertising, while employing traditional advertising only when the comparative advantage of the digital channel becomes weak in later stages. When additionally considering the synergistic effect between the two channels, the optimal adoption timing of traditional advertising occurs earlier as the intensity of synergistic effect increases.

The Costs of Ambiguous Information Disclosure: On the Unintended Consequences of Providing Restaurant Hygiene Scores on Platforms in the United States (p. 81)

Jinghui (Jove) Hou, Dorothy Lianlian Jiang, Xiao Ma, Anandasivam Gopal

Information disclosure on digital platforms is ubiquitous, yet it frequently results in unintended consequences, given the prevalence of simplified cues prone to ambiguity in digital platforms' information design. We study how the addition of hygiene inspection scores, in the form of simplified information disclosure, to restaurant webpages on Yelp across the United States affects restaurant demand. We find that showing high (clean) hygiene scores on Yelp paradoxically reduces restaurant demand relative to restaurants for which Yelp does not show hygiene scores on their Yelp pages. We argue that consumers conflate online hygiene scores with the healthiness and tastiness of the food, thus intuitively leading to reduced demand. Our results reveal that ambiguity is the primary cause of misperceptions about hygiene scores. We also show that providing simple

clarifications about the correct meaning of hygiene scores, as well as tweaking the displayed hygiene information to resolve ambiguity, helps mitigate consumer misperceptions. Our research informs practice on how valuable information can be presented online effectively in such a way as to reduce ambiguity, especially on social media platforms. We provide managerial implications for platforms such as Yelp and city municipal authorities that would like to disclose key information online.

The Illusion of Authenticity in Online Reviews: Truth Bias and the Role of Valence (p. 103)

Dezhi Yin, Samuel D. Bond, Han Zhang

As consumer awareness of fake online reviews grows, platforms face increasing challenges in maintaining trust. Although skepticism toward reviews is rising, our research finds that consumers still exhibit a "truth bias," meaning that they tend to accept individual reviews as genuine—even when fake review detection rates are low. This highlights the need for platforms to proactively identify and address fraudulent content rather than relying on user reporting of suspected fakes, which is largely ineffective. Platforms might also consider labeling suspected fake reviews with warning badges or fact-check indicators. Additionally, we find that truth bias is stronger for negative reviews, making fake negative reviews particularly impactful and damaging. Consequently, platforms should prioritize detecting and mitigating fake negative reviews over fake positive ones. Our findings also suggest that structuring reviews into separate positive and negative sections or allowing (or defaulting to) valence-based review sorting might reduce consumer likelihood of being fooled by fake negative reviews. These insights inform platform policy by emphasizing the importance of proactive fraud detection, transparent labeling, and interface design in safeguarding consumer trust and lowering fraud.

When to Broadcast? Inventory Disclosure Policies for Online Sales of Limited Inventory (p. 117)

Zibo Liu, Shi Chen, Kamran Moinzadeh, Yong Tan

Online sales of limited inventory such as flash sales and lightning deals have become popular among e-commerce retailers including Amazon and eBay. This study focuses on the retailer's best timing of disclosing inventory information to maximize the expected sales in a finite horizon. We consider how two prominent customer mechanisms, herding effect and scarcity effect, affect the relative performance of different policies. We analyze the following common policies in practice: "always disclose," "never disclose," and the fixed threshold policy, which broadcasts the inventory level once it drops below a predetermined level. We also propose a novel time-dependent threshold policy, which we prove to be the optimal policy under reasonable

assumptions. We devise efficient algorithms to optimize the policy parameters, and we compare all policies through a numerical study. We find that both threshold policies significantly outperform the two simple policies. Moreover, herding effect and scarcity effect have significant impacts on the relative performance of different policies. Our study provides not only effective and efficient algorithms for policy optimization but also guidelines for policy selection. Policymakers can refer to our study to identify the most appropriate policy, depending on the relative strength of the two customer mechanisms on the platform.

Virtual Team Efficacy Theory: An Integrative Socio-technical Understanding of the Emergence and Ramifications of Collective Efficacy in Virtual Teams (p. 138)

Andrew Hardin, Sutirtha Chatterjee, Robert Davison, Mark Fuller

Digital technologies facilitate interactions among geographically distributed virtual team members. However, some organizations treat communication technologies as passive tools rather than active actors influencing the relationships between collaborative parties. Researchers have encouraged this indifference by applying concepts developed for traditional teams in studies focused on virtual teams facing the unique challenge of utilizing technology to overcome constraints such as temporal and geographical dispersion. For example, collective-level efficacy, or the collective belief in the ability to collaborate effectively, is a crucial factor influencing traditional team performance, now being applied in virtual team studies. Yet researchers regularly apply collective-level efficacy concepts that do not account for the idiosyncratic nature of technology-mediated teamwork. This approach provides an incomplete view of how collective-level efficacy forms and operates during virtual collaborations. Reinforcing this lack of clarity, most studies concentrate on empirically assessing collective-level efficacy's relationships with other variables rather than on how it develops and functions in these settings. Thus, a notable omission from the practitioner and academic literature is a focus on the nature, evolution, and consequences of collective-level efficacy in technology-mediated virtual team settings. The current study addresses this need by developing a conceptual model explaining how virtual team efficacy, a virtual team-specific conceptualization of collective-level efficacy, emerges and subsequently impacts downstream outcomes during a collective cognitive process unique to virtual settings.

Forced to Change? Media Exposure of Labor Issues and Firm Artificial Intelligence Investment (p. 156)

Boshuo Li, Ni Huang, Wei Shi

Firms are increasingly interested in investing in artificial intelligence (AI), but what drives this trend? Our

research reveals that media coverage of labor issues plays a significant role. When firms face public scrutiny through media exposure of labor issues, the reputational pressure pushes them to act. AI emerges as a strategic response, offering powerful capabilities to automate and augment human tasks. Analyzing data from U.S. public firms, we found that labor issue-related media coverage significantly increases AI investments, particularly among firms with the motivation and resources to invest in AI, whereas other IT or general investments are not similarly influenced, suggesting that firms view AI as uniquely suitable to address labor challenges. Interestingly, firms appear to prioritize AI for its automation capabilities, particularly targeting high-skilled labor, contrasting with traditional automation investments focused on lower-skilled tasks. This shift signals a transformation in how companies are reimagining the future of work. For business leaders, our findings also reveal that AI investment not only reduces future media scrutiny but also decreases labor reliance. Policymakers, however, must consider the broader implications, particularly the impact of AI investment on labor markets and the need for proactive workforce planning.

Is Fitness Technology-Facilitated Social Comparison the Thief of Well-Being? The Mediating Role of Social Comparison on the Relationships Between Passion and Performance Self-Esteem (p. 176)

Tabitha L. James, Eoin Whelan, Kieran Conboy

Popular fitness technologies such as Fitbit, Strava, MyFitnessPal, and Apple Fitness+ provide users with information enabling them to compare their activity to that of other exercisers they have added to their app. However, different people will interpret this social comparison information in different ways. This study provides one explanation as to why social comparison information provided by fitness technologies leads to differing performance self-esteem outcomes for exercisers. What we find is that exercisers holding a harmonious passion for their exercise activity can interpret fitness technology-facilitated social comparison information in an adaptive way; that is, to see better others as a state they can obtain and worse others as evidence of their success. Conversely, the obsessively passionate are prone to interpreting such information in maladaptive ways; that is, to see better performing others as evidence of their own failure and other's poor performance as a sign that they will also falter. These maladaptive interpretations may lead to psychological harm (e.g., reduced self-esteem and well-being). Stemming from these findings, we suggest fitness technology developers consider designing their apps to adapt to exerciser's characteristics, such as passion, to minimize the negative effects of fitness technology-facilitated social comparison information.

Crowdfunding Success Factors: A Meta-Analytic Investigation (p. 195)

DaPeng Xu, Hong Hong, Lingfei Deng, Xiaoquan (Michael) Zhang

In view of the significant role project success plays for all parties in the crowdfunding market, a wealth of research has extensively explored its vastly diverse antecedents. Drawing on the elaboration likelihood model as an overarching theoretical basis, our meta-analysis examines the aggregated effects of widely investigated antecedents (as central and peripheral cues) and moderating roles of research contexts (referring to the elaboration likelihood). It reveals a stronger link with soft information-related factors, weaker ties with backer-related factors, and varied effects of project factors. Crowdfunding success measure, crowdfunding model, platform popularity, and project location are important reasons for the inconsistencies in findings across individual studies. Our research offers valuable insights for stakeholders in the crowdfunding ecosystem. For backers, it empowers them to select projects with greater potential for success among the vast number of available options, ensuring more informed investment decisions. Fundraisers can leverage our findings to refine their fundraising strategies, thereby boosting their chances of securing funds effectively. Crowdfunding platforms can harness our findings to refine their system architecture, enrich service offerings, and improve user satisfaction. Furthermore, regulators and policymakers can draw from our study to devise regulations that nurture a robust and favorable crowdfunding environment.

Voluntary Technology Sharing to Rivals (p. 218)

Jianqing Chen, Weijun Zeng

This study examines a firm's incentive to share its proprietary technology to help a rival develop a new product. Whereas the rival's product introduction increases competitive pressure on the firm, it also turns the rival into a multiproduct firm, raising cannibalization concerns that affect its pricing strategy. We find that the rival's internal cannibalization may soften competition in the existing product market, creating a positive externality for the focal firm and, thus, motivating voluntary technology sharing. We characterize the conditions under which the firm benefits from sharing: generally, the firm is incentivized to share if the new product's valuation is neither too high nor too low. A high valuation of the new product deters sharing because of excessive competition, whereas a low valuation fails to trigger cannibalization, eliminating the firm's incentive to share. Our analysis further shows that new product introduction generally enhances social welfare except when the existing product has high valuation and the new product has relatively low valuation. Consumer

surplus increases only when the existing product's valuation is low. These findings offer guidance for policymakers, suggesting when favorable policies should be implemented to promote technology sharing in cases in which social welfare or consumer surplus is not maximized.

All That Glitters Is Not Gold: The Impact of Certification Test Costs in Online Labor Markets (p. 236)

Jiaru Bai, Qiang Gao, Paulo Goes, Mingfeng Lin

Our study examines how the value of skill certifications changes when an online labor platform eliminates testing fees. Although the policy led to a sharp increase in certification rates and faster hiring, it also reduced the signaling power of certifications. Employers became less likely to hire certified workers or offer them higher pay because their average performance declined. This drop in credibility disproportionately affected inexperienced workers who depended on certifications to establish trust. Importantly, we find that the negative effects of free certification can be reduced through better platform design. Showing more detailed certification information, such as test scores and how recently the certification was earned, helps employers interpret credentials more effectively. These design improvements can help preserve the value of certifications while expanding access.

Sparking Innovation: The Effect of Inventor Gender Diversity on Recombinant Innovation (p. 259)

Naveenkumar Ramaraju, Shagun Pant, Gautam Pant

This study examines how inventor gender diversity influences firm innovation, particularly recombinant intensity that signifies the firm's capacity to combine distant knowledge domains into new solutions. Using 23 years of U.S. patent data (1.8 million patents, 4,769 firms) and a novel text-based recombination measure (SPARK), the study finds that a higher share of female inventors increases firms' recombinant innovation intensity, patent output, citations, and innovation efficiency. Moreover, inventor gender diversity enhances the innovation productivity of female inventors. Cross-gender collaboration emerges as the key mechanism for these gains, enabling firms to unlock the "diversity bonus," especially for recombinant intensity. Interestingly, the diversity bonus is not homogenous and depends on how central females are within the firm's knowledge network. Greater gender diversity also translates into better financial outcomes for firms, indicating that the innovation gains outweigh the costs of diversity. For managers, the study suggests not only hiring and retaining a gender-diverse inventor workforce, but also facilitating cross-gender collaborative environments to activate recombinant intensity and other innovation gains, especially at firms where female inventors are not central. For policymakers, the study provides

support for expanding female STEM higher education pipelines to enhance the supply of female inventors and ultimately spark corporate innovation.

From Smartphones to Smart Students: Learning vs. Distraction Using Smartphones in the Classroom (p. 276)

Zhe Deng, Zhi (Aaron) Cheng, Pedro Ferreira, Paul A. Pavlou

This study evaluates the impact of classroom smartphone use on student performance through two large-scale randomized controlled trials in China. Students were randomly assigned to one of four experimental conditions: (i) smartphones banned, (ii) smartphones allowed and used at will without guidance, (iii) smartphones allowed with teacher prompts to use them for instruction, and (iv) smartphones banned with teachers prompting the use of paper-based aids. Our findings show that unstructured smartphone use reduced performance compared with banning them, whereas teacher-guided use significantly enhanced learning outcomes. Paper-based aids yielded no measurable performance gain over the ban. We analyzed classroom video recordings to track individual-level time spent in each condition. We found that students spent similar total time learning across conditions, but teacher-directed smartphone use produced disproportionately large marginal learning gains outweighing the losses from distraction. Guided use also helped close gender and performance gaps though it risked widening digital divides by major and region. These results suggest educators should receive support to develop purposeful, app-based smartphone instruction materials; policy-makers should avoid blanket bans and instead adopt structured usage policies; and tech developers should design classroom-friendly tools aligned with instructional goals. With thoughtful implementation, smartphones can become engines of equity, positive engagement, and learning within the classroom.

Departmental Boundaries and Knowledge Sharing in Corporate Online Communities (p. 294)

Yang Liu, Jingchuan Pu, Yuan Chen, Liangfei Qiu, Hsing Kenneth Cheng

Can organizational boundaries still hinder knowledge-sharing in an online setting such as corporate online communities? Whereas the existing studies usually respond “yes” to the question, our study argues that this is not necessarily the case. We propose and empirically test two key motivations driving knowledge-sharing inclinations subjected to organizational boundaries, namely, knowledge-focused motivations and social-related motivations. Our analyses focus on departmental boundaries using data from a large corporate Q&A platform. We show a robust pattern: employees are more inclined to share knowledge within their

departments (i.e., intradepartmental knowledge-sharing inclination). Notably, intradepartmental knowledge-sharing inclination is uniquely driven more by knowledge-focused motivations (versus social-related motivations). Managers should consider the revealed intradepartmental knowledge-sharing inclination when designing policies to promote knowledge sharing across departmental boundaries, and the focus should be on social-related motivations. Also, it is worth noting that intradepartmental knowledge-sharing inclination is also driven by knowledge-focused reasons, reflected by knowledge providers’ desire to share helpful knowledge, and the knowledge-focused mechanisms are not necessarily detrimental to knowledge sharing. Finally, it is reassuring that we do not find negative associations between intradepartmental knowledge sharing and individual material outcomes such as work performance and promotions.

Toward Sustainable Electricity Markets: Capacity-Based Pricing for Electric Vehicle Smart Charging (p. 315)

Konstantina Valogianni, Wolfgang Ketter, John Collins, Gediminas Adomavicius

As electric vehicles (EVs) become more widespread, cities face the growing challenge of managing charging demand without overloading the grid. This study presents a novel information systems (IS) solution that supports smart and sustainable EV integration. The authors develop a capacity-based pricing model that adjusts in real time based on charging rates and grid capacity. Unlike many existing approaches, it avoids “avalanche effects” where synchronized charging behavior creates new demand peaks. The presented solution is also computationally efficient, making it practical for real-world use. Evaluated through simulations based on realistic urban scenarios, the model reduces demand volatility, aligns EV charging with renewable energy availability, and maintains overall charging costs for users. This work offers policy makers and energy providers a concrete tool to balance environmental goals with energy system reliability. For urban mobility planners, it provides a scalable, adaptive method to support the transition to cleaner urban mobility.

You Get What You Pay For! An Economic Analysis of the Impact of Data Sponsorship on Content Production (p. 341)

Xin Wang, Chong (Alex) Wang, Liangfei Qiu, Xi Weng

The pricing strategies employed by internet service providers (ISPs), such as AT&T, can significantly influence the decisions of content creators—like video streaming platforms or app developers—regarding the types of content they offer. One such strategy is “sponsored data,” where content providers pay ISPs so that users can access their content without using their own data

allowances. This study examines the effects of data sponsorship on content quality, company profits, and consumer benefits. Our analysis reveals that the efficiency of content providers in producing high-quality content is a critical factor. When creating high-quality content is difficult or expensive, sponsored data allows ISPs to increase their profits but can harm content providers by driving overly aggressive competition for users. Conversely, when producing high-quality content becomes easier or less costly—such as with the support of artificial intelligence—sponsored data can benefit both content providers and consumers, albeit at the expense of ISP profits. As advancements in technology continue to facilitate content creation, ISPs and policymakers must reconsider the structure of data sponsorship programs.

Short-Form Videos and Mental Health: A Knowledge-Guided Neural Topic Model (p. 356)

Jiaheng Xie, Yidong Chai, Ruicheng Liang, Yang Liu, Daniel Dajun Zeng

Short-form video platforms such as TikTok and Douyin are widely used but have sparked serious concerns about their impact on youth mental health, especially suicidal thoughts. This study introduces a novel knowledge-guided neural topic model that predicts a video's potential to induce suicidal thoughts in viewers at the time of upload. Unlike existing models, our approach integrates medical knowledge on suicide risk factors with user-generated content to improve prediction accuracy and explainability. Tested on real-world data from two major platforms, the model not only outperforms current machine learning and deep learning benchmarks but also uncovers emerging content themes linked to suicidal thought risk. For practice, this tool can be directly integrated into platforms' content moderation pipelines, identifying high-risk videos for follow-up human review before harm spreads. For policy, it offers a scalable and ethically informed method to mitigate digital risks to youth mental health, balancing user safety with content creator rights. This work offers a critical step forward in responsible AI and public mental health protection in the era of algorithm-driven media.

The Power of Conversation: Analyzing the Impact of Starter Response on Backer Accumulation in Crowdfunding (p. 378)

Haoyan Sun, Weijia You, Junchao (Jason) Li, Han Zhang

This study investigates how actively engaging potential backers through timely responses in campaign discussion boards influences fundraising success on reward-based crowdfunding platforms. Our findings reveal several critical implications. First, responses from campaign starters significantly attract new contributors. Second, starter response amplifies the “herding effect,”

where the number of pledged backers attracts more new backers. Last, although achieving funding goals typically reduces momentum, we find that ongoing engagement via active response to backer comments mitigates this decline and sustains backer interest. Practically, fundraisers should actively manage discussions to signal trustworthiness, commitment, and manage expectations. Platforms can enhance communication effectiveness by summarizing key discussion sentiments, highlighting frequent topics, and integrating tools like live chat to foster efficient real-time communication. Adopting these practices can significantly enhance crowdfunding effectiveness and sustainability.

Emotions in Online Content Diffusion (p. 398)

Yifan Yu, Shan Huang, Yuchen Liu, Yong Tan

Which emotions make a post go viral, and which hold it back? Analyzing 387,000 news articles and the sharing paths of more than six million users on WeChat—China's super-app for social media—we map how eight discrete emotions drive information diffusion. Econometric models show that content expressing anxiety, love, or surprise reliably travels farther; reaches more unique people; and forms deeper, broader, more viral cascades, whereas anger, sadness, and even joy dampen propagation. Diffusion also varies with who shares the content and how strongly sharers are connected, underscoring the importance of audience- and tie-specific strategies. For practitioners, framing messages around constructive uncertainty (anxiety), prosocial appreciation (love), or unexpected insight (surprise) can amplify reach, whereas caution is warranted when leveraging anger. For policymakers and platforms, monitoring anxiety- and surprise-laden posts enables early intervention, and transparency audits must weigh the unequal amplification power of specific emotions when evaluating recommender algorithms and influence operations.

Does Social Bot Help Socialize? Evidence from a Microblogging Platform (p. 416)

Yang Gao, Maggie Mengqing Zhang, Mikhail Lysyakov

Leveraging advancements in large language models, social media platforms are increasingly deploying sophisticated chatbots, termed social bots, with the potential to stimulate user interaction. However, concerns linger regarding the socializing value of these bots in public settings. We investigate this phenomenon using data from the launch of CommentRobot on a microblogging platform. Analyzing user interactions with this platform-owned bot, we find that posts receiving bot-generated comments experience increased user engagement, demonstrating the socializing value of social bots at the post level. Results from an online experiment confirm this finding and reveal that the socializing value stems from both bot identity and high-quality content. Mechanism tests suggest that the

quality of bot-generated comments—particularly their attractiveness, relevance, and inclusion of social cues—significantly influences user engagement. Moreover, we evaluate existing bot targeting strategies and propose policy learning-based improvements to optimize engagement. Despite the positive impact on post-level engagement, we find that receiving bot comments primarily encourages future bot-related posts rather than increasing overall user posting activity, contrary to platform expectations. Our findings highlight the need for platforms to refine social bot deployment strategies to maximize user engagement while mitigating unintended consequences.

Emotionality in Political Social Media Communications: The Moderating Role of Audience Diversity (p. 434)

Beth L. Fossen, David A. Schweidel

Politicians are increasingly turning to social media to engage with the public. At a time marked by extreme partisanship, rhetoric is often emotionally charged. But does this help or hinder efforts to engage followers and attract new ones? Our research examines how the emotionality of U.S. senators' tweets affects both engagement (e.g., shares) and follower growth. Although emotional posts can increase engagement, this effect diminishes for senators from ideologically diverse battleground states, especially when the emotion is negative. For diverse constituencies, less emotional content may actually lead to greater engagement. Although emotionality can fuel engagement, it is the substantive content of posts that drives follower growth. These findings have implications for political discourse and communication strategy. Although intensely emotional and negative posts may energize a homogeneous base, they can alienate broader audiences and do not attract new followers. Beyond politics, content creators must be mindful of audience heterogeneity and be judicious in the use of emotionally charged messaging.

On-Demand Healthcare Platforms: Impact of Question and Answer Service on Online Consultations and Offline Appointments (p. 454)

Yixuan Liu, Ashish Agarwal, Guoming Lai, Weihua Zhou

On-demand healthcare platforms are increasingly integrating low-cost question and answer (Q&A) services to help patients navigate care options. Using data from a major Chinese health platform, this study shows that Q&A services drive both online and offline engagement—boosting online consultations by 2%, offline appointments by 4.3%, and consultation revenue by 6.6%. These services not only encourage follow-ups with the same doctor but also, generate spillover demand to other providers and specialties, especially those with higher professional titles. Patients benefit through better provider matching, fewer revisits, and reduced time

spent browsing for care—all of which suggest improved outcomes. Q&A serves as an effective entry point, reducing uncertainty and guiding patients to the appropriate level of care. From an operational perspective, the service increases demand without cannibalizing higher-margin services, offering a low-cost lever for engagement and conversion. Platforms should incentivize generalists and junior doctors, who often serve as initial touchpoints and channel traffic to specialists, to maximize the broader impact of Q&A engagement. For providers and policymakers, the findings highlight how lightweight, scalable tools, like Q&A, can improve care access and coordination—especially in fragmented systems where patients select providers without formal referrals.

Mitigating Exposure Bias for Recommendations in Physical Spaces: An Unbiased Pairwise Ranking Approach Using Spatial Movement (p. 479)

Jiangning He, Weikun Wu, Fan Zhang, Zhepeng (Lionel) Li

Given the remarkable success of personalized recommendations on digital platforms, brick-and-mortar businesses are increasingly exploring artificial intelligence-powered recommendation services in physical spaces. To address this emerging need, our study introduces a generalized recommendation problem, termed point-of-interest recommendations in physical spaces with pedestrian movement (P3M). Applicable scenarios for P3M include store recommendations in shopping malls, product shelf recommendations in hypermarkets, and so on. A critical impediment in P3M is *exposure bias*: When the exposure likelihood of items to users is unevenly distributed, indiscriminately treating all unobserved interactions as negative feedback introduces bias to the learning of recommender systems. To address this issue, we propose a novel recommendation method, unbiased movement-aware pairwise ranking (UMPR), which integrates pedestrian movement modeling with unbiased pairwise learning to achieve effective and unbiased recommendations. Using real-world shopping mall data, we demonstrate that UMPR not only delivers more accurate recommendations compared to state-of-the-art methods but also brings added monetary value for mall owners and promotes humanistic fairness across store tenants. Overall, our study emphasizes the importance of mitigating exposure bias through pedestrian movement modeling, advancing the field of recommendations in physical spaces.

Navigating the Storm: Toward a Theory of IT Portfolio Diversity, Leadership Power, and Organizational Resilience to Major Shocks (p. 504)

Mengxiang Li, J. J. Po-An Hsieh, Jingyu Li, Xincheng Wang, Bin Gu

In an era of escalating disruptions—from pandemics to economic crises—organizational resilience is vital for

survival and growth. This study offers actionable insights for business leaders and policymakers on strategically leveraging information technology (IT) resources and leadership structures to navigate major shocks. We demonstrate that although diverse IT portfolios (e.g., cloud systems, data analytics tools) can enhance resilience by enabling adaptability, balance is key: moderate IT diversity strengthens resilience, but excessive diversity creates coordination complexities that erode it. Crucially, empowering IT leaders with formal decision-making authority helps firms maximize IT flexibility, shifting this tipping point to harness greater IT diversity without compromising coordination. Our analysis of firms during the pandemic reveals that crisis-induced industry turbulence further shapes these dynamics. Adverse turbulence intensifies the risks of overdiversification, requiring tighter alignment between IT strategies and leadership oversight. Conversely, beneficial turbulence allows firms to experiment with IT resources more freely. Policymakers can support businesses by fostering digital infrastructure, incentivizing IT leadership training, and creating frameworks for public-private data sharing during emergencies. By aligning IT flexibility with coordinated execution, firms can turn crises into opportunities for sustained success. This research equips stakeholders with evidence-based strategies to future-proof operations in an unpredictable world.

Digital Bricolage and Its Limits: How Microenterprises Undertake Digitalization in Resource-Constrained Environments (p. 526)

Stan Karanasios, P. K. Senyo, Aljona Zorina, John Effah

Small enterprises are under pressure to change and digitalize. Many have had to reimagine how they use digital technology to do business. Our research suggests that for microenterprises, digitalization can be an organic form of development, driven by making do with the digital resources at hand rather than a deliberate strategy that prioritizes investment in complex digital technology. Harnessing the potential of this could accelerate the UN's Sustainable Development Goal to increase access to value chains and markets for small enterprises in developing countries. Our findings offer evidence for policymakers to rethink conventional strategies and develop more context-sensitive support mechanisms that reflect how digitalization actually unfolds in resource-limited settings. For information systems and management education research, the empirical study theorizes digitalization from an alternative perspective that is less emphasized in current literature. It considers the reality of many resource-limited business ventures around the world and their need to "make do." This contrasts with the prevailing emphasis on cutting-edge technology in existing literature and case studies. By spotlighting the emergent, adaptive, and often improvised nature of small enterprise digitalization, this work

invites a rethinking of how we teach, study, and support digital innovation in diverse global contexts.

The ITEM Ontology: A Tool to Elucidate the Anatomy of Psychometric Indicators (p. 549)

Kai R. Larsen, Roland M. Mueller, Dario Bonaretti, Diana Fischer-Preßler, James (Jim) Burleson, Nimisha Singh, Jeffrey Parsons, Jean-Charles Pillet, Lan Sang, Zhu (Drew) Zhang

Survey research relies on well-constructed measurement indicators, yet the words inside an indicator are rarely examined systematically. Scale development has traditionally treated indicators as indivisible units, validated through statistical procedures—a practice that misses linguistic and semantic problems hidden within individual indicators. The Indicator Terminology for Explanation and Measurement (ITEM) Ontology introduces a new level of analysis for measurement indicators: the parts of an indicator. By annotating up the constitutive elements of any given indicator (objects, measurables, qualifiers, and response), researchers gain a precise, shared language for discussing what an indicator actually says—and whether that matches what it is supposed to measure. This opens the door to thinking in greater detail about challenges in scale development such as content validity (do the indicators faithfully represent the construct definition, or do they over- or underrepresent it?) and indicator quality (does the wording introduce problems such as double-barreledness, vagueness, etc.). Validated with information systems (IS) scholars and polling professionals at Gallup, ITEM offers practitioners, journal reviewers, and scale developers a shared language for evaluating and improving measurement instruments. To annotate your indicators using the ITEM Ontology, please visit <https://itemontology.org/>, a tool we have developed to make indicator analysis accessible to the broader IS community.

Star Wars: An Empirical Study of Star Performer Turnover and Content Supply on Multisided Streaming Platforms (p. 568)

Jens Forderer, Dominik Gutt, Brad N. Greenwood

Live-streaming platforms fiercely compete for top content creators, yet little is known about the effects of losing a star performer. This study examines the impact of the 2019 departure of Fortnite streamer Richard Tyler "Ninja" Blevins from Twitch to Mixer. Using a quasi-experimental research design, we find that Ninja's exit led to a 20.4% decline in content production from peer creators, which reveals a critical spillover effect on content supply. Contrary to concerns that creators would abandon Twitch entirely, our findings suggest that they instead downsized their output. Notably, streamers with diversified content portfolios and larger followings were more resilient to the star's departure. For platform

managers, these results highlight the strategic importance of retaining top creators to sustain both direct and indirect content supply. Managing star departures effectively is crucial for ensuring a stable content ecosystem. Efforts to counteract negative spillovers may include incentivizing content diversification and mitigating reliance on individual stars, for instance, through enhancing visibility and monetization opportunities for midtier creators. Strengthening platform loyalty through long-term incentives might also reduce the risk of sudden exits.

Silence Inside Systems: Roots and Generativity Consequences (p. 584)

Amrit Tiwana, Hani Safadi

Modern information technology (IT) systems evolve less through visible coordination and more through subtle behavioral patterns—most notably, silence: the relative absence of interaction internally. We conceptualize silence as a dynamic system-wide behavior distinct from architecture. This quietness is a powerful design trait. Our study of nearly 1,400 systems over 25 years shows that when modules “talk” less, developers focus more, accelerating evolutionary innovation. Silent systems produce cleaner, more maintainable code and are 600 times more likely to be extended by others. This matters now more than ever. As systems grow larger and more entangled, brittleness has become a pressing problem; small tweaks routinely trigger large failures. Brute-force solutions, like scaling compute power, are reaching physical and economic limits. Silence is an architectural antidote; by reducing internal dependencies, it lets teams adapt swiftly, avoid technical debt spirals, and better steward artificial intelligence-driven and autonomous systems. For practitioners and policy-makers, this paper urges a rethink of how we build and sustain IT systems. Rather than endlessly scaling resources to support chatty, tightly linked modules, designers should prioritize structural quietness. Silence is not just good hygiene; it is a lever for IT resilience, scalability, and generative innovation. Silence is golden; it is what sharpens attention, anchors stability, and unlocks generative possibility.

Organizing for Software Product Development: The Effects of Team Structure, Product Complexity, and Cross-Team Coordination (p. 603)

Jungpil Hahn, Junjie Zhou, Gwanhoo Lee, Vasili Zorin

This study investigates how software development team structures influence performance under varying conditions of product and architectural complexity. Using computational simulation grounded in organizational theory, the research compares feature teams—

organized around end-to-end functionality—and component teams—organized around technical subsystems. The findings indicate that feature teams generally outperform component teams, particularly when product complexity is high. Moreover, the study reveals that the effectiveness of team structures is moderated by coordination intensity and team scope. Moderate levels of cross-team coordination yield better outcomes than minimal or excessive coordination, whereas broader subteam scopes can improve performance when coordination is costly or limited. These results have significant managerial implications for software development practice: team structure should be aligned with both the problem space and solution space complexity, coordination mechanisms must be strategically calibrated, and team boundaries should be adjusted based on the organization’s capacity to manage dependencies. The study provides a robust framework for informing team design decisions, offering insights relevant to agile software development. Practitioners are encouraged to adopt a contingency-based approach to team organization, tailoring structural choices to contextual demands in order to optimize delivery efficiency and innovation.

Data Donations for Digital Contact Tracing: Short- and Long-Term Effects of Monetary Incentives (p. 627)

Victoria Fast, Daniel Schnurr

Data donations promise to unlock the social benefits of personal data. Recently, contact-tracing apps were developed to collect data from individuals to fight the COVID-19 pandemic. Because the success of these apps depends on widespread adoption and continuous data collection, we evaluate the effectiveness of monetary incentive mechanisms at promoting verified installations of the German Corona-Warn-App and short- and long-term data donations. We find monetary incentives are effective in the short term: They significantly increase app installations and short-term data donations, tripling the number of data donors after 14 days compared to no compensation. However, the positive stimulus of monetary incentives vanishes in the long term: After eight months, installers in treatments with monetary incentives are significantly more likely to have stopped donating data than intrinsically motivated installers who did not receive monetary incentives, as a consequence of experienced opportunity costs and a lack of perceived benefits. Consequently, long-term data donation rates are not significantly higher in treatments with monetary incentives. This suggests one-time payments are ineffective at promoting long-term data donations, as the short-term crowding-in of less intrinsically motivated installers is difficult to sustain when passive app usage limits opportunities for habit formation and convincing users of contact-tracing benefits.

Signaling Quality to Consumers: The Role of Social Media Marketing (p. 643)

Qinquan Cui, Kenan Arifoğlu, Dongyuan Zhan

Firms are increasingly turning to social media marketing to boost product visibility and spread consumer-generated content, which often reveals valuable information about product quality. However, our research shows that this dual role can backfire; heavy spending on social media marketing may no longer help high-quality firms stand out. Instead of investing heavily to reach a broad audience, high-quality firms may do

better by cutting back and focusing on targeted niche markets. Furthermore, as consumers become more capable of discerning product quality through social media content, low- and medium-quality firms benefit less from mimicking one another. This creates stronger incentives for lower-quality firms to mimic the high-quality firm, which increases consumer confusion and weakens the quality signal conveyed through investment in social media marketing. These findings help explain the variation in firms' social media marketing strategies and offer practical guidance on allocating social media budgets more effectively.