Special Issue: Economics of Electronic Commerce

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Electronic commerce has come a long way since the advent of Web-based business in the early to mid-1990s. With a rich array of theories regarding information asymmetry,
network effects, switching cost, bundling, pricing, and transaction costs, economics has been the dominant reference discipline in this line of research in information systems. By encouraging and publishing high-quality electronic commerce articles for two decades, the *Journal of Management Information Systems* has played a key role in the development of the academic literature in this domain. This special issue showcases a wide variety and richness of problems, as well as the sophistication of methodology and insights representing the cutting edge in contemporary electronic commerce research.

The first three articles of this special issue involve the organization, design, and growth of electronic markets. Eric Overby and Sabyasachi Mitra, in “Physical and Electronic Wholesale Markets: An Empirical Analysis of Product Sorting and Market Function,” examine the coexistence of wholesale physical and electronic markets for used automobiles. They analyze adverse selection and transaction costs, and find that electronic markets serve as spot markets, while physical markets play the role of the general exchange. The results offer new insights into the distribution of supply and demand across the two channels.

Chris Parker and Bruce W. Weber, in “Launching Successful E-Markets: A Broker-Level Order-Routing Analysis of Two Options Exchanges,” focus on electronic exchanges for options and analyze strategies to build the all-important critical mass for new entrants. More specifically, they focus on the unique aspects of the International Securities Exchange (ISE) and Boston Options Exchange (BOX)—instantaneous order execution, direct user access, and low costs—to understand the growth pattern of these new markets. They find that broker order-routing patterns predicted by member affiliations (rather than network effects) are a key driver of market growth.

In a study of the design of electronic auctions, Jochen Reiner, Martin Natter, and Bernd Skiera, in “The Impact of Buy-Now Features in Pay-per-Bid Auctions,” analyze an auction market strategy where losing bidders in pay-per-bid auctions can apply the bidding fees toward buying the auction item with a buy-now feature. The authors demonstrate that this feature increases participation, and results in more aggressive bidding, higher profits per auction, and loyalty, though the opposite holds true for voucher auctions. The authors suggest that the buy-now feature can mitigate many of the problems associated with pay-per-bid auctions.

Digital goods play a vital role in electronic commerce. Four studies in this special issue focus on various facets of digital products including bundling and customization, critical success factors in the mobile app market, motivation behind virtual gifting, and piracy. Using theories of behavioral economics, Jesse C. Bockstedt and Kim Huat Goh, in “Customized Bundling and Consumption Variety of Digital Information Goods,” study customized bundling of digital goods using both experimental and empirical approaches. They introduce two new constructs—design cost effects and compromise effects—and show that while lower transaction costs may increase supply-side variety, consumption variety may be reduced due to these effects. The results have important implications for bundling and customization strategies that are commonly witnessed in music and other digital products.
Mobile applications offered through app stores have ushered a revolution in mobile Internet usage. Gunwoong Lee and T.S. Raghu, in “Determinants of Mobile Apps’ Success: Evidence from the App Store Market,” study drivers of survival and success in this hypercompetitive market. Using data from the Apple App Store, they find that a wider assortment of product offerings across categories, free offers, initial ranks, review scores, focus on less competitive categories, and continuous quality improvements help mobile applications enter the Top 300 chart and increase the chances of staying there. One of the key recommendations of the study is that sellers of these applications should take advantage of the diversity of preferences among consumers.

Sigi Goode, Greg Shailer, Mark Wilson, and Jaroslaw Jankowski, in “Gifting and Status in Virtual Worlds,” study a unique issue involving virtual gifts that users can purchase with real money. The authors link virtual gifting to seeking enhancement of social status in online friendship networks, and show that virtual gift giving increases the use of the system. The authors identify antecedents of virtual gifting, which can help system proprietors identify users who are most likely to purchase virtual gifts.

With the rapid proliferation of digital goods, piracy has become a key concern for developers and sellers. Matthew J. Hashim, Karthik N. Kannan, Sandra Maximiano, and Jackie Rees Ulmer, in “Digital Piracy, Teens, and the Source of Advice: An Experimental Study,” study acts of music piracy in an experimental setting where teenage consumers receive advice on music from their parents, a record label, and an external regulator. The results suggest that minimum (maximum) piracy results when parents (external regulator) are the source of advice. The authors conclude that social ties and potentially negative consequences (e.g., penalties faced by parents for their children’s actions) reduce digital piracy, while the absence of such ties aggravates the piracy problem.

While much of the electronic commerce literature has focused on business-to-consumer (B2C) or consumer-to-consumer (C2C) issues, business-to-business (B2B) commerce has been the dominant player in terms of the volume of money involved. Yan Dong, Xiaowen Huang, Kingshuk K. Sinha, and Kefeng Xu, in “Collaborative Demand Forecasting: Toward the Design of an Exception-Based Forecasting Mechanism,” analyze an exception-based mechanism in collaborative planning, forecasting, and replenishment (CPFR) to induce truthful sharing of information among supply chain partners. They demonstrate that in the presence of information asymmetry between B2B partners, incentive-based contracts involving revenue-sharing, cost-sharing, transfer payment, and CPFR-specific exception resolution can all be used for truthful information sharing, though with different business outcomes. The authors recommend exercising caution in designing and customizing B2B collaboration mechanisms.

It is evident from this brief description that the articles in this special issue represent some of the emerging areas and the latest thinking in the field. These studies contribute significantly to our understanding of economic issues in electronic commerce, and are likely to spawn new research in related areas.