

NOVEMBER RESEARCH REPORT COLLEGE OF MANAGEMENT

ACCEPTED PAPERS IN REFEREED JOURNALS

David Baumer

Otto, Paul N., Annie I. Anton, and David L. Baumer, "The ChoicePoint Dilemma: How Data Brokers Should Handle the Privacy of Personal Information," *IEEE Privacy and Security*

Last year was marked by a significant increase in the number of security and privacy breaches disclosed to the public. Leading the charge was ChoicePoint, a data broker that suffered fraudulent access to its vast databases of personal information. ChoicePoint and other data brokers exist in a largely unregulated environment, in which there appears to be little concern for the security and privacy of the personal information they store on virtually every U.S. citizen. In this paper we examine the details of ChoicePoint's data breach. Our analysis explores what went wrong from the perspective of consumers and executives as well as policy and IT systems. Based on our study, we provide eight specific recommendations for information traders and system designers, and discuss what consumers can do to manage the risk of identity theft.

Robert Handfield

Cousins, P., Handfield, R., Lawson, B. and Petersen, K. "Knowledge Sharing in Inter-Organizational Product Development Teams: The Effect of Formal and Informal Socialization Mechanisms", *Journal of Product Innovation Management*

Working collaboratively with suppliers is increasingly cited as a 'best practice' in product development. The importance of sharing knowledge between buyer and supplier in this context has been well recognized, although comparatively little research exists on the inter-organizational socialization mechanisms that facilitate it. Our research proposes and tests a theoretical model of the impact of formal and informal socialization mechanisms on the level of knowledge sharing within inter-organizational product development projects, and the subsequent effect on buyer firm performance. Results from our study of 111 manufacturing organizations in the United Kingdom largely support our hypotheses. We find that informal socialization mechanisms (e.g. communication guidelines, social events) play an important role in facilitating inter-organizational knowledge sharing, while formal socialization mechanisms (e.g. cross-functional teams, matrix reporting structures) act indirectly through informal socialization to influence knowledge sharing. Our results also show that inter-organizational knowledge sharing is positively associated with supplier contribution to development outcomes, which in turn, improves buyer product development performance, and ultimately, financial performance. We encourage product development managers to build social ties between inter-organizational development teams in order to increase the flow of knowledge, and improve both product development outcomes and financial performance.

Craighead, Chris; Blackhurst, Jennifer; Handfield, Robert; Rungthasaman, Manus "The Severity of Supply Chain Disruptions: Design Characteristics and Mitigation Capabilities," *Decision Sciences*

Supply chain disruptions and the associated operational and financial risks represent the most pressing concern facing firms that compete in today's global marketplace. Extant research has not only confirmed the costly nature of supply chain disruptions but has also contributed relevant

insights on such related issues as supply chain risks, vulnerability, resilience, and continuity. In this conceptual note, we focus on a relatively unexplored issue, asking and answering the question of how and why one supply chain disruption would be more severe than another. In doing so, we argue, *de facto*, that supply chain disruptions are unavoidable and, as a consequence, that all supply chains are inherently risky. Employing a multiple-method, multiple-source empirical research design, we derive novel insights, presented as six propositions that relate the severity of supply chain disruptions (i) to the three supply chain design characteristics of density, complexity, and node criticality and (ii) to the two supply chain mitigation capabilities of recovery and warning. These findings not only augment existing knowledge related to supply chain risk, vulnerability, resilience, and business continuity planning but also call into question the wisdom of pursuing such practices as supply base reduction, global sourcing, and sourcing from supply clusters.

Duncan Holthausen

Duncan Holthausen and Fanis Tsoulouhas, "The Good, the Bad and the Ugly: Agent Behavior and Efficiency in Open and Closed Organizations." *Economic Theory*

Current literature has largely ignored the fact that some organizations are highly selective when admitting new agents while others are more open. In addition, some organizations audit or sort agent behavior within the organization more aggressively than others. One might expect *a priori* that closed, highly selective, organizations would always be more efficient because they screen out the worst types, which could lead to better agent behavior. We show that this is not the case. Specifically, when agent behavior in equilibrium is uniform across organizations (i.e., when the number of agents behaving the same way is identical), closed organizations are inefficient. However, when agent behavior varies across organizations, closed organizations may or may not be inefficient, depending on net payoffs to the organization and the agents. Our analysis implies that organizations should choose the open type when screening or sorting costs are high, when there is a high frequency of good agent types in the population, when agent misbehavior does not reduce output significantly, and when penalties for misbehavior are large.

Sangkil Moon

Sangkil Moon, Wagner A. Kamakura, and Johannes Ledolter (2007), "Estimating Promotion Response When Competitive Promotions Are Unobservable," *Journal of Marketing Research*.

This study addresses a problem commonly encountered by marketers who attempt to assess the impact of their sales promotions: the lack of data on competitive marketing activity. In most industries, competing firms may have competitive sales data from syndicated services or trade organizations, but seldom have access to data on competitive promotions at the customer level. Promotion response models in the literature either have ignored competitive promotions focusing on the focal firm's promotions and sales response or have considered the ideal situation where the analyst has access to full information about each firm's sales and promotion activity. The authors propose a random-coefficients hidden Markov promotion response model, which takes the unobserved promotion level by competitors as a latent variable driven by a Markov process to be estimated simultaneously with the promotion response model. This allows them to estimate cross-promotion effects by imputing the level of competitive promotions. First, the authors test the proposed model on synthetic data through a Monte Carlo experiment. Then, they apply and test the model to actual prescription and sampling data from two main competing pharmaceutical firms in the same therapeutic category. The two tests show that, in comparison with several benchmark models, the proposed random-coefficients hidden Markov model (HMM) successfully imputes unobserved competitive promotions and, accordingly, reduces biases in the own and

cross promotion parameters. Furthermore, the proposed model provides better predictive validity than the benchmark models.

Yong-Soon Kang, Sangkil Moon, and Jaebeom Suh (2007), "Influencing Factors in High vs. Low Share Brand Choice," *International Journal of Management Science*.

Consumers tend to prefer brands with high market shares, but not always. We investigate where advantages and disadvantages for high-share brands arise. Specifically, we identify factors that influence the choice of high-share vs. low-share brands among various product and consumer characteristics related to brand-share perceptions. Furthermore, using 8 product categories varying in terms of purchase decision involvement, we show how the influencing factors vary across the categories. At the general level that cover all the 8 categories, our hierarchical Bayesian regressions analysis shows that factors that favor high-share brands are purchase decision involvement, search goods, experience goods, price-quality relationship, positive network externalities, and price-prestige beliefs. Conversely, consumers who value variety seeking and need for uniqueness favor low-share brands. The effects of these factors, however, vary across product categories. The identification of these characteristics will help brand managers establish a more effective brand-share strategy in such areas as setting an optimal market share goal, extending a brand, and developing ad copy.

It is important to understand different consumer segments and how each segment uniquely behaves in the choice between HSB and LSB. Our segmentation analysis using the latent class methodology demonstrates the general market has two distinct segments – (1) a HSB segment (86%) composed of HSB buyers and (2) a LSB segment (14%) composed of LSB buyers. The two segments are also shown to have different significant factors that explain their brand choice. Our segmentation analysis can help marketers establish a marketing strategy that targets a specific segment of interest.

Fay Payton

Mbarika, V., Payton, Fay Cobb and Kvasny, L. "The Case of Women and IT in Sub-Saharan Africa: Health & Education Issues Abound," *The Information Society*

While Sub-Sahara African women have historically assumed the roles of both housewives and subsistence farmers, they have had few opportunities to participate in the modern economies of the region. However, this trend is changing with the exponential growth of information and communications technologies (ICT), giving many Sub-Sahara African women access to computers, the Internet and other related technologies. Based on the work of a four-member research team from Kenya and the US, this paper examines the integration of female college students into the formal ICT work sector in Kenya. We do so by examining major bottlenecks and enablers to such integration from historical and contemporary perspectives. Using an interpretive approach, we conducted thirty-two interviews with women in an ICT program offered by a university in Kenya. Our findings indicate that women were highly optimistic, embracing ICT as a practical mechanism for achieving entry into the labor market. However, they perceived significant structural barriers, such as public policies that failed to facilitate the development of the ICT sector, gender discrimination by employers, and training that provided them with insufficient technical skills to enable them to effectively perform in the workplace. These findings largely confirm the gendered perspectives found in similar studies conducted in other countries. However, what appear as global perspectives are informed by the local causes.

Fanis Tsoulouhas

Duncan Holthausen and Fanis Tsoulouhas, "The Good, the Bad and the Ugly: Agent Behavior and Efficiency in Open and Closed Organizations." *Economic Theory*

Abstract reported above

Jack Wilson

Richard Sylla, Jack W. Wilson, and Robert E. Wright, "Integration of Trans-Atlantic Capital Markets, 1790-1845", *Review of Finance*, Vol. 10, Issue 4, (2006).

Abstract: During the 1790s, European investors began to purchase substantial quantities of US government and corporate securities. A number of these securities were traded in markets on both sides of the Atlantic. Based on market price quotations we compiled for the same securities in London and New York, we ask if these trans-Atlantic securities became integrated. We find little evidence of market integration before 1816, and substantial evidence of it thereafter. Financial globalization—the convergence of financial asset prices in markets on different continents—began earlier than most have suspected.

REFEREED JOURNAL ARTICLES IN PRINT

Fay Payton

Payton, Fay Cobb. "African-American IT Professionals: Diversity and Employee Rights Considered," *Journal of Individual Employment Rights: Special Issue on Implication of Technology and Information Systems for Individual Employee Rights*, 2006 (11:4), 349-367.

Payton, Fay Cobb, Mbarika, V. and White, S. D. "Using IRSS Psychology Theory to Understand the Experiences of Under-represented Faculty in the IS/IT Domain," *Decision Sciences Journal of Innovative Education*, 2006 (4:2), 191-213.

OTHER PUBLICATIONS

Fay Payton

Payton, Fay Cobb, "Digital Divide or Digital Equity: Other Considerations?" 2007, In *International Encyclopedia of the Social Sciences*, 2nd Edition, editor William A. Darity.

Payton, Fay Cobb (with L. Kvasny) "African Americans and the Digital Divide," In *Encyclopedia of Information Science and Technology*, 2nd Edition, Number 1-803, 2007, editor Mehdi Khosrow-Pour.

Payton, Fay Cobb, "Analytics – Unpacking Hidden Knowledge of Social Exclusion in the AIDS/HIV Black Community," 2007, *Encyclopaedia of Healthcare Information Systems*, editors Nilmini Wickramasinghe and Elie Geisler.

Gregg Young

Member of editorial board and author of 14 entries, *Encyclopedia of Business Ethics and Society*, Sage, forthcoming

PRESENTATIONS

Steve Allen

Council of Graduate Schools Annual Meeting, Dec. 8, Washington, DC, "New Initiatives in Graduate Education: Requirements of a Service Economy."

Marianne Bradford

Marianne Bradford, Mark Beasley, and Don Pagach, "Market Reactions to Announcements of IS Outsourcing Decisions: An Analysis of the Impact of Financial Characteristics and Managerial Outsourcing Justifications," American Accounting Association Information Systems Section Midyear Conference 1/3-1/6

Fay Payton

Payton, Fay Cobb, Invited Presenter, Presentation Topic "Global Digital Divides in Healthcare & Education," London School of Economics, December 2006

The NCSU Women in Science & Engineering Advisory Board and Fay Cobb Payton. 2007, American Society of Engineering Education Annual Conference & Exposition Proceedings, An Integrated Living And Learning Community For First And Second Year Undergraduate Women In Science And Engineering

Payton, Fay Cobb, 2006, Academy Think Tank Presentation and Proceedings, Business Analytics: An Incomplete Story of AIDS & the Black Community, Atlanta, Georgia

Payton, Fay Cobb, 2006, Academy Think Tank Presentation and Proceedings, Digital (In)Equity and Impact on Education, Atlanta, Georgia