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Management Insights

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Securing the Containerized Supply Chain: Analysis of Government Incentives for Private Investment (p. 219)

Nitin Bakshi, Noah Gans

More than 15 million containers enter the United States through its ports each year carrying more than \$400 billion in products. How should the U.S. Bureau of Customs and Border Protection (CBP) structure its inspection programs to improve safety against terrorist threats while maintaining fluidity at borders? Because inspection-driven congestion is costly, CBP provides incentives for firms to improve security upstream in the supply chain to reduce the inspection burden at U.S. ports. Drs. Bakshi and Gans evaluate the CBP Customs-Trade Partnership Against Terrorism (C-TPAT) incentive program to understand its effect on the CBP, firms, and terrorists. They find that, if properly run, C-TPAT can shift some of CBP's security burden to private industry while simultaneously reducing total terror prevention costs. However, the authors find that, as CBP-provided inspection capacity grows, membership in C-TPAT falls. The insight for management: In order to successfully transition to a different program, even if it is more efficient, the option to retain the status quo must be limited.

An Empirical Analysis of Mobile Voice Service and SMS: A Structural Model (p. 234)

Youngsoo Kim, Rahul Telang, William B. Vogt, Ramayya Krishnan

How should wireless network providers price their voice and data services? Drs. Kim, Telang, Vogt, and Krishnan examine the usage patterns of more than 6,800 Asian customers of a major wireless service provider. They empirically estimated the own- and cross-price elasticities for these services. They find that SMS and voice service are small substitutes: A 10% increase in the price of voice minutes will induce about a 0.8% increase in the demand for SMS. The own-price elasticity of voice is also low, approximately -0.1, suggesting that mobile phone service consumption is something of a necessity to these customers. Such results might suggest that mobile phone companies should raise prices; however, the

data cover only a single year, over which time consumers may have difficulty changing providers, and the authors note that their estimates apply only to substitution between plans within the firm, not to substitution between firms. It is easy to imagine that a customer's long-run response to increased prices is changing providers, not changing plans. The insight for management: It is critical to understand and define price sensitivities among product offerings appropriately when pricing a suite of interrelated products.

Hybrid Entrepreneurship (p. 253)

Timothy B. Folta, Frédéric Delmar, Karl Wennberg

Which path to choose: corporate career or entrepreneurial self-employment? Why not both, suggest Drs. Folta, Delmar, and Wennberg in their exploration of this decision. They posit that individuals often transition incrementally toward entrepreneurship by retaining their wage job while gradually entering into self-employment. They find in their empirical analysis of 44,000 Swedish male wage earners in the knowledge-intensive sector that these "hybrid entrepreneurs" represent a significant share of all entrepreneurial activity. They find that hybrid entry is preferred to self-employment entry by individuals who are more capable (because they have more education, fewer prior jobs, and less time in unemployment), who have lower switching costs (longer industry tenure and working in larger firms), and who have less self-employment experience. The insight for management: The best and brightest in the organization might be dabbling in entrepreneurial activities to get a taste of what it would be like to set out on their own venture.

Managing Know-How (p. 270)

Deishin Lee, Eric Van den Steen

Should a firm develop a formal knowledge system? How can firms leverage knowledge management systems to optimally leverage employee-generated know-how? How should knowledge be managed, particularly in terms of what information to record? Drs. Lee and Van den Steen find that firms benefit more from a knowledge system when they are

larger, face the same issues more frequently, have higher turnover, and face problems about which there is less general knowledge. However, recording moderately successful practices can be counterproductive because doing so may inefficiently reduce employees' incentives to experiment. This potential trap forces firms into an exploration–exploitation trade-off. The authors suggest that recording successes (what to do) is more valuable than recording failures (what not to do) and that these best practices might be more useful at the plant level than at the firm level. The insight for management: Knowledge management systems can be a boon and a bane; firms that value a knowledge system most should also be most selective in recording and using information.

Predicting Utility Under Satiation and Habit Formation (p. 286)

Manel Baucells, Rakesh K. Sarin

We know that consumers at times fall into habitual buying habits, making a purchase because that's what they always do, and at other times seek a change. However, it has been historically difficult to capture this dichotomous behavior in modeling human behavior. A model proposed by Drs. Baucells and Sarin addresses the trade-off between seeking variety and maintaining acquired habits. Their model captures both positive and negative intertemporal correlations of purchase habits by capturing both satiation (leads to variety) and craving (leads to habitual) behaviors. Furthermore, the model helps to explain "projection bias": why people buy something different in anticipation of enjoying greater variety but later opt to consume the habitual product. An insight for management: A one-time introductory offer may result in a single impulse purchase, but, if the consumer does not adopt the product into her habitual consumption, the one-time purchase might be the only result.

Cross-Function and Same-Function Alliances: How Does Alliance Structure Affect the Behavior of Partnering Firms? (p. 302)

Wilfred Amaldoss, Richard Staelin

Firms often collaborate to develop and deliver new products. These collaborations vary in terms of the similarity of the competencies that partnering firms bring to the alliance. In "same-function" alliances, partnering firms have similar competencies, whereas in "cross-function" alliances, partners have very different competencies. Drs. Amaldoss and Staelin find that, on average, same-function alliances are expected to perform better than cross-function alliances, holding fixed the level of inputs. They suggest that, as a result, partners in cross-function alliances may invest

more in their alliances than those in same-function alliances. Accordingly, they suggest that partners in cross-function alliances may choose to invest more in learning in early phases to offset collaboration costs in later periods. The insight for management: Increasing the number of partnering firms may not be productive in same-function alliances, but a larger variety of collaborators and competencies improves cross-function alliances. However, a larger variety of collaborators comes at a cost of higher investment in the cross-function projects.

Perturbation of Numerical Confidential Data via Skew- t Distributions (p. 318)

Seokho Lee, Marc G. Genton,
Reinaldo B. Arellano-Valle

The protection of confidential variables in governmental, commercial, and medical databases has become a very important problem. Often, raw data is "perturbed," or modified from their original, confidential values before release. To provide accurate information, or utility of the data, the perturbed data should follow the same distribution as the original. On the other hand, perturbation should minimize unintended disclosure risk. For database security problems, normal distribution is seldom encountered in practice; often the data are asymmetric, or skewed. Drs. Lee, Genton, and Arellano-Valle propose a new data perturbation method, coined the skew- t data perturbation (STDP) method, for numerical database security problems based on skew- t distributions. Unlike the normal distribution, the more general class of skew- t distributions is flexible enough to model skewness and heavy tails in the data. The authors apply the STDP method to a medical database related to breast cancer to demonstrate its usefulness. The insight for management: For database managers wrestling with data utility and disclosure trade-offs, the skew- t distribution may be a more accurate perturbation method.

Buyer Uncertainty and Two-Part Pricing: Theory and Applications (p. 334)

I. P. L. Png, Hao Wang

Two-part prices are widely used: Ski resorts offer season passes providing discounts on usage charges, health clubs charge an annual membership and plus usage fees, night clubs set a cover charge and prices for drinks, and mobile cellular phone network providers offer monthly plans with charges for additional call time. In each case, there is an upfront charge and a subsequent usage charge. Often, the buyer makes a decision on paying the first price before resolving some important uncertainty that is revealed only with the product's use. Drs. Png and

Wang suggest that appropriate two-part pricing of a service can be offered as a form of insurance to risk-averse buyers subject to demand uncertainty. For example, a hotel in Maui can lure more customers by “insuring” buyers against bad weather by charging low fees for bad weather activities (gym usage and massages) but higher costs for beach activities (boating and snorkeling). As a result, customers are more likely to take on the risk of bad weather; even if it rains, there is an attractive alternative. In similar ways, two-part pricing could provide insurance in other markets: For example, health clubs could insure consumers against weight gain (charge less if weight is not lost), and nightclubs could insure patrons against small crowds or bad music (charging low drink prices). The insight for management: By taking on some of the buyers’ risk in a two-part pricing situation through thoughtful pricing, revenues can be enhanced.

Timing of RFID Adoption in a Supply Chain (p. 343)
[Seungjin Whang](#)

The question, “When should we adopt RFID?,” has been pondered extensively over the last decade. Typically, the upstream participant implements the technology at its own cost while the downstream participant receives much of the benefit. For example, when Wal-Mart insisted that its suppliers adopt RFID technology, it was considered a cost of doing business for Wal-Mart suppliers, and Wal-Mart earned the benefits of better and lower-cost inventory control and tracking. Dr. Whang studies the incentives behind the adoption of RFID in a supply chain. Once RFID tags are attached to the items at an upstream site, the same tags can be reused at its downstream sites at lower or zero variable cost. This creates an interesting one-sided “free-rider” problem, where the downstream would wait to free-ride on the upstream’s first move, but not vice versa. Dr. Whang finds that, when the decision maker is upstream, firms tend to adopt too late. Coordinating technology between the upstream and downstream participants would not only save costs, but also speed up the downstream’s RFID adoption. Dr. Whang finds that an equal-cost-split arrangement shifts the free riding to the upstream participant but mitigates the late-adoption problem in many cases. The insight for management is that technology coordination and cost splitting with downstream participants can contribute to the mitigation of the free-rider problem and expedite RFID adoption.

The Interaction Effect of Rivalry Restraint and Competitive Advantage on Profit: Why the Whole Is Less Than the Sum of the Parts (p. 356)

[Richard Makadok](#)

Economic theory suggests that an industry’s profits will increase when firms engage in less price competition. Theory also indicates that a firm that creates superior economic value through a low cost structure or a higher-quality product will earn higher long-run profits that direct and indirect competitors cannot fully compete away. But what is the interaction effect on profit of simultaneously restraining industry rivalry and increasing a firm’s competitive advantage? Dr. Makadok’s theoretical model predicts a negative interaction effect: In order to more fully exploit an economic advantage, a firm might want increased price competition and larger volumes of business over which to exercise this advantage. The management insight provided here is that, given the strength of a firm’s cost or quality advantage, the firm might be more profitable in the face of increased price competition than in a less competitive market.

Divisor-Based Biproportional Apportionment in Electoral Systems: A Real-Life Benchmark Study (p. 373)

[Sebastian Maier](#), [Petur Zachariassen](#),
[Martin Zachariasen](#)

In electoral systems such as Switzerland’s, “proportional apportionment” translates electoral votes into parliamentary seats in such a way that the number of seats given to a party is in proportion to the vote counts of the party. In many electoral systems like Switzerland’s, electoral regions are subdivided into electoral districts. “Biproportional apportionment” methods provide two-way proportionality at both district and region levels. Drs. Maier, Zachariassen, and Zachariasen present an evaluation of divisor-based biproportional apportionment in an electoral system context. By performing experiments on election data from Zurich City Council elections with multimember districts, they evaluate the general quality of divisor-based apportionments with respect to a number of quality measurements. For example, they study the frequency in which a party with a higher vote count in a district ended up with fewer seats in that district. They find that divisor-based methods are fast and perform well, but, in order to attain proportionality over both district and region, some seat “reversals” (reassignment of party) are required.