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Management Insights

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Charitable Motives and Bidding in Charity Auctions (p. 399)
Peter T. L. Popkowski Leszczyc, Michael H. Rothkopf

Can you get more by giving more? Recent field research on bidding in auctions has found that you can. Drs. Popkowski Leszczyc and Rothkopf simultaneously ran charity and noncharity auctions for identical products. Their results show that auctions with all proceeds donated to charity lead to significantly higher selling prices due to higher bidding by bidders with charitable motives. Of course, all proceeds go to charity, making the auction holder no better off except for the psychological benefit of giving. However, the researchers find that auctions with a contribution of 25% of revenues significantly increased bid prices—by more than 41%! Thus, offering a proportion of auction proceeds to charity may result in higher net revenues to the company itself. Some caveats: They did not find that auctions with a charitable focus attracted more people, and they found that auctions with a fixed charitable contribution did not increase bid prices. The management insight: Companies may be able to use charity auctions as part of a corporate social responsibility strategy and at the same time increase net proceeds from auctions even though they donate a proportion of the proceeds to charity.

Navel Gazing: Academic Inbreeding and Scientific Productivity (p. 414)
Hugo Horta, Francisco M. Veloso, Rócio Grediaga

The practice of having Ph.D. graduates employed by the university that trained them, commonly called "academic inbreeding," has long been suspected to be damaging to scholarly practices and achievement. This "navel-gazing" (excessive introspection or self-absorption) tendency is a critical driver of its reduced scientific output when compared with noninbred faculties. Despite this belief, Drs. Horta, Veloso, and Grediaga estimate that 26% of Mexican academics are working at their institution of graduation (they are inbred) based on their data from 64 institutions of higher education in Mexico and a sample of 3,861 researchers. They find evidence supporting the hypothesis that academic inbreeding is associated with lower scholarly output. They also find support for concerns that academically inbred faculty are relatively more centered on their own institution and less open to the rest of the scientific world. However, they also find that a limited presence of inbreds can benefit the research output of noninbreds and potentially the whole university, but a dominantly inbred environment will stifle broad-based faculty scholarly output. The management insight: Academic administrators in developing nations who aim to develop a thriving research environment should consider mechanisms to limit inbreeding.

Revenue Management with Strategic Customers: Last-Minute Selling and Opaque Selling (p. 430)
Kinshuk Jerath, Serguei Netessine, Senthil K. Veeraraghavan

Are Hotwire.com and similar "opaque" sales sites good for sellers? Airlines and hotels often use last-minute sales to dispose of unsold capacity. However, more last-minute discounts may lead to more consumers anticipating the discount, hence potentially reducing revenues for the company. Drs. Jerath, Netessine, and Veeraraghavan show that direct last-minute sales through an opaque intermediary such as Hotwire.com help to mitigate such behavior by hiding many descriptive attributes of the service (e.g., exact departure times for airline tickets) so that it is more difficult for the buyer to predict the ultimate service provider and prices in primary channels are not compromised. The insight for management: Despite the Internet's delivery of ubiquitous price information, intentionally opaque Internet sellers can help create new channels for excess inventory without adversely affecting advanced sale prices in primary channels.

Optimal Commodity Trading with a Capacitated Storage Asset (p. 449)
Nicola Secomandi

How should commodity traders incorporate inventory capacity into their spot market buying and selling decisions? Natural gas, grain coal, and other commodities must be stored at some cost and subject to some capacity; thus, operational conditions must be considered when making financial decisions. The trader has three options: buy, sell, or hold. But the trader must consider the base inventory levels each period, which limit the ability to buy and sell. Dr. Secomandi tests an economic model on natural

gas markets and shows that substantial value can be gained from including operational constraints in spot market decisions. Importantly, future price uncertainty can be incorporated by sequentially reoptimizing a model that ignores this uncertainty. The insight for management: "Purely" financial decisions should not ignore operational considerations to maximize value.

The Impact of Misalignment of Organizational Structure and Product Architecture on Quality in Complex Product Development (p. 468)
Bilal Gokpinar, Wallace J. Hopp, Seyed M. R. Iravani

Could recent Toyota quality problems be due to an asymmetry between their organizational and product structure? Research by Drs. Gokpinar, Hopp, and Iravani evaluates how corporate organization and communication structures affect product quality and new product development in complex products. They study the vehicle development process of a major auto company and use warranty repairs as their performance metric for quality. Through their network analysis, which evaluates subsystem architecture and organizational mismatches, they find that vehicle subsystems of intermediate complexity exhibit abnormally high levels of quality problems. To identify specific subsystems in danger of excessive quality problems, they characterize mismatches between product architecture and organizational communication structure by defining a new metric, called coordination deficit, and they show that it is positively associated with quality problems. The management insight: Organizational structure has a direct impact on the quality of product architecture and on the new product development process.

Package Size Decisions (p. 485)
Oded Koenigsberg, Rajeev Kohli, Ricardo Montoya

Why are raspberries sold in smaller units than blueberries, and blueberries sold in lower quantities than grapes? Drs. Koenigsberg, Kohli, and Montoya describe a model to explain the choice of package size and price for consumer products that deteriorate over time. The model considers four factors: (1) the usable life of the product, (2) the rates at which consumers use the product, (3) the relation between package size and the variable cost of the product, and (4) the minimum quantities that consumers seek to consume for each dollar that they spend (dubbed reservation quantities). The model allows for differences in the usage rates and reservation quantities for the consumers. They find that when the cost increases at a fixed or increasing rate with the package size, packages should be of the smallest possible size to reduce waste and allow consumers to more closely match their purchases with desired consumption. Grapes last longer and are consumed faster than raspberries, so they are sold in larger packages. The good news for sellers is that smaller packaging allows them to charge a higher unit price and also sell more unit volume. The results imply that, in a market with multiple package sizes, at least one of the packages will have the smallest possible size, provided the fixed cost of making the product is sufficiently low. If there are economies of scale, the firm may find it optimal to make larger than smallest-size packages. The management insight: Bigger is not necessarily better for the customer or the producer when economies of scale are not present and consumption rates are low and product spoilage rates are high.

Vertical Flexibility in Supply Chains (p. 495)
Wallace J. Hopp, Seyed M. R. Iravani, Wendy Lu Xu

Flexible supply chains that react quickly to demand and supply variation are paramount to production efficiency. But where in the supply is flexibility most important? Retailers? Distributors? Producers? Transportation providers? Logistics? Drs. Hopp, Iravani, and Xu look at two types of flexibility: logistics flexibility (shipping products to and from varied locations) between stages in the supply chain and process flexibility (producing different products) within a stage of the supply chain. They examine how demand, production, and supply variability at a single stage affect the best stage in the supply chain for each type of flexibility. The authors assume that flexibility can be attained without affecting margin, that capacity investment costs are the same within and across stages, and that a single stage of the supply chain receives an investment in flexibility. Their insight for management: Locate process flexibility at the source of variability, and locate logistics flexibility as close as possible to the source of variability (i.e., downstream for demand variability and upstream for supply variability) in order to buffer the rest of the supply chain from its associated problems.

Randomization vs. Selection: How to Choose in the Absence of Preference? (p. 503)
Eric Danan

Should you flip a coin when you can't decide? Dr. Danan evaluates decisions of indifference (decisions of choices of equal value and thus no preference) and decisions of noncomparability (no ability to discern the options' relative values). Choosing randomly (flipping a coin) is generally considered a natural way to deal with such situations. Dr. Danan shows that systematic randomization between noncomparable options may lead to systematically bad decisions. On the other hand, randomization among indifferent options is costless relative to deliberate selection. The

insight for management: Flip a coin only in the case of true indifference, not in the case where comparison is simply hard to make.

Innovation in Business Groups (p. 519)
Sharon Belenzon, Tomer Berkovitz

Business groups, organizations that include several legally independent firms, are a common ownership structure in many countries outside the United States. Would such organizations be beneficial in the United States? Drs. Belenzon and Berkovitz suggest that they would. Using novel data on European firms, they investigate the relationship between business groups and innovation. They find that group affiliates are more innovative than standalones. They suggest that knowledge spillovers are not the main driver of innovation in business groups because firms affiliated with the same group do not have a common research focus and are unlikely to cite each other's patents. Rather, they find that group affiliation is effective at reducing the costs of raising capital. Thus, group affiliation is particularly important for innovation in industries that rely more on external funding and in groups with more diversified capital sources. The management insight for U.S. policy makers: Existing U.S. tax structures and regulatory hurdles may be hindering business group formation and thus innovation.

Component-Based Technology Transfer in the Presence of Potential Imitators (p. 536)
Jiong Sun, Laurens G. Debo, Sunder Kekre, Jinhong Xie

Are outsourcing and technology transfer to low-cost locations worth the risk of spawning imitators? General Motors and Prada operate locally in China and Turkey to reduce costs whereas others such as Netafim and Emerson keep production of key components at home to deter copycats in local markets. Research by Drs. Sun, Debo, Kekre, and Xie identifies two different types of deterrence strategies—the *barrier-erecting strategy* and the *market-grabbing strategy*. In the *barrier-erecting strategy* the global firm retains enough component technology in the home country to make the potential imitator's fixed-entry costs so high that it is not worthwhile entering. In the *market-grabbing strategy* the global firm transfers enough component technology to the emerging market, reducing the global firm's variable cost to make the potential imitator's revenues so low that it is not worthwhile entering. Which deterrence strategy the global firm should employ depends on the degree to which geographical proximity reduces imitation costs and the degree of differentiation between the local firm's products and the global firm's products. The insight for management: The optimal technology transfer decision may be an all-or-nothing gambit; either protect the technology to increase the costs or constrain copycats entirely, or aggressively outsource to claim market share and reduce the benefits of would-be copiers.

An Analysis of Coordination Mechanisms for the U.S. Cash Supply Chain (p. 553)
Milind Dawande, Mili Mehrotra, Vijay Mookerjee, Chelliah Sriskandarajah

Drs. Dawande, Mehrotra, Mookerjee, and Sriskandarajah have evaluated the Federal Reserve new cash recirculation policy to deter the overuse of its currency processing facilities by depository institutions (DIs). Sometimes a DI both deposits and withdraws cash of the same denomination in the same business week, creating wasteful transactions. A new Fed policy, which came into effect in July 2007, imposes a recirculation fee on cross-shipped cash. In this paper the authors show that the Fed's current linear recirculation fee is not optimal. They suggest a fairness adjustment mechanism that avoids penalizing DIs that recirculate their fair share of cash and rewards DIs that recirculate more than this amount. They suggest that their mechanism is robust and easy to implement. They also describe an idea wherein the Fed allows a group of DIs to reallocate (among themselves) their deposits to reduce societal cost. Finally, they analyze the effect of incorporating the custodial inventory program, another component of the Fed's new policy.

Competing Manufacturers in a Retail Supply Chain: On Contractual Form and Coordination (p. 571)
Gérard P. Cachon, A. Gürhan Kök

When a retailer such as Walmart sells products from competing manufacturers, such as Sony and Panasonic, how should firms manage their contract negotiations? Drs. Cachon and Kök describe three types of contracts: a standard wholesale-price contract, a quantity-discount contract (a decreasing per-unit price in the quantity purchased), or a two-part tariff (a per-unit price and a fixed fee). Previous research had shown that the latter two contracts better enable the manufacturer to coordinate the supply chain, thereby maximizing the profits available to the manufacturers and retailers. More importantly, the sophisticated contracts allow the manufacturer to extract rents from the retailer, in theory allowing the manufacturer to leave the retailer with only its reservation profit. However, Drs. Cachon and Kök find that the two sophisticated contracts force the manufacturers competing at the same retailer to compete more aggressively than when they offer only wholesale-price contracts, and this may leave them worse off and the retailer substantially better off. The insight for management: Although more sophisticated contracts have been touted to better coordinate the supply chain and maximize manufacturer profits, in the common case with competing products at the same retailer these contracts may not be preferred by manufacturers but instead benefit the retailer.