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Management Insights

Tainted Knowledge vs. Tempting Knowledge: People Avoid Knowledge from Internal Rivals and Seek Knowledge from External Rivals

Tanya Menon, Leigh Thompson, Hoon-Seok Choi

Our findings highlight the challenges of creating a learning organization. Organizational incentives and practices can inadvertently create ego threats which inhibit managerial willingness to learn internally. For instance, whereas people are often rewarded for learning from an external rival or for championing their own ideas, they often assume that they will lose status in the organization if they learn from their internal rivals. As a result, managers may have the incentive to spend company resources to acquire external knowledge, even when the same knowledge is available internally because of the ego, status, and career threats associated with that knowledge. We propose that organizational practices that affirm the self can attenuate these defensive reactions to potentially valuable new ideas from internal rivals.

On Precautionary Policies

Pauline Barrieu, Bernard Sinclair-Desgagné

When managers and policymakers ask different scientists for advice on a complex matter, they frequently get diverging viewpoints. This is especially true when dealing with the risk trade-offs involved in controversial issues such as drug safety, technology policy, or species preservation. In these contexts, one widespread but still debated rule, known as the *Precautionary Principle*, recommends “erring on the side of caution” until scientific knowledge offers a coherent picture. This paper brings a systematic approach to help managers and policymakers arrive at policies that fit such a rule. As expected, the achieved policies will first address the worst asserted hazard. They will also be (a) consistent with the most common (often legal) restrictions imposed on precautionary measures, (b) cost effective, (c) consistent with the actions that would be taken in otherwise similar circumstances, and (d) proportioned to the size of the threat. Finally, our approach fosters a balance in the attention given to each scientific assessment and thereby generates policies that will remain sensible if any of the available viewpoints (including the most disquieting one) ends up being incorrect.

Coordination in Fast-Response Organizations

Samer Faraj, Yan Xiao

Coordination has traditionally been viewed from an organizational-design perspective where rules, modalities, and structures are used to meet the information-processing demands of the environment. Fast-response organizations face unique coordination challenges as they operate under conditions of high uncertainty and fast decision making, where mistakes can be catastrophic. In such organizations, there is a need to rely on distinctive coordination practices to respond to novel events and to ensure failure-free operation. We studied the coordination practices of a medical trauma center where fast response and error-free activities are essential requirements. We found that expertise coordination practices are necessary due to the distribution of expertise and the highly situated nature of trauma work. Furthermore, because specialists are embedded in communities of practice and the tempo of treatment is high, there is a need for dialogic coordination practices that ensure error-free operation. For organizations operating in fast-response environments, these findings suggest the usefulness of extending coordination theory beyond a design perspective to include actual coordination practices.

Knowledge Gathering, Team Capabilities, and Project Performance in Challenging Work Environments

Martine R. Haas

Why do efforts to capture, store, and share knowledge so often seem to have little positive impact on performance in knowledge-intensive organizations? This paper suggests that such knowledge-management efforts typically overlook the importance of the contexts in which projects are conducted: In highly challenging work environments, knowledge gathering can create problems that impede project performance if teams lack the capabilities to address them. Conditions that enhance the capabilities of teams to address these problems are therefore critical. In this paper we show that the benefits of knowledge gathering for project performance are higher for teams whose members have more time, experience, and autonomy.

By identifying these three capability-enhancing conditions, the paper highlights the opportunities for managers to create project teams with characteristics that improve rather than inhibit the success of knowledge-management efforts.

Conducting R&D in Countries with Weak Intellectual Property Rights Protection

Minyuan Zhao

Despite significant cost advantages, conducting R&D in emerging economies can be risky due to inadequate protection for intellectual property rights (IPR). This study examines the role of firm organization in the protection and appropriation of knowledge, based on a sample of 1,567 U.S.-based firms. The results show that (1) technologies developed in weak IPR countries tend to be used more internally, and (2) firms conducting R&D in weak IPR countries tend to have much stronger internal linkages among their technologies. These findings suggest that firms can use their global organizations to overcome the lack of institutional support in specific countries and that by efficiently integrating the resultant technologies into their products and services being offered worldwide the threat of local imitation can be greatly reduced. The message from this study is very general: Even the most adverse environments may offer opportunities to firms with the right internal capabilities.

Time Value of Commercial Product Returns

V. Daniel R. Guide Jr., Gilvan C. Souza,
Luk N. Van Wassenhove, Joseph D. Blackburn

For many manufacturers the flow of returned products from customers represents a sizeable stream of potentially recoverable assets. In practice, the typical reverse supply chain for returned products has a centralized design, which tends to minimize the cost of collection and disposal of returned products; however, the time delays in such systems can yield significant losses in asset value for the manufacturer. We use a model of the forward and reverse supply chain for a product to investigate alternative design strategies to maximize asset recovery in the return stream. Our analysis suggests that a more decentralized, responsive reverse supply chain is the preferred design when: (1) products are very time sensitive and lose value rapidly over time and (2) products experience a high fraction of customer returns. We also describe conditions under which it is advantageous to use early product differentiation (or preponement) to immediately sort and evaluate product at the point of return. Finally, we illustrate these design principles using examples from the reverse supply chains for printers and power tools.

Agent Competition Double-Auction Mechanism

Leon Yang Chu, Zuo-Jun Max Shen

With recent advances in information technology and the growth of electronic commerce over the Internet, online auctions have expanded rapidly with millions of transactions occurring every day. However, since transactions of identical commodities are carried out in many isolated auctions (e.g., eBay), a potential customer may need to search through and decide how to place bids in numerous auctions. The bidding decisions are further complicated by severe information asymmetry, as most people do not know how many other bidders are participating in the auctions or how competitors value the items. The difficulties of participating can outweigh the savings and result in loss of customers for online marketplaces. To regain customers, marketplaces must simplify customers' decision making. This paper proposes a new multistage double-auction design approach to accomplish this task. Under this approach, both the auctioneer and the buyers/sellers have incentives to participate in the auction and collectively achieve best possible outcomes. A key feature of the proposed double auction mechanism is that no knowledge of the customers' monetary preferences is assumed. This research opens the possibility of applying double-auction mechanisms to e-marketplaces where the auctioneer has little or no knowledge about the goods traded, or where the values of the goods are highly volatile.

Timeshare Exchange Mechanisms

Yu Wang, Aradhna Krishna

This paper focuses on the timeshare industry where developers sell the right to use a specific property for a certain time interval to individuals who then become "members" of timeshare exchange organizations. Members are permitted to exchange amongst themselves the rights to use these properties. Timeshare exchanges allow for reserved times (i.e., "weeks") to be redistributed among members so as to better match their preferences and thus increase efficiency. For this multibillion dollar industry, we demonstrate that the two exchange systems currently in use—deposit-first and request-first mechanisms—can cause efficiency loss, i.e., they yield allocation outcomes less preferable for the set of members than some alternate possible outcomes. We propose an alternative exchange mechanism, the top trading cycles chains and spacebank (TTCCS) mechanism, and show that it can increase the efficiency of the timeshare exchange market because it is Pareto-efficient (i.e., no member can be made better off without another member being made worse off), individually rational (i.e., members will never be worse off by participating in exchanges), and strategyproof

(i.e., members cannot game the system by tricks such as misreporting their preferences). Laboratory tests of the three mechanisms, in which we simulated exchange markets with networked “timeshare members”, strongly support our theory. Hence, we conclude that the TTCCS mechanism offers a practical and attractive algorithm for improving the management of timeshare exchange organizations.

Strategic Commitments for an Optimal Capacity Decision Under Asymmetric Forecast Information

Özalp Özer, Wei Wei

Advances in information technology have greatly enhanced firms’ abilities to collect, process, and share information across the supply chain. However, firms are often reluctant to do so because of conflicting incentives. For example, demand forecasts are key information that needs to be shared accurately with an upstream partner, and yet forecast manipulation is widespread in many industries from apparel to high technology. In this paper we design contracts (structured agreements) that induce credible forecast information sharing and maximize both firms’ profits by aligning incentives. We also show that the optimal contract form depends on two important factors, the *degree of forecast information asymmetry* (a measure of how much the supplier knows about the product’s market potential versus the manufacturer) and the *risk-adjusted profit margin*. Depending on these two factors, we show which of the following contracts should be adopted—the wholesale price contract, the payback contract, the capacity reservation contract, or the advance purchase contract.

Modeling the “Pseudodeductible” in Insurance Claims Decisions

Michael Braun, Peter S. Fader, Eric T. Bradlow, Howard Kunreuther

In many business settings, customers respond to a series of events where only those that exceed a threshold are actually observed by the company. This is particularly true in the insurance industry, where some customers may decide to absorb the cost of a covered loss themselves instead of filing a claim with the insurer. In this paper, we introduce the concept of the “pseudodeductible,” a threshold that varies from person to person and that determines whether or not a loss is sufficiently large for the customer to want to file a claim. By considering customer behavior in

this manner, we can draw inferences about the processes that govern the frequency and severity of all events, not just those that are observed by the company directly. By using this modeling approach an insurer can improve its prediction of the arrival rate of all customer claims, especially those that are generated from small, noncatastrophic losses. Beyond the insurance industry, marketers could apply this model to the redemption rate of rebates, and technical support managers could improve predictions of which customers are likely to request postsales service for problems of varying degrees of complexity.

Financial Asset Returns, Direction-of-Change Forecasting, and Volatility Dynamics

Peter F. Christoffersen, Francis X. Diebold

Forecasting the direction-of-change in asset prices is essential for financial analysts who make “buy,” “sell,” and “hold” recommendations. We show that the direction-of-change in an asset price is forecastable from information on the volatility of the asset. Asset price volatility is known to be highly forecastable, which in turn renders the direction-of-change forecastable. We argue that volatility-driven direction-of-change forecasting is likely to be most effective at the monthly and quarterly horizons.

Violations of Cumulative Prospect Theory in Mixed Gambles with Moderate Probabilities

Guido Baltussen, Thierry Post, Pim van Vliet

The theory of risky choice helps to understand behavior of consumers and investors and supports decision making in marketing and finance. In this field, cumulative prospect theory (CPT) has been proposed as an alternative to classical expected utility theory (EUT). Much of the evidence supporting CPT is based on unnatural choice experiments that involve only gains or only losses and extreme probabilities. In this study, we test CPT using an experimental design consisting of mixed gambles with risky outcomes that involve both gains and losses and moderate probabilities. We observe that subjects do not exhibit the risk-loving behavior predicted by CPT and that people are more likely to take the safer choices in situations that involve both gains and losses, as predicted by EUT. Our results suggest that managers must be cautious when extrapolating the results from classroom and laboratory experiments to real-life decisions of consumers and investors.