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Management Insights

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Cost Structure, Customer Profitability, and Retention Implications of Self-Service Distribution Channels: Evidence from Customer Behavior in an Online Banking Channel (p. 4)

Dennis Campbell, Frances Frei

What should banks and other brick-and-mortar service providers expect from their burgeoning online self-service channels such as online banking? Many expect both cost reductions and expanded market reach. Drs. Campbell and Frei find mixed results based on a sample of 100,000 retail banking customers observed over a 30-month period at a large U.S. bank. Customers who used online banking reduced their use of slightly more costly ATM and voice response unit offerings, but simultaneously *increased* their use of the most costly branch and call center services, perhaps as they struggled to understand and use the new online channel. Additionally, online bank customers, facing lower overall transaction costs, generated an overall increase in transaction volumes across all channels, resulting in a long-run increase in average transaction cost per customer. These changes led to an 11% *decrease* in profitability per customer in the first year because of both increased costs and fewer fees incurred by customers. There is good news, however; the provision of an online channel did result in increased customer satisfaction and customer retention in the one- to three-year horizon and increased market share for the bank overall. One might argue that it is likely to find such benefits when looking only at the tech-savvy customers who are prone to use online services, or a progressively minded bank that is prone to offer them, but these researchers have in fact considered these effects and controlled for them in their results. The insight for management of any retail service offering considering implementing or expanding its online service offering: The primary benefit of online service offerings might be attracting and retaining customers more than increasing the profitability of existing customers.

Optimal Pricing with Speculators and Strategic Consumers (p. 25)

Xuanming Su

How do ticket resellers such as StubHub affect the functioning of the market for tickets for major

sporting and entertainment events? Although ticket “scalping” is not always well regarded or well received, the secondary market for sports and entertainment is active and growing with the emergence of Internet-based ticket brokers. Scalping may have a bad reputation, but research by Dr. Su shows that the venue operator earns more profit under this arrangement than in the absence of ticket brokers. The reason is that ticket speculators that exist only in markets with active resale markets boost the inherent demand, and the venue is more likely to sell out of tickets. Thus, they get some of the benefits of dynamic pricing (yield management) strategies like those employed in the airline and hotel industries without drawing the ire of the local sports team’s fans. The bad news for concert goers: venue operators have less incentive to expand their capacity under this arrangement, instead making tickets habitually scarce to encourage such speculative buying to continue, perhaps explaining the trend toward smaller baseball parks. The insight for management for whom discriminatory pricing is not an option may be to create intentionally scarce capacity with liquid markets powered by aftermarket brokers.

Lone Inventors as Sources of Breakthroughs: Myth or Reality? (p. 41)

Jasjit Singh, Lee Fleming

“Eureka!” shouted Archimedes, as he solved the riddle of how to measure the volume of a solid object by the water it displaced. Brilliant insights emanate from a single mind, but what from there? Drs. Singh and Fleming empirically test whether lone inventors are more likely to see these epiphanies through to successful completion, or if the old adage “two heads are better than one” is a better model. On one hand, individuals are less encumbered by team dynamics, interpersonal issues, and communication problems, but, on the other hand, teams offer greater cross-pollination of ideas and perhaps more thorough testing of an idea. These researchers investigated more than a half a million patented inventions and found that the lone inventor is less likely to succeed at creating a major breakthrough, as measured by a highly cited patent, and more likely to create a patent that

is rarely cited. The authors attribute this result to collaborative research both reducing the probability of failure through more rigorous project selection and increasing the probability of a major breakthrough. The insight for management is to use innovation teams to both reduce risk and increase payoff on an idea. The caveat: Diversity of thought *within* projects may reduce diversity of projects overall; given some R&D budget, the opportunity cost of allocating multiple resources to a single project is that fewer projects can be undertaken.

Another Hidden Cost of Incentives: The Detrimental Effect on Norm Enforcement (p. 57)

Andreas Fuster, Stephan Meier

Most markets are based on the efficiency of exchange of a consumable based on the equality of marginal costs and marginal benefit. Not so with public goods such as the environment, highways, parks, and natural resources that are shared. Personal choices based on cost benefit analysis of public goods may lead to “free ridership,” or underpaying for its consumption. In these cases, positive and negative externalities of public good consumption are balanced with incentives for their efficient use and punishment for inefficient use. Proper economic behavior is often incentivized by the carrot, a centralized subsidy (e.g., a rebate for a fuel-efficient car), and the stick, decentralized social norm enforcement by peers (e.g., a scowl from a neighbor when you litter). In their economic experiments, Drs. Fuster and Meier confirm that the carrot and the stick are effective individually but find that they are not in tandem. In a corporate setting, for example, the performance of a team-based sales goal (public good) whose salespeople had been self-policing, individual team member contribution (social norm) may actually suffer if individual compensation is offered to salespeople who carry their fair share of the quota (centralized subsidy). The social norm incentive is less enforced, giving way to the subsidy, and the net effect is lessened. The insight for management creating incentive structures is to carefully consider how centralized incentives might interfere with social norm enforcement among peers before enacting them. Centralized subsidies could do more harm than good in situations where social norm enforcement is effective; these incentives are substitutes, not complements.

Design of Decision-Making Organizations (p. 71)

Michael Christensen, Thorbjørn Knudsen

How is the organizational decision-making process affected by organizational structure? Individuals make mistakes and have biases, and appropriately structured hierarchies can lead to more discriminating

decisions by exercising a formal chain of command, as in the military. But how many good ideas are not implemented? On the other hand, in decentralized organizations, such as bank branches, decisions can be made more autonomously, and the organization can be more nimble. But this can lead to implementing bad or biased decisions. Research of Drs. Christensen and Knudsen shows how optimal organizational structure can be derived for a given number of employees. They give an example application of the approach to determining how many people should be involved with the loan approval process at a bank. The insight for management is to find the organization that provides the right mix of decision reliability and responsiveness: greater levels of hierarchy reduce bias but may also hinder good ideas that do not have consensus. The optimal level of hierarchy balances the costs of these two errors, with keen awareness of the manpower costs of getting more people involved in a decision.

An Empirical Examination of Goals and Performance-to-Goal Following the Introduction of an Incentive Bonus Plan with Participative Goal Setting (p. 90)

Shannon W. Anderson, Henri C. Dekker,
Karen L. Sedatole

How does a business set the appropriate goals when managers have pay-for-performance (PFP)-based bonus plans? Understandably, a manager who participates in setting his own PFP has a vested interest in setting lower goals (creating slack) than would otherwise be set to improve the chance at earning a bonus. Drs. Anderson, Dekker, and Sedatole conduct statistical analysis of sales and sales goal data from 61 stores of a U.S. retail firm over 10 quarters and find that the introduction of a performance-based bonus plan with participative goal setting is accompanied by goals that are biased downward when a manager participates in setting his own goals. The insight for management is to exercise caution when granting goal-setting authority in PFP programs; it is perhaps more prudent to give that authority to the supervisor for more accurate and unbiased goal setting.

Global Dual Sourcing: Tailored Base-Surge Allocation to Near- and Offshore Production (p. 110)

Gad Allon, Jan A. Van Mieghem

Companies making global sourcing decisions are often faced with low cost or high responsiveness trade-offs. Drs. Allon and Van Mieghem present a simple and implementable method for allocating the base and surge components of volatile demand between two sources: an offshore location with low cost and low responsiveness such as China and

a nearshore location with higher cost and higher responsiveness such as Mexico. The method replenishes at a constant rate from the offshore source and produces at the nearshore plant only when inventory is below a target. The constant base allocation allows the offshore facility to focus on cost efficiency while the nearshore's quick response capability is utilized only dynamically to guarantee high service. The management insight comes from the guidelines for identifying key drivers for implementing a successful low-cost, high-service dual sourcing strategy.

The “I Designed It Myself” Effect in Mass Customization (p. 125)

Nikolaus Franke, Martin Schreier, Ulrike Kaiser

Many companies offer websites that enable customers to design their own individual products, which are then produced to order. To date, the economic value of products self-designed using mass customization (MC) toolkits has been attributed to maximizing the preference fit achieved and minimizing the company's design effort. Drs. Franke, Schreier, and Kaiser suggest a third factor to consider: the customer's awareness of being the creator of the product design. The authors provide experimental evidence from five different studies that this “I designed it myself” effect creates economic value for the customer and generates a significantly higher willingness to pay. The management insight for MC companies: It is not enough merely to design MC toolkits that maximize fit and customer satisfaction and minimize design effort and cost. To capture the full profit potential, MC toolkits should also elicit “I designed it myself” feelings to capture enhanced revenues.

Inventory Dynamics and Supply Chain Coordination (p. 141)

Harish Krishnan, Ralph A. Winter

How should manufacturer–retailer contracts be structured in order to align retailer and manufacturer incentives? A manufacturer distributes a product through retailers, who compete on both price and fill rates. However, the optimal strategy for retailer profit may not be ideal for the manufacturer. Recent research on supply chain coordination suggests pricing guidelines (floors and ceilings) as well as manufacturer inventory buyback programs to help align the retailer's order and inventory strategies with maximal manufacturer profit. Drs. Krishnan and Winter add that the durability of inventory is a key attribute to consider when structuring such incentives. When the product is highly perishable or quickly becomes obsolete, retailers are biased toward excessive price competition and inadequate inventories. Vertical price floors or inventory buybacks (subsidies for unsold

inventory) can coordinate incentives in both pricing and inventory decisions. When the product is less perishable, the retailer's tendency is reversed and vertical price ceilings or inventory penalties can coordinate incentives. The insight for management is to consider inventory durability when creating manufacturer–retailer contracts.

Detailing vs. Direct-to-Consumer Advertising in the Prescription Pharmaceutical Industry (p. 148)

Ram Bala, Pradeep Bhardwaj

Since August 1997 when the Food and Drug Administration eased the restrictions on direct-to-consumer advertising (DTCA), there has been a dramatic increase in the use of DTCA by pharmaceutical firms to target end customers (patients). DTCA is both informative, educating patients about the availability of drugs for some ailments, and persuasive, encouraging patients to talk about specific brands with physicians, to influence market share. In light of DTCA, pharmaceutical companies must decide on an informative or persuasive DTCA strategy and then allocate marketing budget between the traditional sales representative marketing channel and DTCA levels. Management insights come from the answers to numerous questions: What is the impact of adopting DTCA on competitive intensity? How do optimal sales representative levels for a firm change with the adoption of DTCA? How should the DTCA strategy for a firm vary depending on the strength of influence in the physician's office? Under what conditions would competing firms voluntarily decide to pursue constructive DTCA? Depending on the market competitive situation the pharmaceutical is in, the answers help budget for and coordinate DTCA and sales representative strategies.

A Quantitative Measurement of Regret Theory (p. 161)

Han Bleichrodt, Alessandra Cillo, Enrico Diecidue

When Monty Hall made a deal, he gave the option of swapping a modest prize for what may have been a fantastic prize behind door number three, where Carol Merrill was standing. Monty probably did not realize that he was testing regret theory. According to regret theory, when making decisions under uncertainty, the decision maker might follow a strategy of minimizing regret. Regret minimization assumes that the decision maker cares not only about what they get, but also about what they might have gotten had they chosen differently. Research by Drs. Bleichrodt, Cillo, and Diecidue is the first to find empirical support for regret minimization theory. In an experimental analysis, they show that, under a wide variety of conditions, people are disproportionately averse to large regrets. The management

insight from this research can be applied in negotiations, human resource management, and child rearing; according to regret minimization theory, presenting the possibility of a superior option of what could be is a powerful force for persuading outcomes of decisions.

An Example and a Proposal Concerning the Correlation of Worker Processing Times in Parallel Tasks (p. 176)

Kenneth L. Schultz, Tobias Schoenherr,
David Nembhard

Do workers pick up the pace when coworkers are faster than they at like tasks? Equity theory suggests that generally a worker will work more quickly when he or she falls behind, or that one worker's pace can influence another's. Based on an empirical analysis of individual productivity in production line data, Drs. Schultz, Schoenherr, and Nembhard found that this claim is supported; an average worker will make up to 40% of the difference between his or her pace and a coworker's pace of the same task. However, not all workers will react as quickly to falling behind or as diligently at catching up; some workers do not react at all, and others can make up to 87% of the difference between their pace and a coworker's. Thus, the authors propose a rearrangement of workers on parallel lines based on their base production rate, with the fastest workers in front of the others. Similarly, those with the fastest reaction time and highly revised speeds are sorted from fastest to slowest to maximize the adoption rate of best practice. The insight for management is ironic; despite the advanced statistical methods used to derive these results, line design decisions as simple as what direction the workers are facing will affect motivation and productivity. Simply, line design and assignment should not be done purely mechanistically or mathematically.

Coping with Uncertainties in Technological Learning (p. 192)

Tieju Ma

New technology adoption is fraught with risk. Dr. Ma suggests that optimization models of endogenous technological change commonly deal with uncertainty in technological learning by adding expected risk costs into an objective function with a subjective risk

factor. Dr. Ma argues that risk-constrained methods could be more practicable for decision support. From a practical perspective, it might be easier to specify a maximum risk and a minimum risk, rather than the cost of risk. From an accuracy perspective, he shows that risk-constrained methods generate an S-shaped technology diffusion pattern as one would expect from historical observation. These results could be used, for example, in the adoption of low-carbon-emitting technologies. He suggests that the results imply that early or late adoption of such technologies could result in similar outcomes. The insight for management comes from the revised approach to modeling risk in new technology investment.

Drivers of Finished-Goods Inventory in the U.S. Automobile Industry (p. 202)

Gérard P. Cachon, Marcelo Olivares

What drives inventory differences between automobile manufacturers? Automobile manufacturers in the U.S. supply chain exhibit significant differences in their days of supply of finished vehicles (average inventory divided by average daily sales rate). For example, from 1995 to 2004, Toyota consistently carried approximately 30 fewer days of supply than General Motors. This suggests that Toyota's well-documented advantage in manufacturing efficiency, product design, and upstream supply chain management extends to their finished-goods inventory in their downstream supply chain from their assembly plants to their dealerships. Drs. Cachon and Olivares measure for this industry the effect of several factors on finished auto inventory holdings such as product variety, sales rate, plant utilization, target service levels, and the like. They find that two factors, the number of dealerships in a manufacturer's distribution network and a manufacturer's production flexibility, explain essentially all of the difference in finished-goods inventory between Toyota and three other manufacturers: Chrysler, Ford, and General Motors. The insight for management in the automobile industry and beyond: A varied product line requires a flexible manufacturing process or few distribution points to keep finished-goods inventory low. It will be interesting to see over the next few years if the U.S. manufacturers' finished-goods inventories fall as product lines are slashed and dealerships are closed.