Practice Prize Report: The 2018 ISMS Gary Lilien Practice Prize Competition

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Abstract. This report summarizes the entrants in the 2018 ISMS Gary Lilien Marketing Science Practice Prize Competition, designed to identify, encourage, recognize, and reward the application of impactful marketing science to industry and noncommercial settings. These applications aim to showcase innovative and impactful examples of applications demonstrating the best of rigor and relevance that our profession produces. The winner described an application of econometric and experimental techniques at the French-based retailer of body, face, fragrances, and home products, L'Occitane, aimed to optimize budget allocation between online and off-line marketing expenditure across six countries. The other three finalists include a decision support aid to assist members of the United Services Automobile Association (a not-for-profit organization to assist military service personnel select and finance their automobile purchases) choose vehicles that balance their individual tastes and preferences with their financial circumstances, a business-to-business pricing decision support aid for use by the sales force of Hadco Metal Trading to avoid loss of margin by undercharging and loss of business by overcharging, and a methodology to test online advertisements cost-effectively by generating "ghost ads" as a way of minimizing control group costs in a reliable and valid way.

Keywords: multichannel marketing communications • targeting • pricing • business-to-business marketing • decision support aids • field experiments • not-for-profit marketing

Background

The INFORMS Society for Marketing Science (ISMS), together with the Marketing Science Institute, and the European Marketing Academy, runs the Gary Lilien Practice Prize Competition to celebrate excellence in applied marketing science. The year 2018 represented the 10th round in which the Practice Prize has been conducted. Since the first competition in 2003, the award has attracted hundreds of submissions, resulting in 33 finalists. These finalists demonstrate marketing science applied to a wide range of managerial problems, using an immense diversity of analytical techniques. Lilien et al. (2013) provide an evaluation and summary of this portfolio, and most finalists' work has also been published in *Marketing Science*. The Practice Prize Competition is an important communications vehicle for marketing scientists concerned with the practice side of our profession. The Practice Prize protocol provides a good way to understand the objective of celebrating impactful marketing science applied to solving real managerial problems and the way in which it pursues that objective.

The Practice Prize is awarded for outstanding implementation of marketing science concepts and methods. The methods used must be innovative, sound, and appropriate to the problem and organization, and the work should have had a significant, verifiable, and preferably quantitative impact on the performance of the client organization.

In assessing the rigor of the prize entries, along with their focus on relevance and organizational impact, the judging panel takes a number of criteria into account. Specifically, the panel considers the following:

- *Implementation:* Who uses the research, for what, and how?
- *Impact:* How did the research impact decisions, and what was the effect of those changed decisions?
- *Methodological quality:* Is the methodology appropriate to the problem and, preferably, innovative?
- *Technical originality:* Do the problem, approach, and implementation demonstrate uniqueness and flair?
- *Difficulty:* Does the application solve hard problem(s) whether that difficulty arises from problem formulation, methodological solution, or implementation complexity?
- *Transportability:* Is the work applicable to other contexts, whether potential or demonstrated, that is valuable to drive organizational adoption of marketing science forward?
- *Charm:* Does the application demonstrate the work of marketing scientists to engage with organizational stakeholders, including its impact on society and newsworthiness?

Having been chairman of judges for Gary Lilien Marketing Science on four separate occasions, I have noticed some characteristics strongly associated with winning applications, and I believe that these features tend to be common to all or most effective implementations of our discipline in business and other organizational settings.

The main fact that distinguishes compelling applications from those that are not as convincing is not so much the individual elements that they contain, but the links between those elements. Most applications have a well-defined objective, that is, a management decision that is more focused (or less uncertain in outcome) if informed by a rigorous evidence and analysis base. Similarly, most studies consider alternative approaches to assemble an evidence base that can assist the manager in evaluating alternative courses of action. However, in terms of the logical flow from one element to the next, the case in our profession is often not as strong. From the insight that emerges from analysis to the actions that are based on that insight is a step in which academics are less trained and, I would argue, less equipped than they are in studying the market environment in which consumer response is occurring. Similarly for the results that stem from those actions, that is, impact is often less unambiguously established. This may be demonstrated in the diagram (Figure 1).

The point I wish to make is that, although the contents of each of these boxes is critically important, it is in the links between them where less successful applications often demonstrate weakness. Does the approach adopted really address all of the key phenomena in the marketplace and the dimensions of management action? Given the analysis, has the researcher really listened to the results and drawn insights from them rather than just hit the data with a powerful statistical sledgehammer? Do the actions recommended really stem logically and unambiguously from the analysis? Could these actions have been identified by a far simpler approach or is there no logical link between what was found in the marketplace and what the manager decided to do in practice? Finally, is the impact that results after the management i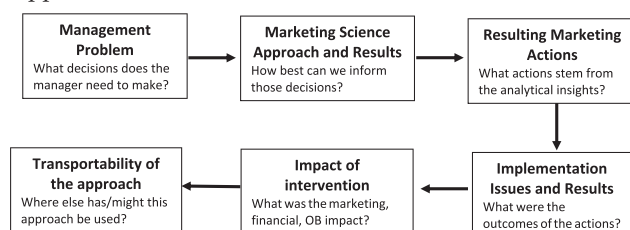ntervention really attributable to the actions that the manager took, or are there alternative plausible explanations for any changes in the organization's fortunes?

The 2018 Competition

The 2018 prize committee was comprised of John Roberts, prize committee chair (as the ISMS immediate past vice president practice), Dominique Hanssens (as immediate past ISMS president), K. Sudhir (as *Marketing Science* editor), Manfred Krafft (representing the European Marketing Academy), Alex Degeratu (an industry judge from McKinsey), and Hongjie Wang (an industry judge from PNC Financial Services). Gerrit van Bruggen (Erasmus University) and Pablo Azar (PNS Financial Services) assisted in the early stages of the judging. The committee received a number of excellent entries, each of which described both the work itself and the impact that work has had on the client organization. From that set of entries, the judges selected the four finalists described here and then a winner, following presentations at the ISMS Marketing Science Conference at Temple University in Philadelphia on June 15, 2018.

The 2018 round of the prize shared a number of characteristics with previous competitions. There were entries from industry-only teams as well as those combining academics with industry members. Applications covered a whole gamut of industries: B2B and B2C, products and services, and profit maximizing and not for profits. The work entailed a wide range of approaches, and in particular, there was a trend toward more mixed methods. For example, the winning entry combined the external validity strengths of econometric analysis with the internal validity strengths of controlled experiments. However, there were differences from previous rounds as well. Two finalists developed decision support aids, one to assist consumers (United Services Automobile Association or USAA) and one to improve marketing actions within the firm (Hadco). With the growth of platforms as communications and distribution channels, one application focused on how to more accurately calibrate the effectiveness of communications (ghost ads). Finally, many firms need to deal with conflicting objectives in designing their service offerings. The USAA application attempted to address those types of environments.

The Four Finalists: A Brief Summary

The winning entry was from Albert Valenti (IESE Business School), Shuba Srinivasan (Boston University), Gokhan Yildirim (Imperial College of London), and Koen Pauwels (Northeastern University) and was titled "Direct mail to prospects and email to current customers? Managing multichannel marketing for multinational retailers." Understanding own- and

Figure 1. Elements of Impactful Marketing Science Applications and the Links Between Them

cross-channel sales responsiveness to online and off-line marketing across customer segments and countries is essential for multichannel multinational retailers. Accordingly, the authors propose a conceptual framework and develop a modeling approach to assess how email and direct mail effectiveness vary by channel, customer value segment, and country. They apply their approach to L'Occitane en Provence in a number of countries and find that own- and cross-channel sales responsiveness to email and direct mail varies by value segment and country. Specifically, direct mail drives off-line sales for prospects, and email drives both online and off-line sales across customer segments in half of the countries. Interestingly, the authors argue that sending high-cost marketing materials, such as glossy catalogues, to high-value customers, an approach that appears to be intuitive, can be far from optimal. A field experiment provides short term causal support for the empirical model findings. An effective reallocation of marketing resources based on these results would yield a substantial revenue lift for L'Occitane.

The other finalists in the competition (in alphabetical order of first author in the submission) were as follows.

Many organizations face the challenge of balancing profit objectives against responsibilities to their other stakeholders. In research titled "Squaring the Circle: Decrease Purchase Price, Increase Satisfaction, and Maintain Revenues Using a New Machine-Learning Recommendation System," Michael Harrison (USAA and the University of North Carolina) and Jan-Benedict Steenkamp (the University of North Carolina) develop a new automobile recommendation algorithm using machine learning methods and compare its impact on customers and the organization, relative to current practice. USAA has a dual responsibility to its shareholders regarding financial performance, and also to serving members of the U.S. armed forces, veterans, and their families. The authors' approach is designed to reduce the average automobile purchase price so to as increase customer financial security while maintaining firm revenues. The algorithm's performance is evaluated in two ways, including (1) a randomized field experiment with treatment and control groups matched based on characteristics relevant to automobile purchases and (2) a comparison of firm's automobile loan and insurance revenues in 2016 versus 2017. Their recommendation algorithm greatly increased the predictive accuracy of customer automobile purchases. Consumers' average automobile purchase price was lower with their recommendation algorithm, 91% of customers said they would recommend the automobile they purchased to others, revenues on auto loans and insurance policies increased,

dollars in default declined, and the number of delinquent loans decreased.

To measure the effects of advertising, marketers must know how consumers would behave had they not seen the ads. In an application titled "Ghost Ads: Improving the Economics of Measuring Online Ad Effectiveness," Garrett Johnson (Boston University), Randall Lewis (Netflix), and Elmar Nubbemeyer (Netflix) develop a methodology that they call ghost ads, which facilitate this comparison by identifying the control-group counterparts of the exposed consumers in a randomized experiment (Garrett et al. 2017). Relative to the current practice of public service announcement and intent-to-treat A/B tests, ghost ads can reduce the cost of experimentation, improve measurement precision, deliver the relevant strategic baseline, and work with modern ad platforms that optimize ad delivery in real time. The authors have implemented their methodology at scale on the Google Display Network since 2015. Hundreds of advertisers have used Google's experimentation platform to run more than a thousand tests annually worth millions of dollars in ad spend.

The last finalist (alphabetically) involved business-to-business (B2B) marketing mix decisions. Pricing processes in B2B industries rely to a large extent on human expertise and interpersonal interaction. This research by Yael Karlinsky Shichor and Oded Netzer (both of Columbia University), titled "Automating the B2B Salesperson Pricing Decisions: Can Machines Replace Humans and When?" introduced automation to pricing decisions in Hadco Metal, a U.S.-based company that sells aluminum and other metal products to business clients. Providing salespeople in the company with real-time automated price recommendations increased gross profit—often difficult in B2B markets in which margins can be very thin. By incorporating the automated price recommendations as an aid tool to salespeople, the company could not only substantially increase profits, but also increase institutional sales force knowledge preservation and decrease sales costs.

In addition to these four finalists, there were a number of other interesting and exciting entries. I feel that it is useful to provide a feel for the best of these because they do provide an indication of the range of problems to which marketing science is turning its attention. Applications included the follow areas of marketing response and calibration:

• Improving marketing effectiveness by calibration of omnichannel attribution in a dynamic setting.

• Using customer base analysis to calibrate the long-term value of firms at the IPO stage.

• Reducing bias in models to assist in the retargeting of ads with real-time bidding.

• Using adaptive maxdiff item identification to assist firms at the large-scale idea screening stage of new product development.

• Applying a theory-driven approach to identifying keywords in the process of search engine optimization.

• Calibrating the effects of quota frequency on sales force performance.

• Accelerating the diffusion process of sustainable energy solutions using social media.

• Improving charitable giving by evidence-based targeting.

• Streamlining the buyer customization process using templates based on prior information.

• Establishing a common language for marketing terms to improve efficiency and communication.

• Assessing the role of noninformative content in email advertising customization.

• Matching problem generators and solution providers in B2B markets based on urgency and importance.

• Calibrating consumer response to online video advertising.

Comment

The prize committee congratulates the finalists and winners for their outstanding work and contributions to the practice of marketing science. ISMS is keen to disseminate the excellent work embodied by the entries in the Practice Prize Competition. The best of prize finalists will continue to be published in *Marketing Science*, subject to review for rigor and relevance. Additionally, videos of finalists' presentations are available for illustration or classroom use at the following URL: http://lilienpracticeprizevideos.org.

Calls for submissions for the 2020 Gary Lilien Practice Prize have been requested and may be found at http://ama-academics.communityzero.com/elmar?go=6140744. Submissions close on January 8, 2020. The Society for Marketing Science, the Marketing Science Institute, and the European Marketing Academy encourage all those undertaking applied marketing science work that has had major impact on the organizations whose problems it is attempting to address to consider submitting their work to the 2020 competition. It is open to all scholars and practitioners, whether a member of ISMS or not. If you would like to learn more about the prize or the appropriateness of your work to it, please contact the 2020 chairman, Professor Koen Pauwels at k.pauwels@northeastern.edu.

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