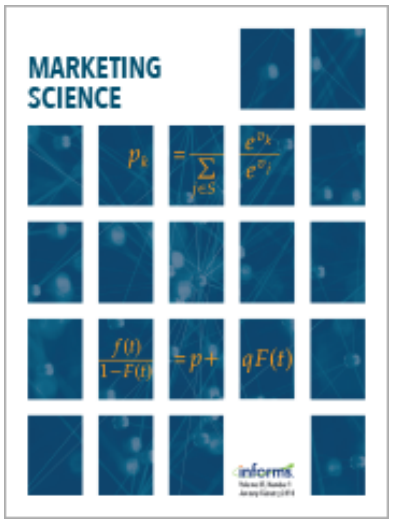

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Practice Prize Report: The 2016 ISMS Gary Lilien Practice Prize Competition

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Abstract. This report describes entrants in the 2016 ISMS Gary Lilien Marketing Science Practice Prize Competition, representing the best examples of rigor plus relevance that our profession produces. The winner, describing a collaboration between the World Bank and a team based at the London Business School, involved a randomized control experiment to calibrate the relative effectiveness of business training on business performance of microentrepreneurs in South Africa. The other four finalists include a method to estimate the value of key word searches that allowed for cannibalization of organic search at eBay; a methodology to model and manage customer satisfaction at the National Dutch Railways; a stock-carrying algorithm to assist a fashion department store manage inventory on a store-by-store basis, implemented by Celect, an inventory-management consultant based in Boston; and an integrated marketing communications-optimization tool used by Mercedes-Benz to increase advertising effectiveness.

Keywords: randomized control trials • field experiments • customer satisfaction • resource allocation • advertising • inventory management

Background

The INFORMS Society for Marketing Science (ISMS), in conjunction 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 2016 prize competition was the ninth round in which it has done so. The hundreds of submissions and 33 finalists since the first competition in 2003 represent 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 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 significant, verifiable, and preferably quantitative impact on the performance of the client organization. It aims to address criticisms by some scholars that research in marketing science runs the risk of becoming isolated from the reality of marketing practice (e.g., Reibstein et al. 2009).

The 2016 Competition

The 2016 prize committee comprises John Roberts, prize committee chair (as the ISMS vice president practice); Dominique Hanssens (as ISMS president); K. Sudhir (as *Marketing Science* editor); Bernd Skiera (representing the European Marketing Academy); Earl Taylor (representing the Marketing Science Institute and an industry judge); and Steve Cohen (an industry judge from In4mation Insights). 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 five finalists described herein and then a winner, following presentations at the ISMS Marketing Science Conference in Shanghai on June 17, 2016.

The 2016 round of the prize was distinctive in a number of ways. First, a number of scholars have noted that much of cutting-edge marketing science theory and application is being undertaken within commercial organizations, such as Microsoft, Google, and Amazon (see, for example, Winer 2014). The judging panel reached out to industry to solicit applications from teams deeply embedded in such organizations, and the finalist entry coauthored by Blake et al. (2015) is a live application within eBay, representing one of the resultant submissions.

Second, problems that 10 or 20 years ago would unambiguously have been thought of as marketing issues (and calibration of the environment in which they were embedded thought of as marketing science) are increasingly being addressed by other disciplines, such as information technology, organization science, economics, and operations management. For that reason, and to ensure continued cross-disciplinary communication, the judges also worked hard to ensure that applications addressing marketing problems not just

from marketing scholars and practitioners, but also from other groups. The Farias et al. (2013) finalist submission represents an interesting product-stocking and inventory-management application, undertaken from an operations-management perspective.

Finally, marketing is increasing its domain of interest beyond just large firm–customer interactions. Although this trend has been evident for some time, its rate of progress has recently accelerated. Marketing science is looking at not-for-profit organizations, in emerging markets, for regulatory support, and many other areas. The winning application by Anderson et al. (2018) was undertaken with a not-for-profit organization, the World Bank, and looked at microentrepreneurs in an emerging market.

The Five Finalists: A Brief Summary

The winning entry was "Pathways to Profits: The Impact of Marketing vs. Finance Skills on Business Performance" by Stephen J. Anderson, Rajesh Chandy, and Bilal Zia. The World Bank and the government of South Africa are concerned with generating economic growth and tackling the unemployment rate in the country. Much economic activity is generated by microentrepreneurs, the vast majority with little or no formal business education. The question exercising the mind of the World Bank was whether management education would improve the performance of these small businesses and, if so, in which skills. Using a randomized control trial in which entrepreneurs were allocated to marketing and sales training, finance and accounting training, or no training, the authors came up with a number of interesting results. First, marketing skills and finance skills both had a positive, significant effect on performance relative to the control (as measured by employment, sales, profits, and survival). Second, these effects were approximately equal for the marketing and finance interventions, but the mechanism was different. Entrepreneurs receiving marketing training tended to improve performance by increasing sales and hiring more staff (i.e., top-line focus), and those who received the finance training tended to enhance profits by decreasing costs (i.e., cost focus). Finally, an entrepreneur's prior experience acted as a moderating variable on training effectiveness: developing skills in marketing and sales was most beneficial to small business owners with narrow previous experience. For a more comprehensive description of this application, see Anderson et al. (2018)

The other finalists in the competition (in alphabetical order of first author in the submission) were as follows: Tom Blake, Chris Nosko, and Steve Tadelis represented a joint team between eBay Inc. and the University of Chicago and University of Calfornia–Berkeley, addressing the problem of how much eBay should pay when purchasing keywords. Although the main effects of keywords look extremely profitable, if many of those who click on the sponsored ad would have organically found the sponsor anyway, the return on keyword purchases could be greatly overestimated. The application reported the results from a series of natural experiments conducted at eBay in which large-scale search engine marketing (SEM) campaigns were randomly executed or withdrawn across the United States. The authors found that conventional methods used to measure the causal (incremental) impact of SEM vastly overstated its effect. By combining different marketing interventions with diff-in-diff econometric models, they were able to first establish that buying the keyword "eBay" was not profitable. Second, in terms of when paying for other keywords might be cost-effective, the authors found a detectable positive impact of SEM on new user acquisition and on influencing purchases by infrequent users, allowing for a far more nuanced targeting strategy. This application is described more fully in Blake et al. (2015).

A somewhat different application was presented by Joost Bosma, Martin Heijnsbroek, and Peter Verhoef in trying to address the perceived service performance of the National Dutch Railways. In this case, the government-owned service provider was not trying to maximize profits, but more trying to improve customer satisfaction. Using a multisource database combining internal longitudinal operational statistics with extensive survey data, the authors were able to identify the drivers of customer satisfaction. The drivers could then be linked to service features, prioritized by their relative importance in driving satisfaction. One attractive feature of the operational drivers of customer perceptions was that they were classified into short and long term with corresponding strategies for both. For example, availability of seating was a primary driver of satisfaction. In the long term, this had implications for carriage design and length. In the short term, the Dutch Railways developed a real-time app for cell phones to advise passengers of likely forward seat availability, thus allowing them to participate in peak load spreading. This application is described more fully in Verhoef et al. (2017).

One example of operations management scholars addressing a problem that is generally considered to be within the domain of marketing was an application by Vivek Farias, Srikanth Jagabathula, and Devavrat Shah to product ranging and inventory management at an American cloths and fashion retailer for the consulting company Celect. The problem of deciding where to place stock is a highly multidimensional problem with large numbers of stock-keeping units (SKUs) cross-classified by a considerable count of stores. Although there is also a substantial pool of data of individual customer shopping records by SKU and store, those data are very sparse, leading to difficulties in estimating

the large number of parameters in the SKU × store model. The authors used nonparametric choice models to allow automation of the model selection, thus making the estimation tractable. They demonstrated a 20% increase in prediction accuracy over competing benchmark models. This, they suggested, would lead to a 10% growth in revenue given the resource constraints of the stocking decision. The data and methodology used in this application are detailed in Farias et al. (2013).

The fifth finalist represented a more conventional marketing-science application. Marc Fischer addressed the problem of how a large organization such as Mercedes-Benz should optimize its marketing spend across a variety of different media vehicles. To calibrate the effectiveness of TV, print, and social media spend in supporting new product launches, Mercedes conducted a survey of target consumers that estimated "opportunities to see" of different communications based on individual media usage habits, combined with the organization's spend on each medium. Target consumer response was calibrated in terms of mindset metrics including awareness (recognition), reach (involvement), and motivation (persuasiveness). Substantively, the results are interesting. They suggest that plans to move budget from TV to social media were likely to be misguided. Relative to use of the previous allocation algorithm, Mercedes calculated that the new approach saved the company up to two million euros per campaign. This application is described more fully in Fischer (2018).

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. All practice prize finalists are encouraged to submit their papers to *Marketing Science* for review. Accepted papers will be published as "practice papers," and videos of finalists' presentations are available for illustration or classroom use at the following URL: http://lilienpracticeprizevideos.org.

References

Anderson SJ, Chandy R, Zia B (2018) Pathways to profits: The impact of marketing vs. finance skills on business performance. *Management Sci.*, ePub ahead of print March 29, https://doi.org/10.1287/mnsc.2017.2920.

Blake T, Nosko C, Tadelis S (2015) Consumer heterogeneity and paid search effectiveness: A large-scale field experiment. *Econometrica* 83(1):155–174.

Farias VF, Jagabathula S, Shah D (2013) A nonparametric approach to modeling choice with limited data. *Management Sci.* 59(2):305–322.

Fischer M (2018) Managing advertising campaigns for new product launches: An application at Mercedes-Benz. *Marketing Sci.* Forthcoming.

Lilien GL, Roberts JH, Shankar V (2013) Effective marketing science applications: Insights from the ISMS-MSI practice prize finalist papers and projects. *Marketing Sci.* 32(2):229–245.

Reibstein DJ, Day G, Wind J (2009) Guest editorial: Is marketing academia losing its way? *J. Marketing* 73(4):1–3.

Verhoef PC, Heijnsbroek M, Bosma J (2017) Developing a service improvement system for the National Dutch Railways. *Interfaces* 47(6):489–504.

Winer RS (2014) The impact of marketing science research on practice. *Internat. J. Res. Marketing* 31(2):142–143.