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Publisher: Institute for Operations Research and the Management Sciences (INFORMS)

INFORMS is located in Maryland, USA



# Marketing Science

Publication details, including instructions for authors and subscription information: <a href="http://pubsonline.informs.org">http://pubsonline.informs.org</a>

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#### To cite this article:

(2009) 2007 ISMS Practice Prize Competition—Special Section Introduction. Marketing Science 28(4):617-619. <a href="https://doi.org/10.1287/mksc.1080.0478">https://doi.org/10.1287/mksc.1080.0478</a>

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Vol. 28, No. 4, July–August 2009, pp. 617–619 ISSN 0732-2399 | EISSN 1526-548X | 09 | 2804 | 0617



# 2007 ISMS Practice Prize Competition Special Section Introduction

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We introduce the work of the finalists in the 2007 ISMS Practice Prize Competition, representing the best examples of rigor plus relevance that our profession produces. The winner, describing a collaboration between National Academies Press and a team based at the University of Maryland, involves a sequenced program of research to calibrate price sensitivity of digital media. The other two finalists address a model to optimize the distribution of used cars geographically depending on local conditions, and a model to use price and distribution strategies to improve product profitability of P&G's heavy-duty detergent brands in India.

Key words: marketing organization; resource allocation; pricing; field experiments

History: Received: November 22, 2008; accepted November 24, 2008.

# Background

ISMS (The INFORMS Society for Marketing Science) runs the Practice Prize Competition to celebrate excellence in applied marketing science; 2007 is the fifth year it has done so. The Practice Prize Competition is an important communications vehicle for marketing scientists concerned with the practice side of our profession. To understand the objective of the Prize and the way in which it pursues that objective, it is useful to quote from the Prize Protocol:

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.

That is, the award is designed to recognize both the rigor of the work, along with its focus on relevance and organizational impact. Specifically, the following criteria have driven the selection of finalists and the winner:

- Implementation—Who Uses It, for What, and How:
- Impact—Organization and What Value;
- Methodological Quality: Leading edge/appropriateness;
- Technical Originality—Uniqueness and Flair;
- Difficulty—Problem(s), Politics, and Technical;

- Transportability—Use in Other Applications or Similar Organizations;
- Charm—Impact on Society or Newsworthiness.

The paper and two notes that follow represent the three finalists in the 2007 Practice Prize Competition, sponsored in part by the Marketing Science Institute, the Institute for the Study of Business Markets, the European Marketing Academy, and the Australian Marketing Institute (in conjunction with the Australian and New Zealand Marketing Academy), as well as ISMS.

# The Competition

The 2007 Prize committee was comprised of John Roberts, Prize Committee Chair (representing the Australian Marketing Institute and ANZ Marketing Academy), Tülin Erdem (as ISMS President), Manfred Krafft (representing the European Marketing Academy), Russ Winer (representing the Marketing Science Institute), Gary Lilien (representing the Institute for the Study of Business Markets), Steve Shugan (as *Marketing Science* editor), Chuck Weinberg, Jorge Silva-Risso, and Peter Danaher. 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 three finalists following presentations at the Inaugural Marketing Science Practice Conference on October 15,

2007, at The Wharton School of the University of Pennsylvania.

The Kannan et al. paper went through the traditional refereeing process at *Marketing Science* in addition to the rigorous screening of the competition. The notes from Du et al. and Kumar et al. were also examined by *Marketing Science* reviewers as well as undergoing the extensive evaluation process of the competition judging. In each case, in line with the Prize's focus on practice, evaluation is heavily weighted toward the organizational, impact, and transportability aspects of the work.

#### The Three Finalists

The winning entry, "Pricing Digital Content Product Lines: A Model and Application for the National Academies Press" by P. K. Kannan, Barbara Kline Pope, and Sanjay Jain, describes a problem increasingly prevalent in the world of digital commerce. National Academies Press wished to distribute its books electronically in PDF format but was concerned about the effect on its print revenue. Kannan et al. developed and calibrated a model to estimate cannibalization and category expansion effects from launching the digital product range. Their choice model enabled them to examine the profit implications of various print-digital pricing bundles, allowing for the heterogeneity of their consumers. The results enabled National Academies Press to launch its digital range with a viable pricing structure, while fulfilling their nonfinancial objectives of maximizing the reach of their authors' work. Their approach has subsequently been adopted by a number of other similar organizations.

The other finalists in the competition were

"PIN Optimal Distribution of Auction Vehicles System: Applying Price Forecasting, Elasticity Estimation, and Genetic Algorithm to Used-Vehicle Distribution," written by Jie Du, Lili Xie, and Stephan Schroeder. Every year, automotive manufacturers in the United States receive millions of vehicles on which the leases have expired and which must then be remarketed. In 2007, about 10 million used vehicles were sold at over 400 auctions in the United States. Manufacturers must decide when, where, and at what price to offer these vehicles. To address this challenge, J.D. Power and Associates developed an automated decision optimization system to help remarketers maximize profits through the most advantageous distribution. At the core of the system is a combination of three models that determine the distribution of the vehicles on a daily basis: a nearest neighbor linear regression model for short-term auction price forecasting, an autoregressive integrated moving average time-series analysis model for volume-price elasticity,

and a genetic algorithm optimizer for vehicle distribution. Since its launch in 2003, the system has been used to distribute more than two million vehicles with savings of \$52 million for Chrysler alone.

"Marketing-Mix Recommendations to Manage Value Growth at P&G Asia-Pacific," written by V. Kumar, Jia Fan, Rohit Gulati, and P. Venkat. This note examines the effect of marketing mix variables, including price, distribution, product initiatives, and advertising, on sales performance. Procter & Gamble (P&G) managers in India needed to disentangle the effects of marketing mix variables under complex market conditions. In particular, they had to make optimal strategic decisions on (a) the optimum price, distribution, and sizing combination to get maximum value; and (b) how to gain market share from their competitors without cannibalizing their own brands. To address this problem, the authors measured the price and distribution elasticities for all P&G's detergents using a system of equations for same-price tier choice and uptiering (to evaluate the draw of sales from the lower-tier competitors), incorporating a three-step random coefficient regression approach with timevarying parameters. As a result, P&G gained over \$39 million in value growth over a one year period by implementing the recommendations from the authors' modeling approach.

#### Comment

The work of previous finalists and winners, together with the work reported here, provides a rich portfolio of applications of marketing science models in industry, both in terms of range of management problems addressed and the diversity of techniques used with which to lend insight to them. By documenting the value and impact of the work our field produces, we hope to demonstrate the potential of applied marketing science to the more junior members of the profession, as the papers that follow demonstrate that rigorous marketing science work can be highly relevant and have significant impact as well. The 2007 Practice Prize shows that leading examples of practice can originate from academics, from industry marketers, and from the consultants who help practicing marketing managers with their decision making.

To conclude, we would like to thank the Practice Prize committee members and sponsors. The hard work by the committee members helped make this competition a particularly successful one. The support by the sponsors both attests to the practical value of the Practice Prize and provides resources for the professional filming of the Finalists' presentations.

The incorporation of the 2007 Practice Prize into the first ISMS Marketing Science Practice Conference meant that the judging was held somewhat later than usual, making it logistically difficult to run a competition in 2008. The Practice Prize will be conducted again in late in 2009 or early 2010, with Calls for Entries being requested by June 2009. Judging of the finalists in the Practice Prize will take place at the second Marketing Science Practice Conference, which will be jointly sponsored by ISMS and the Marketing Science Institute.

Once again, on behalf of the Prize Committee, we would like to congratulate the finalists and winners

for their outstanding work and contributions to the practice of Marketing Science!

Note. ISMS is keen to disseminate the excellent work embodied by the entries in the Practice Prize Competition. Excellent DVDs of these presentations, as well as those of previous finalists in useful chapter format, are available for illustration or classroom use. DVDs include the PowerPoint presentations that the presenters used at the competition. To obtain the videos visit http://www.informs.org/edu/marketingscience/.