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Practice Prize Report: The 2020 and 2022 ISMS Gary Lilien Practice Prize Competition

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Abstract. This report summarizes the finalists of the INFORMS Society for Marketing Science (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 2020 winner described an application of corporate valuation with a customer-driven approach, whereas the 2022 winner reported a large-scale randomized controlled trial of the effect of front-of-pack labels on the nutritional quality of supermarket food purchases. The other four finalists include studies of dynamic structural analysis of salesforce management (2020), promotional campaign duration and word-of-mouth in solar panel adoption (2022), personalization in email marketing (2022), and reducing product returns through green nudges (2022). As the ISMS Vice Presidents of Practice, we draw several conclusions on how to further marketing science applications above and beyond the typical academic settings.

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Keywords: field experiments • sales force • social/nonprofit marketing • advertising • retailing • stock valuation

What Is the Practice Prize?

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 years 2020 and 2022 represented the 10th and 11th round in which the Practice Prize was awarded. Since the first competition in 2003, the prize has attracted hundreds of submissions, resulting in 39 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 many finalists' works have 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?

The 2020 Competition

The 2020 prize committee was comprised of Koen Pauwels, prize committee chair (as the ISMS vice president of practice), Kusum Ailawadi (Charles Jordan 1911 TU'12 Professor of Marketing at the Tuck School of Business at Dartmouth), Michael Cohen (Chief Data & Technology Officer at Marketing Evolution), Robert Moakler (Quantitative Researcher at Facebook), Greg Pharo (Global Director, Marketing Analytics and Research at Coca-Cola), and John Wittenbraker (Managing Director & Chief Science Officer (CSO) of the Global Science Organization at Ipsos). Gary Lilien and John Roberts provided feedback during the finalists' rehearsal presentations. The committee received several 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 two finalists and then a winner, following presentations at the virtual ISMS Marketing Science Conference organized by Duke University on June 12, 2020.

The winning paper by McCarthy (2020) puts a customer spin on corporate valuation. As Tim Ambler exclaimed in the first marketing-finance conference (organized by Marketing Science Institute (MSI) in 2003), the interface should not just be about marketing academics talking finance, it should also be about bringing marketing to finance! This paper does just that by demonstrating the power of a marketing-based methodology to help financial analysts to value a firm and managers to communicate the value marketing has created for that firm. Customer-based corporate valuation (CBCV) values the current and likely future income streams from the firm's market-based assets, in particular its customers. Extending previous models (McCarthy et al. 2017, McCarthy and Fader 2018) with a richer specification and data input, McCarthy applies CBCV to companies whose fair valuations different more than 10% from their stock prices: Blue Apron, HelloFresh, Lyft, Revolve Clothing, Farfetch, and Wayfair. Easy to implement, the models are validated by excess market returns and adopted by a wide range of firm stakeholders including securities law, Wall Street analysts, regulatory bodies, and professional investors.

This winner highlights the relevance of the marketing science driving the work to investors and financial analysts, which in turn highlights the relevance of the work to marketing managers who are responsible for managing customer assets and driving improvement in the customer metrics.

In "The Comprehensive Effects of Sales Force Management: A Dynamic Structural Analysis of Selection,

Compensation, and Training," finalist Chung et al. work with the multinational general pharmaceutical company Nobel Ilac. To answer management's questions on sales force compensation, hiring, firing, and training, the study provides an integrated model of an agent's behavior in response to multiple sales management instruments. Such integrated and dynamic model is needed because salespeople show differences in productivity, time preferences, and responsiveness to compensation and training, which drives performance and in turn influences turnover, which changes the salesforce composition. Taking into account effort allocation, forward-looking behavior, present bias, training effectiveness, and employee turnover, the research provides guidance on the optimal design of sales management policies. The counterfactual results demonstrate a tradeoff relation between adjusting fixed- and variable-pay components toward performance; a potential drawback of hiring only high-type salespeople; the short- and long-term performance outcomes of hiring rookies versus experienced salespeople; how a collective leave package can lead to selective departure of the sales force; and how sales training can serve as an alternative to providing additional compensation.

The insights led Nobel Ilac to change a number of its sales force management policies. A field validation, by comparing counterfactual and actual outcomes under the new policy, demonstrates the accuracy of the model and illustrates that the policy change indeed leads to positive performance and turnover outcomes. As to generalizability, the study's framework and model provides a practical application for sales organizations to foresee the effect of multiple sales management instruments on the behavior of the sales force.

The 2022 Competition

The 2022 prize committee was comprised of Lan Luo, prize committee chair (as the ISMS vice president of practice), Phil Leslie (Chief Digital Economist & Vice President at Amazon), Robert Moakler (Quantitative Researcher at Meta), Koen Pauwels (Distinguished Professor of Marketing at Northeastern University), Olivier Toubia (Glaubinger Professor of Business at Columbia University), John Wittenbraker (former Managing Director & CSO of the Global Science Organization at Ipsos), and Juanjuan Zhang (John D. C. Little Professor of Marketing at MIT Sloan School of Management). Gary Lilien, Koen Pauwels, and John Roberts provided feedback during the finalists' rehearsal presentations. From the rich set of entries, the judges selected four finalists and then a winner, following presentations at the ISMS Marketing Science Conference organized by the University of Chicago on June 17, 2022.

The winning paper “Effect of Front-of-Pack Labels on the Nutritional Quality of Supermarket Food Purchases” was presented by Chandon on behalf of the author team (Dubois et al. 2021). This paper reported the results of a large-scale randomized controlled trial conducted by a multidisciplinary research team at the request of the French Government to select the best of four simplified front-of-pack nutrition labels. For 10 weeks, 1.9 million labels were added to 1,266 food products in four categories in 40 French supermarkets, whereas 20 other stores served as a control group. Analyses of the nutritional quality of 1,668,301 purchases using a difference-in-differences approach revealed that Nutri-Score was the best label. The author team also showed that the effect sizes of nutrition labeling are, on average, 17 times smaller in real-life grocery shopping conditions than in laboratory studies. Although Nutri-Score increased the purchases of foods in the top third of their category nutrition-wise by 14%, it had no statistically significant impact on the purchases of foods with medium, low, or unlabeled nutrition quality. The study led the French Ministers of Health, Agriculture, and Finance to jointly endorse Nutri-Score, which has since been endorsed by Germany, Spain, Switzerland, and the Benelux countries. Products with the Nutri-Score label accounted for 57% of the market in France in 2021 (OQALI 2021¹) and are currently used by hundreds of food retailers and manufacturers, including those who originally supported alternative nutrition labels.

The winner showcases a fruitful large-scale collaboration between government agencies and a team of highly competent scholars to scientifically test out various alternatives to effectively promote better choices at the grocery stores. Nutri-Score label, the nutrition label option endorsed by the research, was well adopted across multiple European countries by a large number of food retailers/manufacturers. Overall, this winner is an exemplar of rigorous and relevant research that has a long-reaching impact on both society and business practice.

The remaining finalists are highlighted in alphabetical order by first author of the submission. Bollinger et al. presented their work on the effects of promotional campaign duration and word-of-mouth in solar panel adoption. Intensive marketing campaigns can be used to increase awareness, consideration, purchase, and word-of-mouth (WOM) of prosocial products. With expanded interest and belief in how social norms and spillovers might be leveraged to combat climate change, it is critical to understand how campaigns designed to leverage such peer effects can be best designed. In this paper, the authors study the role of campaign duration on solar photovoltaic adoption using a large-scale field experiment, in which they randomly assign communities to campaigns with shorter

durations, increasing the marketing intensity to maintain the same total resources per campaign. Bollinger et al. find that the shorter and longer campaigns are equally effective while they are running, but the longer campaigns generate more WOM and therefore lead to more adoption post campaign than the shorter campaign. The shorter campaigns led to 34.8 fewer installations per town in the two years after the campaigns concluded, increasing the cost per acquisition from \$1,566 to \$4,367, the former being substantially lower than installers’ self-reported acquisition costs and the latter being substantially higher.

In another finalist paper, Sahni et al. (2018) dived deep into the impact of having personalized emails in firms’ marketing campaigns. They collaborated with three companies selling a diverse set of products and conducted randomized field experiments in which experimentally tailored email ads were sent to millions of individuals. They found consistently that personalizing the emails by adding consumer-specific information (e.g., recipient’s name) benefited the advertisers. Importantly, such content is not about the advertised product or the company. In their main experiment, Sahni et al. found that adding the name of the message recipient to the email’s subject line increased the probability of the recipient opening it by 20%, which translated to an increase in sales’ leads by 31% and a reduction in the number of individuals unsubscribing from the email campaign by 17%. The authors also present similar experiments conducted with other companies, which show that the effects they document extend from objectives ranging from acquiring new customers to retaining customers who have purchased from the company in the past. Their investigation of several possible mechanisms suggests that such content increases the effort consumers make in processing the other content in the rest of the advertising message. This paper quantifies the benefits from personalization and sheds light on the role of noninformative advertising content by analyzing several detailed measures of recipient’s interaction with the message. It provides external validity to psychological mechanisms and demonstrates their practical implications for the firms designing their advertising campaigns.

Finally, in “Reducing Net Product Returns Through Green Nudges and Causal Machine Learning,” finalist von Zahn et al. worked with a large European retailer to demonstrate that green nudges can effectively reduce new product returns for online retailers. As free online shipping becomes a standard in e-commerce, product returns pose a growing challenge to online retailers and society. For retailers, product returns create considerable costs associated with transportation, labor, disposal, and infrastructure to manage returns. From a societal perspective, increasing product returns contribute to increased

pollution, additional trash, and often a waste of natural resources. Due to these costs, companies and society are interested in reducing product returns. However, despite strong entrepreneurial and public interest in minimizing product returns, retailers on a micro level possess only very few effective instruments to minimize product returns without harming customer demand and net sales. In this work, von Zahn et al. propose a novel product return prevention instrument (*Smart Green Nudging*) that leverages causal machine learning (CML) and the availability of rich customer and contextual data to identify and nudge selected customers toward better shopping choices that will yield reduced product returns without diminishing customer demand and net sales. The authors evaluate the performance of the proposed returns prevention instrument with real-world data from the German online shop of a large European retailer. They demonstrate in a randomized field experiment with approximately one million visitors that showing a green nudge to all customers (Naïve Green Nudging) can reduce product returns but also incurs a decrease in demand, which ultimately translates to higher net profits. Furthermore, the author team shows that the superiority of Smart Green Nudging over Naïve Green Nudging in terms of both product returns and firm profits. Specifically, in this randomized field experiment, compared with Naïve Green Nudging, the Smart Green Nudging strategy curtails product return by additional +1.23% and increases profits by additional +3.61%. Overall, this paper demonstrates the efficacy of using state-of-the-art CML to customize minimally invasive behavioral nudges in the digital environment as a means to tackle business and societal problems.

Discussion

Compared with previous years, the 2020 and 2022 rounds of the Practice Prize Competitions were distinctive in the following ways. First, the winners from these two rounds have demonstrated that there are many different ways to show impact. In the past, winners and finalists often ran field experiments in collaboration with firms (Wiesel et al. 2011, Valenti et al. 2018). The customer-based corporate valuation paper (2020 winner) did not have a field experiment in any specific organization but showcased lots of stakeholders attesting to the model's value. The nutrition label paper (2022 winner) collaborated with the French government, but findings from this paper had long-reaching impact on numerous food retailers and manufacturers. The judging panel found both entries to be highly impactful in terms of representing the best examples of rigor plus relevance that our profession produces.

Second, in both rounds, the winners contributed knowledge and actions beyond marketing, respectively, to finance and to health domains. This is a manifestation that our field has become considerably more interdisciplinary

over the years. As an applied domain under the social science umbrella, the field of marketing has always had a tradition to leverage knowledge and toolkits from other domains. It is exciting to witness research from our field influence other disciplines and receive appreciation for its key strengths: a thorough understanding of customers and employees in all their “rational” and actual behavior, an appropriate choice of methods to fit the problem and business reality instead of merely for mathematical sophistication, and the enthusiasm to learn from practical consideration to enrich existing theory and empirical approaches.

Last but not the least, compared with previous years, there is a notable trend of more entries related to the work centering on “for the good of the society,” in line with “better marketing for a better world” (Chandy et al. 2021; <https://www.bmw.org/>). In addition to the 2022 winner paper that promotes healthy living, one 2022 finalist used green nudges to prompt online shoppers to be more environmentally conscious that ultimately led to reduced product returns. Another 2022 finalist collaborated with government agencies to examine how to best design promotional campaigns to promote adoption of solar panels. Both entries reflected a recent movement in our field related to the use of marketing to create a better world. Quantitative marketing has been slow to answer this call, but recent papers discuss how to overcome the obstacles of policy decision maker and data access (Kopalle and Lehmann 2021, Martin and Scott 2021, Pauwels and Perry 2022). We welcome and expect more future Practice Prize entries that emphasize marketing's role in enhancing the welfare of the world's other stakeholders and institutions.

Despite these new developments, our key learnings as Vice Presidents of Practice also reflect the insights from our predecessors. In line with Lilien et al. (2013), we see multiple approaches for marketing science to add value to client organizations: there is no one silver bullet. Simpler, easier-to-use models that offer robust and improved results can have a stronger impact than academically sophisticated models. Organizational buy-in is critical and requires researchers to embed themselves and speak the same language as the decision makers, whether they are company executives (Sahni et al. 2018, Chung et al. 2021, von Zahn et al. 2022), financial stakeholders (McCarthy 2020), government officials (Dubois et al. 2021), or influential customers in the community (Bollinger et al. 2022). Moreover, we agree with Roberts (2020) that academic papers are too often judged by their perfection on specific criteria in isolation: Are all possible alternative explanations ruled out? Is the data ideal? Is the method the most groundbreaking? Instead, it is in the connections between these criteria where winners shine and less successful applications fall short. Are the key marketplace phenomena and managerial decision alternatives truly captured in

the chosen approach? Have the researchers really distilled the results into insights rather than just hit the data with a powerful statistical sledgehammer? Do the recommendations follow from the analysis? In some cases, could these actions have been identified by a simpler approach, which is easier to explain and get buy-in for? Better answers to these questions enrich both marketing academia and practice.

In sum, the discussed projects and the other entrants showcase the collaboration of marketing scientists with practitioners. We encourage more academics and decision makers to participate in such projects and are looking forward to your submissions to the 2024 Gary Lilien ISMS-MSI-EMAC Practice Prize.

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 <http://lilienpracticeprizevideos.org/> and on the dedicated YouTube channel <https://www.youtube.com/channel/UCrS2aW6TiebaWVMjGGFH8oQ>.

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Endnote

¹ OQALI. Suivi du Nutri-Score par l’OQALI (2021). See https://www.oqali.fr/media/2022/01/OQALI-2021_Suivi-du-Nutri-Score-1.pdf.

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