

The Effect of Data Breach Announcement on Customer Behavior: Evidence from a Natural Experiment

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Abstract:

Data breach incidents have become increasingly common and businesses incur enormous costs to recover from such events. In this study, we assess the effects of a data breach announcement by a multichannel retailer on customer behavior. We exploit a natural experiment and use individual customer transaction data from the retailer to conduct a detailed and systematic empirical examination of the effects of a data breach announcement on customer spending and channel migration behavior. For identification of the data breach announcement effects, we compare the change in customer behavior before and after the cyberattack announcement between two groups of customers—a treatment group (customers whose information is breached) and a control group (customers whose information is not breached)—using the difference-in-differences modeling framework. We find that the data breach results in significant decrease in customer spending. Our analysis also finds a silver lining for the focal multichannel retailer in that we find that a significant portion of the firm's customers migrate from the breached channel to the unbreached channels of the retailer. Further, we find that customers with a greater retailer patronage are more forgiving as the negative effect of the data breach announcement is lower for customers with stronger retailer patronage as compared to customers with lower retailer patronage. We perform a series of robustness checks and falsification tests to validate our findings. Based on our results, we offer prescriptions for managers on how to engage with customers following data breach announcements and elaborate on the strategic role of multichannel strategy in absorbing negative demand shocks.

Speaker Profile:

Dr. Ram Janakiraman is an Associate Professor of Marketing and a Business Partnership Foundation Research Fellow at the Darla Moore School of Business at the University of South Carolina (USC). Ram has a Ph.D. in Business Administration from University of Southern California, Los Angeles, CA. Dr. Janakiraman's substantive research areas include social and digital media, multichannel retailing, big data and marketing, health/healthcare marketing and marketing/public policy issues. His methodological interests include microeconometrics, applied econometric modeling and consumer learning/structural models. Dr. Janakiraman's research has appeared or forthcoming in leading marketing, information systems, strategy and medical journals such as *Marketing Science*, *Management Science*, *Journal of Marketing*, *Journal of Marketing Research*, *Information Systems Research*, *Journal of Consumer Psychology*, *Decision Sciences*, *Journal of Advertising Research*, *Journal of Management and Annals of Family Medicine*. Dr. Janakiraman's research has received several recognitions. One of his research papers was a finalist in the best paper award given by the Industry Studies Association-INFORMS (2011) and another research paper received an honorable mention in the best paper award awarded by the Decision Science Institute (2011). Ram's research has received several national and international research grants. Ram's work has been covered in popular business outlets such as the *Wall Street Journal* and *Biz Inc*. He teaches graduate level courses on marketing analytics, customer relationship management, data mining and doctoral seminars on marketing models. Prior to arriving at USC, Ram was an Associate Professor of Marketing and Mays Research Fellow at the Mays Business School at Texas A&M University, where he was a recipient of the Association of Former Students Teaching Achievement Award for his outstanding teaching contributions.