

Real-Time Evaluation of Email Campaign Performance

December 2007

André Bonfrer*
Xavier Drèze

* Corresponding author. André Bonfrer is Assistant Professor of Marketing at the Singapore Management University, Lee Kong Chian School of Business, 50 Stamford Road #05-01, Singapore 178899, andrebonfrer@smu.edu.sg, Tel +65-6828-0398, Fax +65-6828-0777. Xavier Drèze is Assistant Professor of Marketing at the Wharton School of the University of Pennsylvania, 3730 Walnut Street, Philadelphia, PA 19104-6340, 215-898-1223, Fax 215-898-2534, xdreze@wharton.upenn.edu.

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We develop a testing methodology that can be used to predict the performance of email marketing campaigns in real time. We propose a split-hazard model that makes use of a time transformation (a concept we call virtual time) to allow for the estimation of straightforward parametric hazard functions and generate early predictions of an individual campaign's performance (as measured by open and click propensities). We apply this pre-testing methodology to 25 email campaigns and find that the method is able to produce in an hour and fifteen minutes estimates that are more accurate and more reliable than what the traditional method (doubling time) can produce after 14 hours. Other benefits of our method are that we make testing independent of the time of day and we produce meaningful confidence intervals. Thus, our methodology can be used not only for testing purposes, but also for live monitoring. The testing procedure is coupled with a formal decision theoretic framework to generate a sequential testing procedure useful for the real time evaluation of campaigns.

Keywords: Database marketing, email, pre-testing, advertising campaigns.