



The University of Chicago
Department of Statistics

Master's Seminar

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No Small Potatoes

Using Shopper ID level models to measure the impact of targeted marketing for a popular potato product

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110 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

With tens of millions of dollars at stake, brand managers often resort to statistical models to help make decisions on how to spend their marketing budgets. Most of these models are specified with data at either the market or store level. However, even though they traditionally have measured marketing impact of their coupons at the store level, Catalina Marketing Corporation (a targeted marketing promotions company in St Petersburg, FL) collects data at the shopper ID level.

I will be investigating and measuring the impact of targeted coupons on frozen potato purchasing using data for two groups of shopper ID's. The first group is those who received coupons to buy more frozen potatoes based on their purchases of frozen potatoes. The second is ID's that should have received the same coupons but whose coupons failed to print due to a technical problem (out of paper, printer jam...).

The primary goal of fitting the models at the ID level is to reduce the variability associated with the prediction of what volume of frozen potatoes would have been purchased had the coupons not been printed (which is a traditional problem with the store level models). To that end, we will fit and compare three classes of models and examine the variance of their predictions.