TACKLING HETEROGENEITY IN AN OPPORTUNITY-TO-SEE (OTS) BASED MEASUREMENT APPROACH

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Abstract

Determining the right approach to measuring advertising performance on consumer attitudes and behaviors has been an ongoing debate in the industry for many years. A slew of different approaches have been introduced over the past few years, with some approaches providing timely insights to help managers fine tune their immediate business decisions and others delivering retrospective insights that that enable managers to see the long-range impact of their media investments. Today's advertisers regularly use both measurement approaches to control short-term outcomes and effectively drive long-term planning.

In this paper, Symphony Advanced Media Chief Analytics Officer Haren Ghosh details the shorter-term measurement approaches currently available in the market. These approaches primarily apply an experimental design approach assigning respondents randomly into control and exposed groups and examine the between those two groups. Although the approach by itself is a robust one, it could be extremely difficult to establish control and exposed groups in reality. Market researchers currently tend to follow an opportunity-to-see (OTS) based approach assigning respondents into control and exposed groups based on their stated media recall responses (e.g., if a respondent says the he read Men's Health magazine or visited the magazine site, in which the ad appeared somewhere, s/he falls into the exposed group for print or online respectively). Ghosh empirically shows how this OTS based approach could be misleading in times, and proposes an alternative approach that can help marketers and advertisers get the most accurate insights on advertisement effectiveness.

Tackling Heterogeneity in an Opportunity-to-See (OTS) based Measurement Approach

The number of mass media channels where advertisers are investing to reach their target audiences has exploded in last couple of years. Choices in new media, such as digital display, social and mobile media, and streaming video and radio, enable audiences to pick and choose how they access content. Along with traditional channels--such as television or print—such new media gives marketers more opportunity to communicate with target audiences and increase the number of contact points between them and their consumers, a key ingredient for brand building.

In deploying multi-channel advertising, most marketers gravitate toward an Integrated Marketing Communication (IMC) strategy, which harnesses cross-channel synergies by integrating messaging. Advertisers believe such IMC campaigns lead to greater brand equity and affect the bottom line (sales) significantly.

Although IMC activities have increased quite a bit in last few years, how to accurately capture campaign effectiveness remains unsettled. One camp says a correlational analysis (commonly known as Mix Modeling) associating the outcome variable and various media efforts (e.g. spend, reach, frequency, etc.) is enough to detect the effectiveness of each media. The other camp, which relies on experimental design frameworks, highlights the drawbacks of such efforts with weighty counter arguments:

1) A correlational model cannot capture synergies between channels correctly;
2) The model falls short when one or few media have spend numbers that are sporadic over time or small or non-variant;
3) The modeling effort cannot disentangle the messaging effectiveness piece from media and
4) The model needs extensively long time (weekly or monthly) series data in order to establish any relationship between sales and spend.

Advertisers are often unsure which approach does a better job measuring advertising performance, particularly when the goals are to find out what is or is not working and why or why not. Advertisers are reluctant to wait for a year or more to get those answers because such a delayed retrospective analysis, which is generally the case for a correlational modeling effort, is not viable or actionable due to market place dynamics.

To tackle this challenge and effectively measure near-time ad performance impact, advertisers often lean on consumer survey-based research that either applies brand tracking data reporting (which relies on brand metrics such as brand awareness, opinion, and intent, etc.), tracking, or an experimental design-based analysis which randomly put respondents into different media-exposed groups and contrasts their responses with those in the control group. The latter approach is extremely

powerful because this manages the effects of all extraneous variables by distributing them evenly to both control and exposed groups. Thus, any differences observed in any exposed groups detected through an experimental design analysis can be attributed to advertisers' media efforts only.

Many advertisers and research suppliers agree that an experimental design-based approach is preferable in detecting a brand's near-time impact resulting from integrated media tactics. However, there are conflicting opinions on how to establish control and exposed groups properly. Some researchers suggest that an opportunity-to-see (OTS)-based approach should be followed to identify whether or not a respondent is exposed to a particular medium. Other researchers argue that relying solely on OTS—which is a function of the number of people reached and the number of times each person has an opportunity to see the advertisements—can produce misleading outcomes for long-term campaigns or when one or more media are so large that a 'true' control group is almost impossible to establish.

Another issue is that OTS might range from a brief glance to a careful consideration of an advertisement. To illustrate this range, imagine one is walking on a busy street. How many billboard advertisements catch one's eye? One may not realize it but s/he is contributing to the OTS/Impressions of several advertisements, regardless whether s/he ignores them or studies them with great interest*.

As the chief research officer at Symphony Advanced Media (SAM), study author Haren Ghosh experienced many results based on an OTS experimental design approach that were quite contrary to the outcomes obtained from other approaches. Subsequently, Ghosh leveraged an ad recognition-based data analytics approach using SAM's datasets to examine the root cause of such consistently disparate results.

To execute this, Ghosh showed the actual creative to both control and exposed groups (OTS-based) and asked if they recognized seeing the ad in real media context. To ensure unbiased responses on all key brand metrics questions (awareness, opinion, purchase intent, etc.), Ghosh showed those commercials only after respondents finished answering those questions.

A standard ad recognition question would look like as follows, where top 2-box would lead to the Ad Recognizer group:

Q. Do you recognize this ad from **the Internet**?

1. Yes, I have definitely seen this ad before
2. I think I have seen this ad before – I am not certain
3. No, I have definitely not seen this ad before

Outcome

The analysis revealed the following insights:

- A non-trivial portion of OTS-based exposed actually consumed and recognized the ad
- The responses, in aggregate, clearly indicate that ad recognizers in the OTS-based 'control' group responded statistically similarly to the ad recognizers in the OTS-based 'exposed' group-- indicating that the ad consumption drives consumers, not the media consumption (measured by consumers' opportunity to see an ad in a certain medium).
- Similarly, non-ad recognizers in the OTS-based 'control' group responded similarly to the same in the cookie-based 'exposed group.

Conclusion:

Based on this study, Ghosh proposes to establish control and exposed groups based on respondents' stated ad recognition ability, instead of solely relying on their either stated or technology revealed passive media consumption behavior. This approach has unique advantages, including:

- When control impressions are not available, pure ad recognition information can be used in lieu of actual control group
- It is possible to avoid deletion of large number of valid information from the control group, because those who recognize the ad in the OTS based control group would now be a part of the exposed group.
- This approach helps understand the true advertising effectiveness by detecting creative effectiveness, ad recognition propensity by each site, site efficiencyand overall media efficiency..

*Source: Wharton School Research publication, 2006