Incremental Clicks Impact Of Mobile Search Advertising

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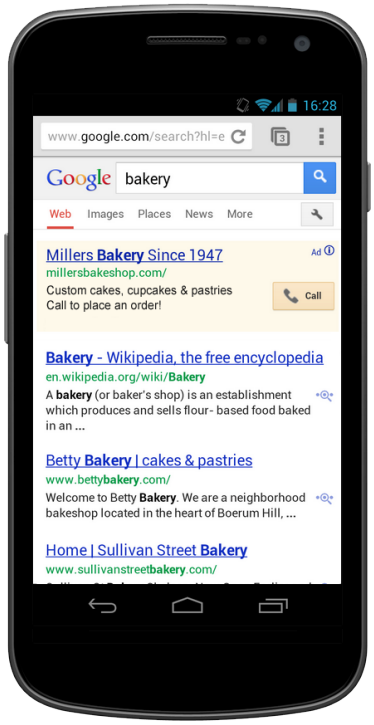
Abstract

In this research, we examine how the number of mobile organic clicks changes when advertisers significantly change their mobile ad spend. This continues the line of research of search ads pause by applying it to the mobile platform. We utilize a statistical model to estimate the fraction of clicks that can be attributed to mobile search advertising. A metastudy of 327 advertisers reveals that 88% of ad clicks are incremental, in the sense that the visits to the advertiser's site would not have occurred without the mobile ad campaigns.



1 Introduction

In two previously published papers, we established that 89% of visits to an advertiser's site are incremental to clicks on organic results on average [1], and when broken down by organic result rank, 50% are incremental when an organic result appears at the top position, 82% when an organic result appears at ranks 2-4, and 95% when an organic result appears at ranks 5 and higher [2]. This paper continues this line of research by focusing exclusively on the mobile platform – only considering ad spend, ad clicks, organic clicks and organic impressions for mobile. The two prior studies combined data across the desktop, mobile and tablet platforms. As the layout of the search results page on mobile differs from desktop, we might expect the incrementality of ad clicks to vary on the mobile platform.

Mobile advertising is largely driven by smartphones. The use of smartphones in the United States is on the rise with 56% penetration as of the first quarter of 2013. Of those smartphone owners, 61% perform searches on their smartphones every day while 77% have researched a product or service online. Smartphones also drive users who begin research on their phones to make purchases through other channels with 40% purchasing via a computer and 38% purchasing offline in a store [3].

US mobile online advertising spend is one of the fastest growing areas with a projected spend of $7.7 billion in 2013 growing to an estimated $28 billion in 2017 [4]. There are advantages search advertising has over traditional media advertis-

ing. One involves access to direct metrics of impact, such as the number of clicks achieved. Another is search advertising allows advertisers to pay only when a user clicks on an ad. And yet another is that since the ads are triggered by search terms, they tend to be highly relevant to the user. Additionally, search advertising on the mobile platform allows advertisers to reach users when they are out of their homes. 83% of smartphone users do not leave home without their device [3].

However, measuring the number of mobile ad clicks alone does not provide information on the incrementality of mobile search advertising. That is, the question "how many of the clicks are incremental to clicks that would have occurred on natural search results in the absence of paid ad results?" is not answered. Advertisers that pause their mobile search advertising campaigns sometimes cite concerns about how much of the traffic to the sites is truly incremental to clicks on natural search results.

The incrementality is dependent on factors such as the organic search result ranking and how similar the paid and organic listings are to each other. By measuring the incremental click impact from search advertising, the advertiser is able to make more informed decisions regarding their advertising spend.

2 Methodology

In order to determine the incremental clicks related to mobile search advertising, we quantify the impact that a pronounced search ad spend change (increase or decrease) has on total mobile clicks. Indirect navigation to the advertiser site is not considered. Each study produces an estimate of the incremental clicks attributed to search advertising for an advertiser. To make comparison across multiple studies easier, we express the incremental clicks as a percentage of the change in paid clicks. This metric is labeled "Incremental Ad Clicks", or "IAC" for short.

IAC represents the percentage of paid clicks that are not made up for by organic clicks when ads are paused. Conversely, when the campaign is restarted, the IAC represents the fraction of paid clicks that are incremental. Since we do not assume a positive interaction between paid and organic search in our analysis, the IAC estimate is bounded at 100%. For example, consider the following scenario:

(A) An advertiser spends $1,000 a month and receives 400 organic and 300 paid clicks a month.

(B) Subsequently, they cut their ad spend to $0 and find there are 500 organic clicks a month and 0 paid clicks a month.

Under (A), there are 200 incremental clicks, thereby giving an IAC of (700-500)/(300-0) = 66.7%.

In the above example, we do not consider external factors which could also affect the organic clicks before and after the spend change. To control for this, we employ the statistical model described in [1].

This estimate of 200 incremental clicks depends on factors leading to the ad spend drop and the state of the account and competitive environment around the time of the spend change. Although the estimate of the IAC should always be considered in the context of the changes preceding the ad spend change, a meta-analysis of all the Mobile Search Ad Pause studies provides insight into the average IAC from mobile search advertising.

2.1 Implementation Details

The studies are implemented by leveraging the automated pipeline from [1] and customizing it to only extract spend, clicks and impressions for the mobile platform. The pipeline extracted ad and organic data between March 2012 and April 2013 for each company that was identified to have either a significant increase or decrease in spend. Also identified are a pre-period (a relatively stable period prior to the spend change), and a post-period (a relatively stable period after the spend change). The results are compared

against validation checks on data integrity and model quality. Validation checks are used to ensure confidence in the statistical model and its predictions. Only studies passing the validation flags are included in this meta-analysis. For more details on the statistical model, see [1].

3 Meta-Analysis Results

The meta-analysis is based on 327 validated studies conducted between March, 2012 to April, 2013.

Figure 1 is a histogram plot of the IAC across all 327 studies. The average IAC across all studies is 87.7%, with the median rate at 96%. More than 63% of the studies had an IAC value greater 90%, with only a few studies showing a low IAC value.

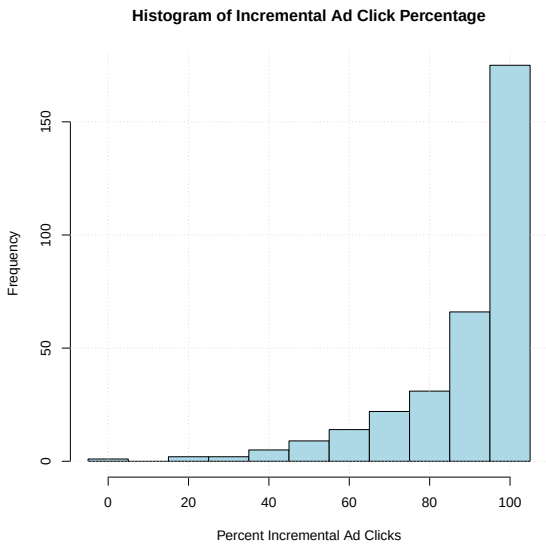


Figure 1: Histogram of Incremental Ad Clicks

3.1 IAC Statistics by Vertical

Table 1 and Figure 2 summarize the IAC statistics by industry vertical. We have omitted industry verticals with fewer than 5 studies from the table and boxplot.

Industry Vertical	N	Mean	Sd	Median
Retail	79	86.3%	17.6%	93.9%
Education & Government	30	93.6%	11.7%	98.4%
Technology	28	89.7%	19.1%	97.0%
Finance	26	87.3%	16.6%	96.2%
Services All Verticals	20	82.4%	19.4%	91.7%
Consumer Packaged Goods	19	85.7%	17.1%	90.8%
Automotive	18	85.6%	15.9%	88.3%
Business & Industrial Markets	18	94.0%	5.5%	95.1%
Healthcare	14	82.8%	12.2%	87.0%
Media & Entertainment	14	86.4%	23.8%	96.7%
Travel	12	84.8%	22.5%	92.0%
Classifieds & Local	9	96.9%	4.3%	98.7%

Table 1: IAC Statistics by Industry Vertical

Figure 2 is a boxplot of the IAC for each of 12 different verticals arranged alphabetically. The IAC is quite consistent across verticals with most verticals having a median IAC above 90%.

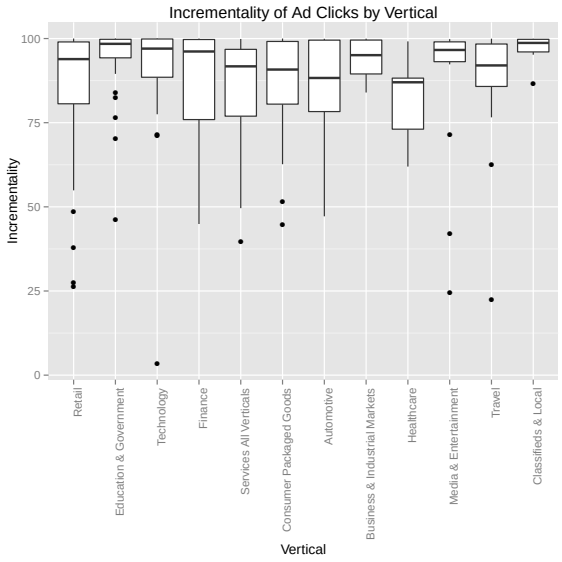


Figure 2: Boxplot of Incremental Ad Clicks by Vertical

Table 2 and Figure 3 summarize the IAC by whether the spend change was an increase or decrease.

Spend change	N	Mean	Sd	Median
Increase	89	87.0%	17.7%	95.4%
Decrease	235	88.7%	16.0%	96.1%

Table 2: IAC Statistics by Spend Change Type

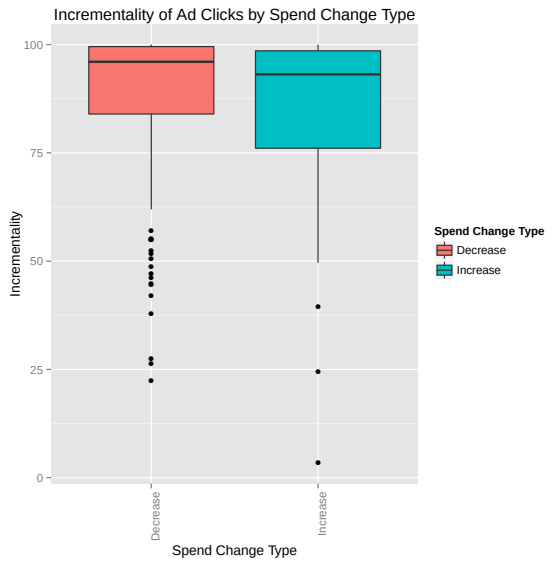


Figure 3: Boxplot of Incrementality by Ad Spend Change Type

4 Concluding Remarks

We have examined those accounts which have exhibited a pronounced spend change for which our models produce valid results. The meta-analysis is not representative of all the possible factors which could drive ad spend change. However, given the large volume of studies produced, across multiple industry verticals, our analysis does provide a reasonable cross section of expected IAC.

A more rigorous approach to determining IAC would be to conduct a randomized experiment. A test group would be exposed to the pull back in paid search ads while search spend would be held constant in a control group. A comparison of the paid and organic click volumes in the two groups would then yield an IAC estimate. One approach would be to conduct a geo-experiment [5].

Ultimately, advertisers are interested in how much income can be attributed to their search advertising campaigns. Our analysis does not include an estimate for incremental conversions. Other factors such as the ranking of the organic search result or the strength of brand awareness of the search term could influence the IAC estimate. Being able to track these factors for each study will allow us to better understand their influence on the IAC estimate.

Acknowledgments

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