

# Measurement Case Study



## The Challenge

Hudson's Bay Company, an institution of Canadian retail and the oldest company in North America, wanted to assess whether digitizing their print flyer on Facebook could drive omni-channel sales growth across 89 physical locations in Canada and the company's eCommerce site. However, measuring the impact of online advertising on in-store sales can be quite difficult. It requires companies to connect the dots between the actions consumers take in the real world to ads they see on digital devices.

Hudson's Bay partnered with Facebook's Marketing Science team to tackle this challenge head on. Through geo experimentation, which uses test and control geographic markets with similar historical sales performance, Hudson's Bay was able to measure lift in online and in-store sales as a result of campaigns on Facebook and Instagram. The company saw a 12.9X incremental return on ad spend (iROAS) utilizing this approach, meaning that every \$1 invested in Facebook drove \$12.90 in incremental omni-channel sales.

## The Opportunity

Hudson's Bay wanted to test whether a digital-first flyer on Facebook could increase the reach of its print flyer and drive incremental omni-channel sales. To do this, the company needed to find a measurement solution capable of accurately estimating lift in online and in-store sales.

While there are many solutions available to measure online sales lift, measuring in-store sales lift is much more difficult due to the complexity of connecting ad-exposure to in-store purchases. In order to overcome this challenge, Hudson's Bay adopted geo experimentation to measure lift in online and in-store sales. The test vs. control assignment was done at the city level and the sales performance of test markets was compared to similar control markets not exposed to Hudson's Bay's Facebook ads. This method allowed Hudson's Bay to measure the campaign's impact on total omni-channel sales.

## The Results

Since implementing geo experiments, Hudson's Bay has seen:

- 12.9X incremental return on ad spend (iROAS)
- 11% lift in omni-channel sales, with online sales growing by more than 20% and in-store by 6%

## How They Did It

### Geo Experimentation

In order to understand the true effectiveness of advertising, it is necessary to measure the causal impact to sales that is directly attributable to ad exposure. The causal impact of Facebook ads on online sales can be measured using conversion lift, a randomized control trial (RCT) solution. But measuring the causal impact of Facebook ads on in-store sales is more difficult due to the need to connect ad-exposure to in-store purchases.

Geo experiments are one solution which can measure the in-store impact of Facebook ads. In these experiments, a region (e.g., country) is partitioned into a set of geographic areas (e.g., cities), which are then assigned to either a test or control group. Facebook ads are served to users living in test cities; those living in control cities do not see the ads. A linear model is used to match sales in test cities and control cities. The lift in sales is calculated by assessing whether test cities outperformed their matched control cities during the campaign flight period.



*"As an incrementality driven organization, Hudson's Bay is focused on deriving maximum returns from every dollar invested in marketing. Digital flyers on Facebook presented an opportunity to expand our impact, and the geo experiments we were able to run in partnership with Facebook showed they were highly effective. We look forward to collaborating even more closely with Facebook in the future to test new, innovative solutions that benefit our customers."*

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