

# Design a Marketing Experiment

## Introduction

This report aims to design a marketing experiment for Notebook manufacturing company. The campaign is a billboard advertising campaign highlighting the quality of paper. As quality of a notebook is important along with price and now a days to online or cloud based note taking is prominent it is difficult to find notebooks with high quality paper. The experiment will be a before –after design experiment. Not going for full factorial, as it will be difficult to quantify impact if several parameters are simultaneously changed.

## Experiment Design

In this experiment, the independent variable is increased advertising in the form of billboard advertising campaign. The dependent variable observed here is sales, it is taken as reference from Coursera provided sample report for assignment. The experiment will be run in Mumbai, India. The control market observed will be Delhi, India. The test and control markets are so chosen that they resemble closely in terms of population demographics and other city attributes. Since the entire cities will be exposed to the experiment, the sample size would be big enough to be statistically significant. Since it is a before-after design experiment, sales will be recorded for both control and test markets for a 3-month average from January-March. The experiment will be run for the next three months from April-June. The change in sales during the experiment will be then used to calculate the lift in sales. The experiment certainly adheres to the first three rules of causality. However, the experiment has no control over the fourth rule, which deals with the presence of external factor. Prima facie, there appears to be no external factor impacting the experiment, however there might be competitive response that shall be accounted for.

## Anticipated Issues

Both the before and during experiment results are collected during the April-June. As known fact in India June is the month most schools reopen, and schools are the most common sales area. If the field implementation is executed anywhere between September to February, the months might see the dampening in the impact due to the seasonality involved. Any other external factor during implementation such as a new competitor entering the market or decrease in prices from competitors could adversely affect the field results. The above-mentioned issues might have an adverse impact on the sales; however, the experiment will still demonstrate the impact of billboard advertising on sales. The seasonality and external factors notwithstanding, the experiment will provide a fair guideline on whether to go ahead with the nationwide marketing campaign. The lift in sales would also provide a concrete idea on the appropriate amount of spending on the campaign.

## Experiment 2.0

Another version of the experiment can be through selling products on Amazon which is kind of advertising with promotion initially. This approach also provides much better control on the target audience, test markets and analytics. Hence, it can be a full factorial design with the independent variables as both price and advertising theme. This will also yield more informative results as It demonstrates the impact of more than one independent variable, more insights on the buying preferences of the audience This version of experiment is also generally cheaper and quicker to implement than the offline campaigns such as TV or billboard advertising. The only concern is that it does not include the chunk of audience that is not so active users of Amazon. In the context of this product, that chunk of inactive users could be huge.