

Dear [Associate Director's Name],

I hope this email finds you well. I would like to share my thoughts and proposed approach for testing this hypothesis. Understanding the factors driving customer churn, especially in the SME segment, is crucial for our analysis.

Hypothesis: The hypothesis we aim to test is that customer churn is influenced by price sensitivity. We will explore whether customers are more likely to churn when subjected to price changes. Additionally, we will investigate the effectiveness of offering a 20% discount to customers at risk of churning, with the expectation that it will dissuade most from switching providers.

In order to test the two hypotheses, we would need to model the churn probabilities of customers, and derive the effect of prices on churn rates. We would need the following data to be able to build the following models:

1. The SME customer data---contains the SME customer's characteristics of each client
2. Churn data---Indicate if the SME customer has churned
3. Price data---Indicate the prices of different SME customers at different times.

When we get the data, after wrangling the data, we need to do the exploratory analysis to confirm if the churn is driven by customer price sensitivity. If it is driven by customer price sensitivity, then we can build a binary model (e.g. Logistic Regression, Random Forest, Gradient Boosted Machines etc.), to predict customers likely to churn. We can find the most appropriate model that fits best. Once we get the model, based on the model, we would be able to understand the impact of price on churn rates and we can size the business impact of the second hypothesis.

Regards
Ashu Kumar