Dear Associate Director,

I hope this email finds you well.

As you know, PowerCo has been experiencing significant customer churn, especially in the SME segment. I believe that price may be a contributing factor, and I want to test this hypothesis.

The hypothesis can be formulated as follows:

**Null Hypothesis:** Customer churn is not driven by price sensitivity.

**Alternate Hypothesis:** Customer churn is driven by price sensitivity.

In order to test the hypothesis, data needs to be collected first. Data needs to be collected on-

* Asking customers how sensitive they are to price change.
* Tracking if the customer has churned over a period of time.

As the data is collected we can use various statistical tests to test the hypothesis like chi-square test a z/t test. We can also run Regression Analysis. Exploratory Data analysis (EDA) can be a vital tool to analyze trends and patterns to understand which customers are more prone to churning. Since this is a binary classification problem , we can use Logistic Regression, where the predictive variable is whether or not the customer left. We can also use a Tree Based model to fit the data as it can also give accurate results.

If the odds ratio is significantly greater than 1, then we can reject the null hypothesis and conclude that customer churn is driven by price sensitivity.

I believe that this is a feasible and worthwhile project. If we can confirm that customer churn is driven by price sensitivity, then we can take steps to reduce churn by offering discounts to price-sensitive customers.

I would be happy to discuss this project further with you. Please let me know if you have any questions.

Thanking You,

Yours Sincerely,

Deya Hazra