Dear Associate Director

To address the problem of customer churn **in small businesses,** we need to **use hypothesis testing to find out** whether there is a relationship between **price and customer churn.**

First, define the **null hypothesis** and **alternative hypothesis.**

Null Hypothesis (H0): There is no significant relationship between price sensitivity and churn rate among **customers in** the **small business segment.**

Alternative Hypothesis (Ha): There is a significant relationship between price sensitivity and churn rate **for customers in** the **small business segment.**

Next, **you** need to determine the appropriate statistical test for this problem. **Correlation tests are appropriate because you** are testing the relationship between two variables (price sensitivity and churn **rate).**

We recommend that you define the type of relationship **(linear/nonlinear)** and decide whether to use **Pearson correlation** for linear **relationships** or **Spearman correlation** for **nonlinear relationships.**

The **dataset** useful for this study should represent each small business customer continuously with the corresponding variable**.**

- Billing data: **You can use billing** data to determine how much **your** customers **pay** for their energy usage and how **often** they receive **a bill.** This information **helps you** identify customers who are likely to be price-sensitive.
- Usage patterns: Information **about customer** energy **consumption behavior, such as: Data** such as **how much** energy **users use, what** time of day they **use energy,** and peak energy **consumption provides insight** into **users'** level of price sensitivity.

• **History of interactions:** contract start **date,** whether **the customer has raised** any concerns or **complaints, etc. A** feature that **reflects customer satisfaction.**

• **Company** information: domain, size **(small/medium), etc...**

• **Migrated:** whether the customer **company has canceled** or not.

Other useful data could be information **about your competitors** and their **prices. This allows you to** compare costs **with competitors** in **this area.**

Please let **us** know if you have any questions or concerns **regarding** this approach. **I am** looking forward to your **reply so we can discuss this in depth.**

Thanking you,

Tejashri Pathak