Dear AD,

Given that our client PowerCo is going through a hug customer churn most especially in the SME segment, therefore, to test the hypothesis, we need to come up with problem in data science way and then formulate the major steps that will apply to see that the test is done. The price changes affect customer churn in the SME segment being our hypothesis, the following steps can be used;

Data collection. There are many data sources such as customer databases, customer feedbacks, billing data and many others. In general, we have to collect the historical data on customer churn which will inturn help us develop a predicative model that can identify for us the risks.

Exploratory Data Analysis (EDA):
When that data collection is done, we will apply statistical techniques to analyze the data and identify which variables are to be used (customerName, age, gendar, buying_rate, income_earn, etc.) and are most correlated with churn. We can also segment customers based on their price sensitivity and other relevant characteristics. This will help us understand which groups are most likely to churn due to price changes.

Predictive Model Development:
Once we have identified the relevant variables, we then go ahead and develop a predictive model to identify customers who are at risk of churning. This can be done by using machine learning algorithms such as logistic regression, decision trees, or random forest to build the model. The model will provide us with a churn score for each customer, indicating the likelihood of them churning in the near future.

Model Validation:
To ensure that the model developed is accurate and can be relied on, we need to do model validation. We can use dataset that is not used in the model training to test the model's performance in predicting churn. If the model performs well, we can use it to identify customers at risk of churning.

Discount Incentive:
From the modal validation result therefore, customers identified by the model as at risk of churning, we can offer a discount incentive. It will also be wise for us to track which customers accept the discount offer and whether it reduces their churn rate or not so that we can make the decision based on that.

To summarize, when we apply all the steps above, we can surely gain a better understanding of the factors that contribute to customer churn and identify strategies to reduce it as the decision.

Thank you for reading through this, I can be guided where necessary and I will be very open to discuss other hypothesis not mentioned here.

Kind regards,

Pius Obonyo