Kiet Nguyen
UID: 001601720
Email: kngu179@wgu.edu

Reflection Paper

1. Purpose

The purpose of my dashboard is to allow stakeholders to see the relationship between cost of living, income, and churn rate. How much customers make, and their cost of living are important indicators on whether they are likely to churn. The SVP would be interested in this information since they want to know about customer characteristics and what drive their behavior.

On the other hand, the EVP wants to see customer categorization and how demographics play a role in different regions. To satisfy this stakeholder, I designed a dashboard that provide a broad overview of the whole U.S. market. At the same time, the stakeholder could drill down into specific state and see the details.

The Regional VP has similar needs as the EVP. Since the Regional VP is responsible for setting policies and managing operations, they would appreciate the ability to see the overall churn rate in their regions, as well as being able to look at individual state. This would inform them which regions need promotions and new features to prevent customers from leaving.

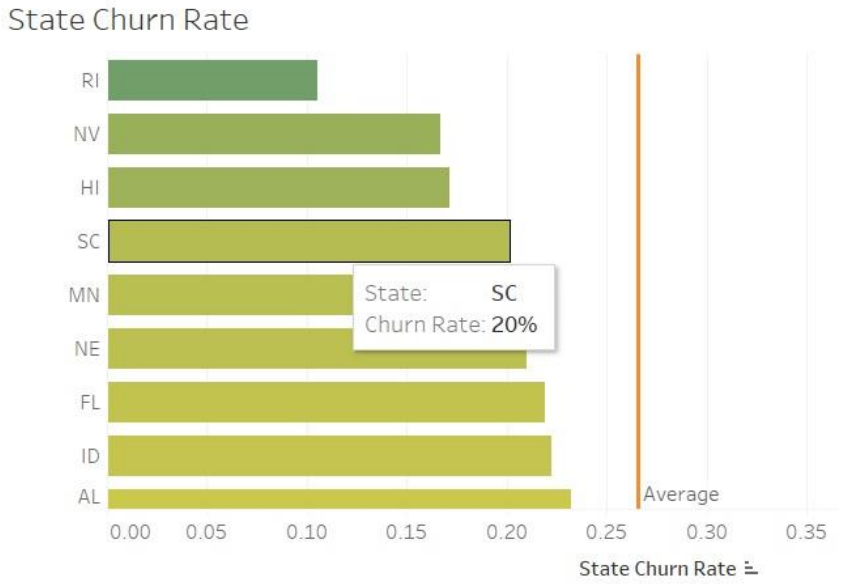
2. Variables

The additional dataset I chose included the cost-of-living index for each state (Council for Community & Economic Research, 2021). This data was important because of the results from previous churn analysis. We found out that customers who paid more per month were more likely to disconnect their services. On our end, we know exactly how much customers paid per month. However, we do not know what the cost of living for our customers is. People who live in high-cost state might have less income for utilities so a high price means they cannot afford our service.

The cost-of-living data allows us to see the bigger financial picture regarding our customers. By identifying the highest cost states, we can segment those customers into separate churn groups. These customers might share similar characteristics that can give us additional insight into their behavior.

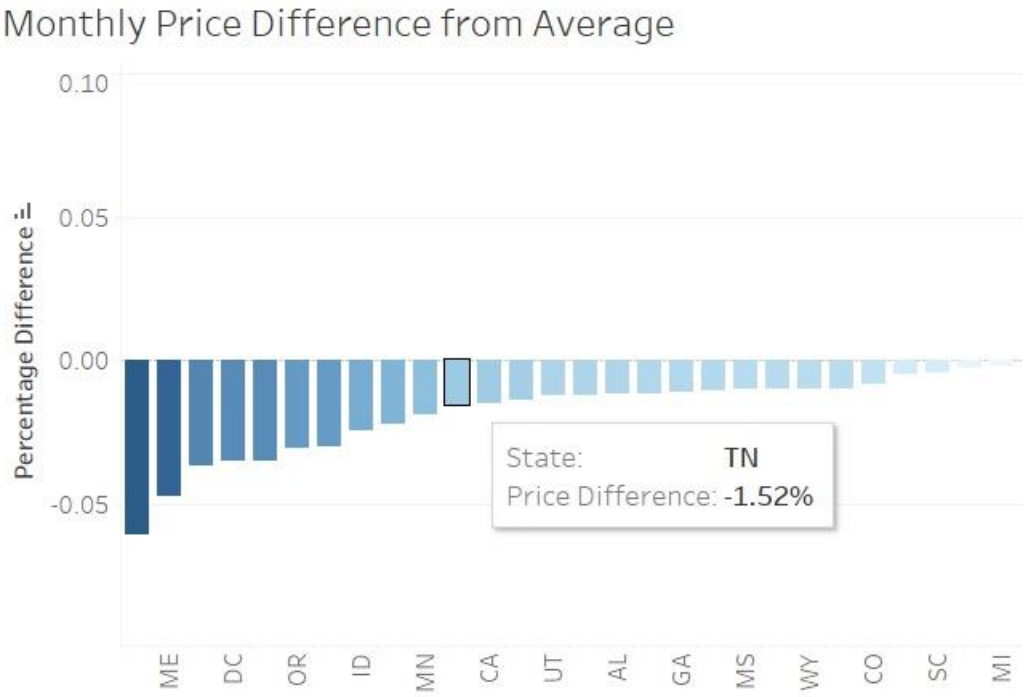
3. Representations

One representation is the State Churn Rate. This is a vertical bar chart that shows the churn rate for each state, along with the orange line indicating the national average churn rate.



This representation gives the stakeholders an overview of the churn rate for multiple states at a glance. It also provides a baseline average to compare the churn rate against. Stakeholders can also select multiple states to compare them and see where they should focus their efforts on.

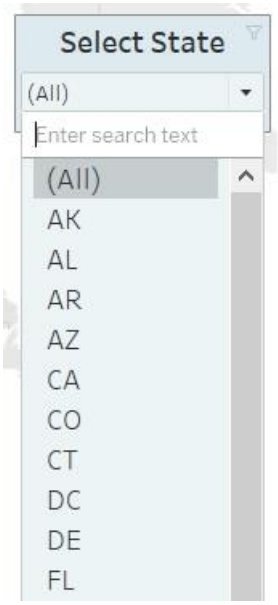
Another representation is the Monthly Price Difference from Average. This is another bar chart that shows how much customers in each state pay in comparison with the average.



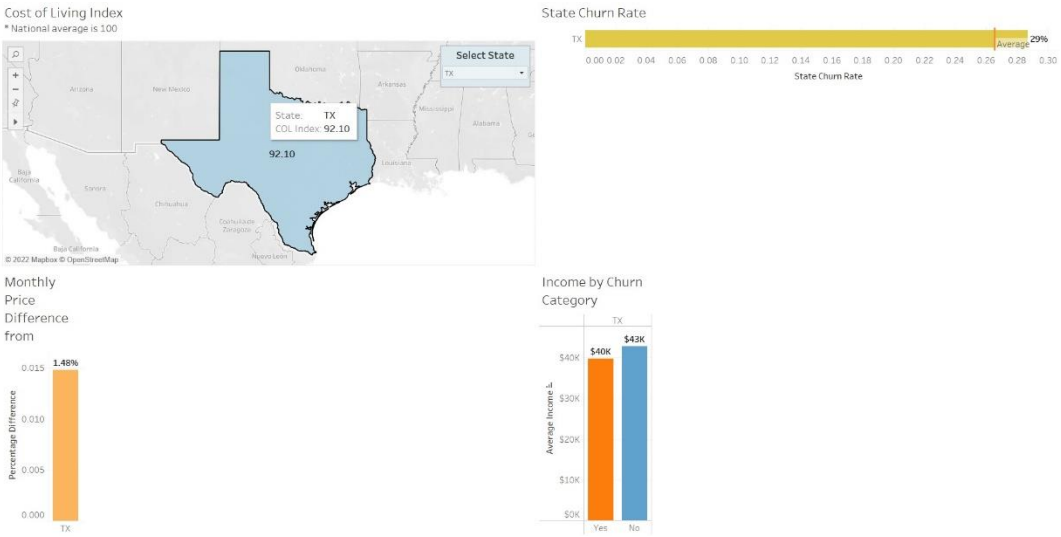
In our previous analysis, we found that customers are price sensitive. This chart tells the stakeholders the difference in price between many states. It allows stakeholders to quickly see what state might be paying too much or too little. States that are paying too much might have a high churn rate, while states paying too little might be losing us profits.

4. Controls

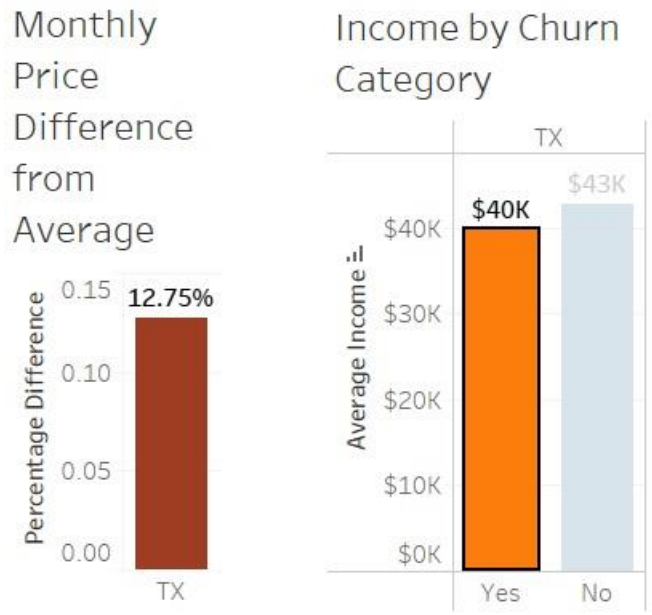
The primary control of the dashboard is the dropdown list of states.



When the user selects a state from the drop down, all four representations in the dashboard will filter out other states. This allows the user to view the data regarding a specific state. As an example, below is what dashboard looks like when Texas is selected.



The second control that users can interact with is selecting the churn category income by clicking on it. We can reuse the example above to demonstrate. From the data, we can see that Texas customers are paying 1.48% above average. However, the customers who disconnect service pay 12.75% more than average.



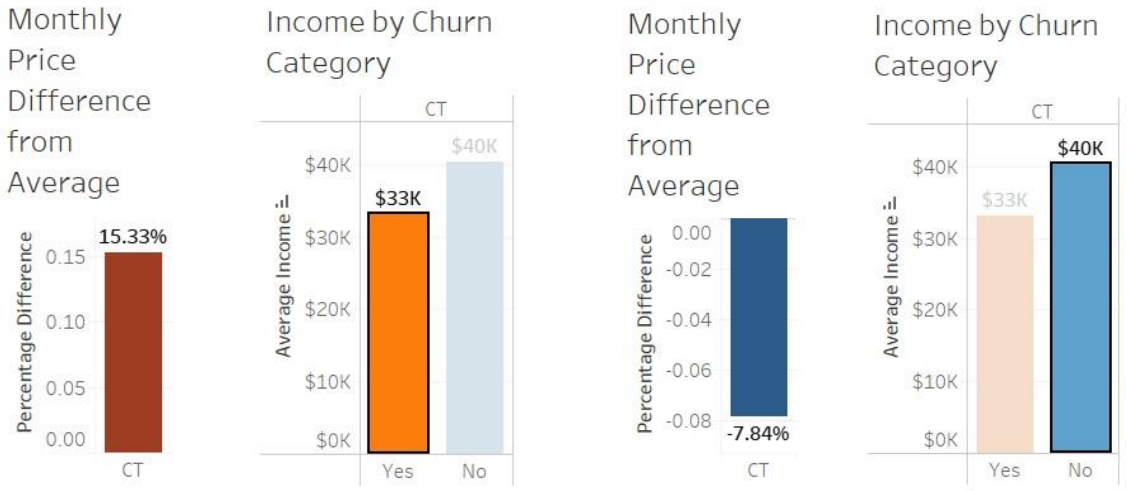
5. Colorblindness

In my dashboard, I used colors that are accessible to people with colorblindness. Since red-green colorblindness is the most common, I avoided using that combination of colors in my dashboard as much as possible. The palette I chose for this dashboard consisted primary of blue and orange. I used some green shades but opted to not have any red to help users who have difficulties differentiating them.

6. Story

The story I wanted to tell was that the company was losing both customers and profits due to disparity in pricing. In my analysis, I found that customers who left were paying significantly more than customers who stayed. The two representations that demonstrated my point was the Price Difference from Average and Income by Churn Category.

I am going to use Connecticut as an example. Overall, customers here pay 1.64% above average. But if we break the difference down by churn category, there is a massive difference. Churn customers pay 15.33% above average but current customers pay 7.84% below average.



7. Audience

Before creating the dashboard and presenting my story, I analyzed the profiles of the stakeholders. Both the SVP and EVP are interested in characteristics of customers and how they could be categorized across regions. This means my dashboard needed to cover all regions that the company operate in. I picked income and pricing as a characteristic that may drive customer behavior since it is another topic the SVP wanted to see.

For the Regional VP, they are responsible for managing operations so my dashboard might not tell them anything new. However, my dashboard does allow them to see how other regions are performing relative to their own. They could use this data to discover their own insights given their knowledge of the business.

8. Universality

My dashboard was designed with simplicity and ease of use in mind for the nontechnical audience. There are no fancy charts or complex analytics, only a map and three bar charts. I believe that the easier the audience can grasp the ideas of the dashboard, the easier they can translate them into concrete actions. If I used

complicated charts, I risk losing the audience and render my whole presentation ineffective.

9. Storytelling

The first element I used was setting up the context for the presentation. The audience wants to understand why they need to be at this presentation in the first place. By giving them the reason for the presentation, I set up a narrative in their mind. Without context, they will feel like they are being dumped right in the middle of the road without any signs or signals. Giving a context to build their own story is vital to keep my audience engaged.

The second element I incorporated was removing any unnecessary clutter from the dashboard. My charts do not have many numbers crowding out the overall trend of the data. I picked my colors with care and limited them to just a few in order to emphasize their importance. There are many other datapoints I could include but chose not to because that would distract from the aesthetic of the dashboard. A clean minimalistic look invites the users to explore without being overwhelmed.

References

Acharya, G., & Whitney, H. (n.d.). *Creating Dashboards and Storytelling with Tableau*. Coursera. Retrieved May 28, 2022, from https://www.coursera.org/learn/dataviz-dashboards

Billen, S., & Sulmont, L. (n.d.). *Analyzing Data in Tableau*. DataCamp. Retrieved May 24, 2022, from https://app.datacamp.com/learn/courses/analyzing-data-in-tableau

Council for Community & Economic Research. (2021). *Cost of Living Data Series*. Missouri Economic Research and Information Center. Retrieved May 22, 2022, from https://meric.mo.gov/data/cost-living-data-series

Rose, D. (2017, February 19). *Learning Data Science: Tell Stories with Data*. LinkedIn. Retrieved May 25, 2022, from https://www.linkedin.com/learning/learning-data-science-tell-stories-with-data