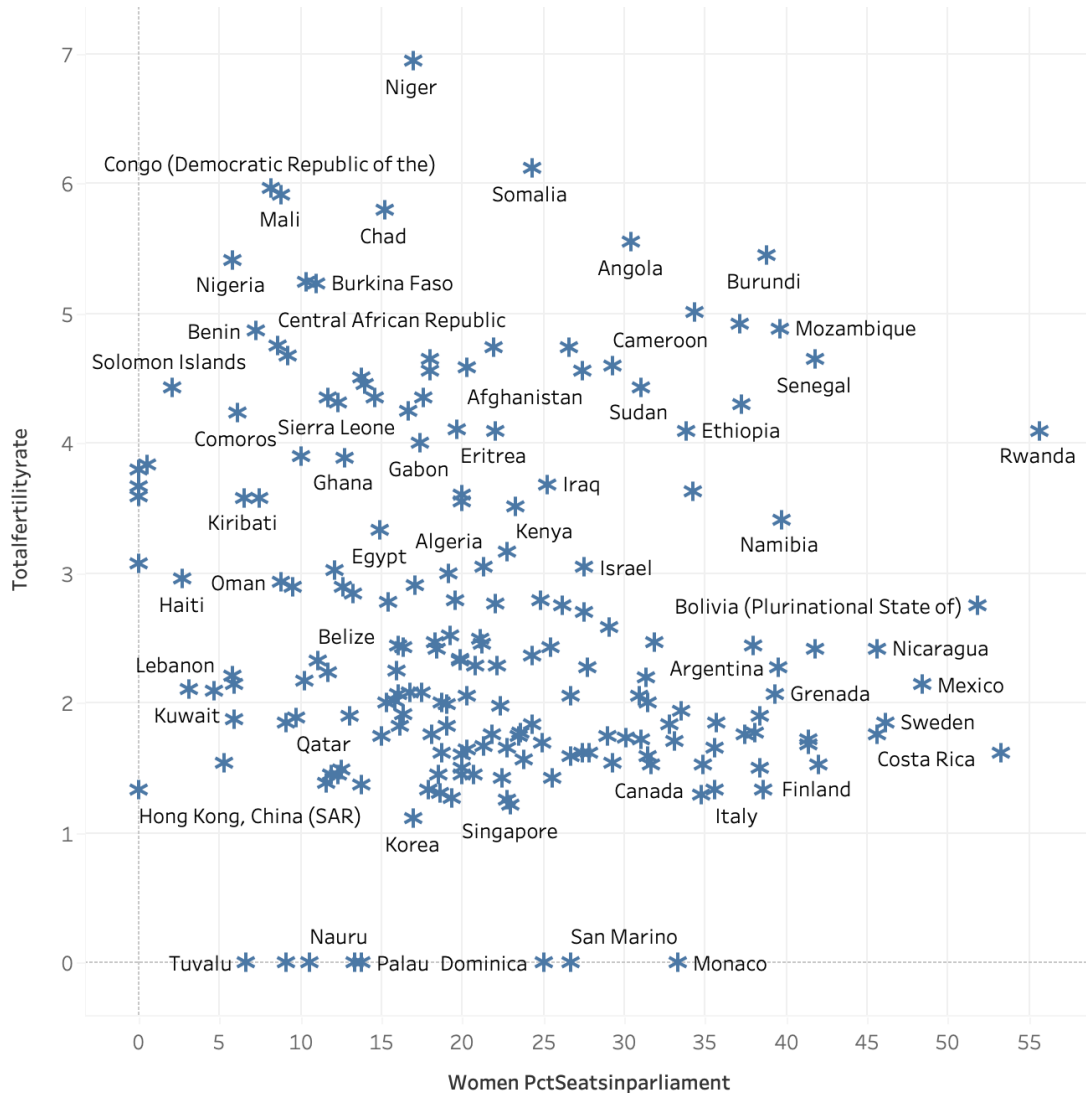


Homework 3: Use and Critique Tableau

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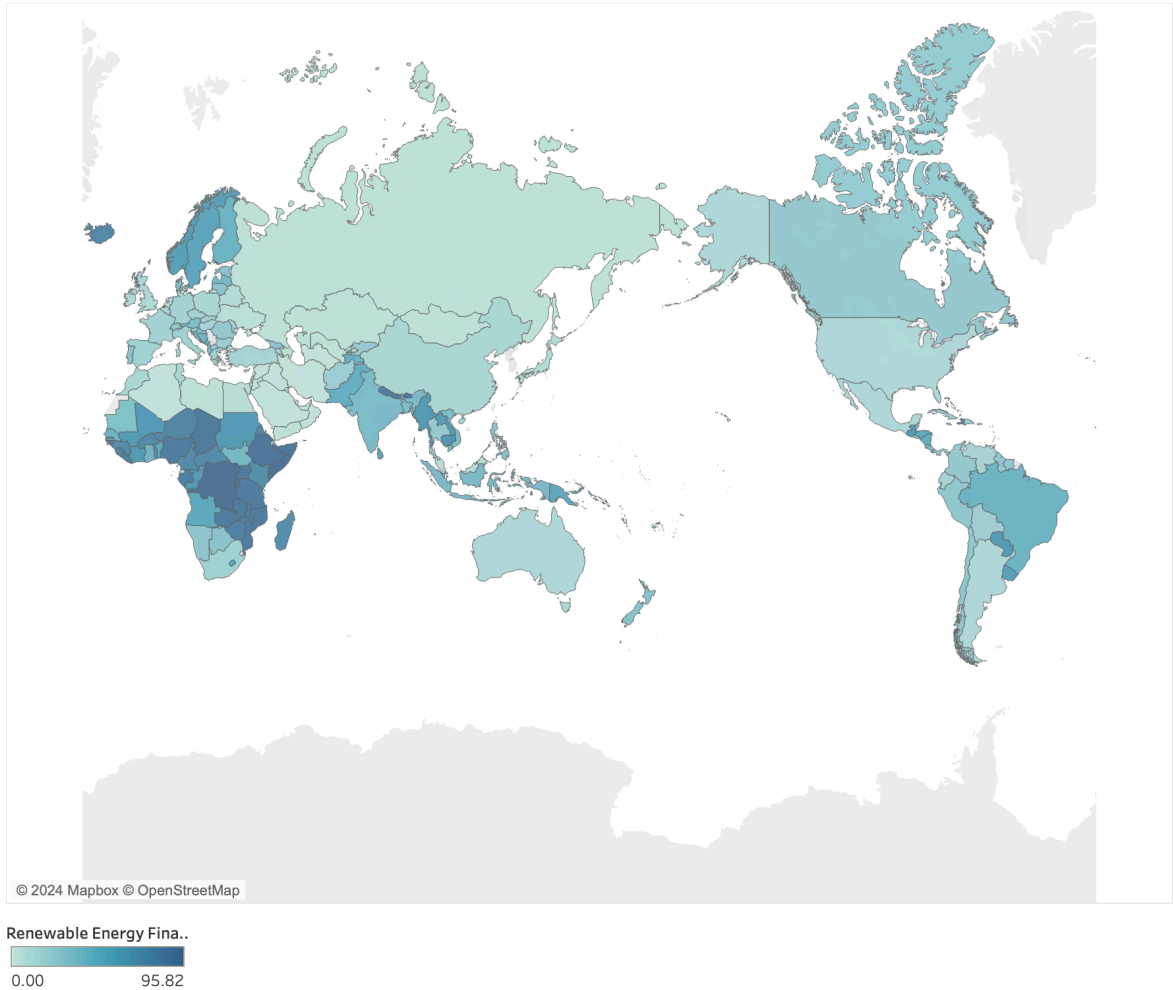
Part 1

1. How does the percentage of women in parliament correlate with the total fertility rate?



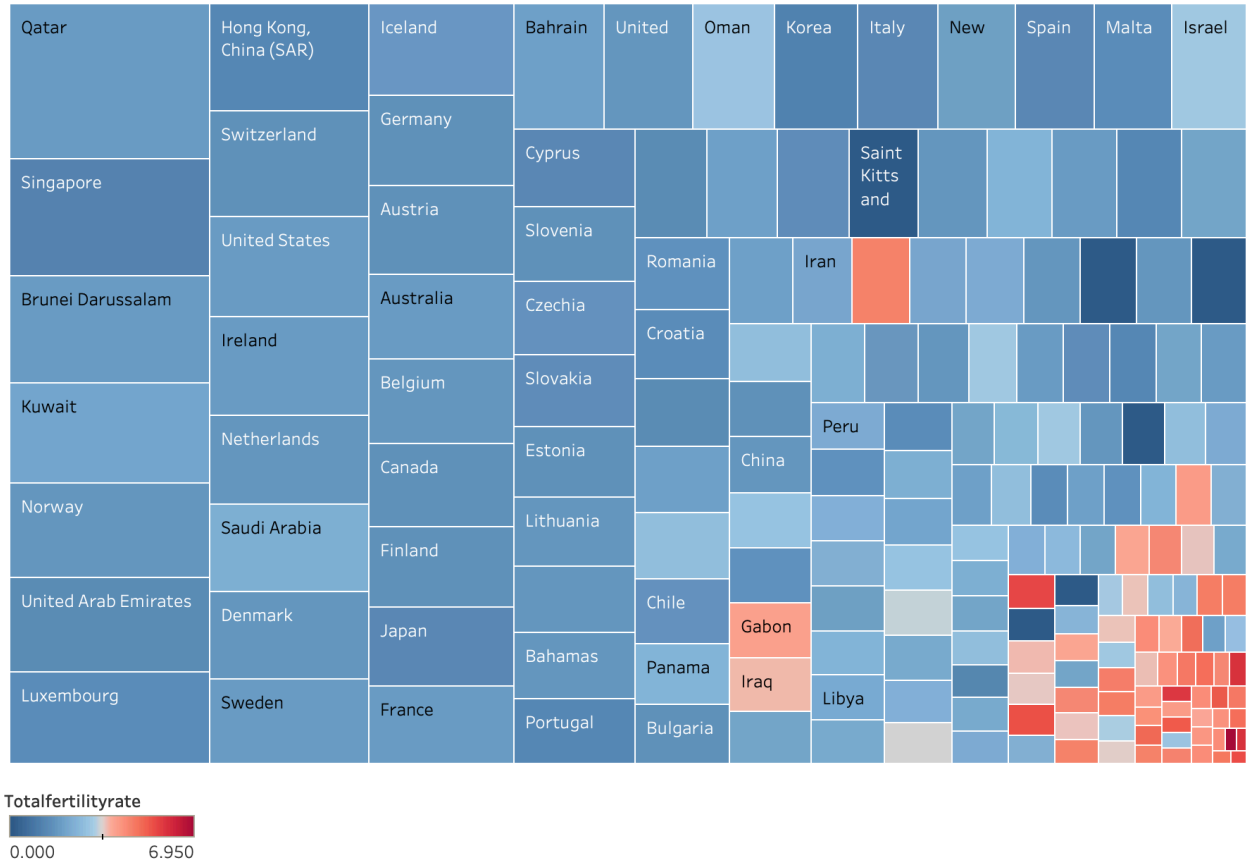
The scatter plot shows a weak negative link between women in parliament and fertility rates, countries with more women in politics tend to have lower fertility rates, but the relationship isn't very strong. *This suggests that while female political participation may influence societal changes affecting fertility, other factors also play big roles.*

2. Which countries have the highest percentage of renewable energy usage?



The map visualization clearly indicates that countries like Paraguay, Bhutan, and Albania have the highest percentages of renewable energy usage. These countries are shaded in the darkest color, representing the top tier in renewable energy adoption.

3. Which countries have the highest fertility rates, and how does this relate to their GDP?



The treemap visualization displays countries by their fertility rates and GDP. The size of each block corresponds to GDP, while the color intensity represents fertility rates. From this visualization, it's clear that countries with higher fertility rates are generally represented by smaller blocks, indicating lower GDP. In contrast, countries with lower fertility rates have larger blocks, *showing a correlation between lower fertility rates and higher GDP.*

Part 2

- **A Few Strengths**

- User-Friendly Drag-and-Drop Interface: One of the best things about Tableau is that it doesn't require coding to create charts. The drag-and-drop system makes it really easy for beginners to get started. You just pull fields into different areas like Columns, Rows, or the Marks card, and Tableau does the rest. No coding or complicated setup—just quick chart creation, this makes it a lot easier to play around with different ideas/plots.
- Wide Range of Visualization Options: Tableau gives you lots of ways to visualize your data. From scatter plots and bubble charts to maps and box plots, there's a good selection of chart types. This makes it great for comparing data in different ways.
- Interactive Exploration: Tableau is great for interactive visualizations. You can click on different parts of the chart to filter or zoom in on the data, and hovering over points gives you extra information. This is really helpful when you're trying to explore your dataset, as it allows you to see trends and details more easily.

- **A Few Weaknesses**

- Advanced Features Have a Steep Learning Curve: While the basic drag-and-drop interface is easy to use, figuring out more advanced features is much harder. I found myself watching tutorials just to figure out how to perform basic things.. The UI is somewhat TOO simple, seeing as the icons weren't always clear what they did, I had to play around a lot before I got the hang of it.
- Cluttered Visuals with Large Datasets: When working with larger datasets (like when you have many countries or regions), the visualizations can get pretty cluttered. For example, if you're plotting every country in the world on a scatter plot, it's easy for the points to overlap, making the chart hard to read. While there are ways to filter data, it's sometimes tricky to decide what to filter without losing important insights.
- Customizing Charts Can Be Tricky for Beginners: Tableau has some customization options (like changing colors, adding labels, etc.), but for

beginners, these can be hard to find and use effectively. For example, resizing points in a bubble chart or adjusting the axis labels takes playing around. The Marks card and Show Me panel aren't always the most intuitive, especially when you want to make small, specific changes.

- **Which Tasks Is It Good For?**

- Creating Visualizations Quickly: Tableau is excellent for building visualizations fast. If you need to create basic charts like scatter plots, maps, or even simple line graphs, Tableau makes it easy with its drag-and-drop system. You don't have to mess around with coding or settings just drop your data into place, and then your chart is ready.
- Interactive Data Exploration: Tableau is great for exploring data interactively. You can filter your data directly by clicking on parts of the visualization, which helps you focus on specific areas without needing to go back and modify the data itself. This is perfect when you're trying to dive deeper into a dataset and figure out hidden trends.
- Adding Labels: Tableau makes it simple to add labels to your charts. For example, by dragging a field into the Label box in the Marks card, you can quickly display the relevant data for each point on a scatter plot or map. This helps make the charts easier to understand at a glance.

- **Which Tasks Did You Want to Do but Could Not?**

- Handling Large Datasets Cleanly: One area where Tableau struggles is handling really large datasets. If you try to plot too much data at once, like every country in the world, it can become overwhelming. The visualizations can get cluttered, and it's hard to make sense of what you're seeing.
- Customizing Charts: While Tableau offers a lot of visualizations, I found it difficult to fully customize them. For example, if I wanted to adjust the size of the bubbles in a bubble chart or change specific axis settings, it wasn't always clear where to go or what to do. More advanced customization options are buried in menus, and for a beginner, it's easy to get lost.