

Ryan Cooley

Lakshmanan

BAN-306-001

16 Oct 2025

Midterm Report

For the midterm I chose to use Internal Trade Value for my analysis.

Executive Summary:

- Pharma, Oil and Telecom (POT) is the leading trade value category in every region from Q1 2014 to Q4 2017. POT is in the lead per quarter 75% of the time with Finance and Banking (FB) taking the lead 25% of the time and second place every other quarter. This can be seen from the table, clustered bar, line, ribbon, and pie chart. Overall while POT is in the lead in each region FB is a close second place. With POT containing 36% and FB 32% of the companies total trade value.

Data Cleaning:

- To start I removed the top 8 rows from 2014, replaced the headers with the first row, and ignored the null values in the modified date. From there I appended 2014-2017 into 1 table as new while ensuring to remove enable load on the original. Next I merged the 2014-2017 data with the State data using the left outer method. I only kept the column named state. Following this it was some renaming of the columns for ease of use like the column that had the states spelled out got renamed as "Full State", state.region transformed into "Region" etc. After this I imported and merged the text file through the left outer on ID. Keeping only Status as it was the unique value. Finally during my

visualization I noticed the date and numbers were not formatted correctly so I had to manually go back and change the date to date/time and the numbers to numerical. They were all text data otherwise.

Count: What is the total internal trade value per category?

- For this visual I chose to use a table that broke down the total 2.3 million dollar valuation into the four categories and ranked them in descending order. From this it can be easily seen that Pharma, Oil, and Telecom (POT) are the most prominent category by 100k.

Comparison: What category is the highest valued in each region?

- A horizontal clustered bar chart was chosen for this visual with the regions on the Y axis, values on the X axis and the categories broken up per region. The takeaway is that POT is the dominant category in every region.

Composition: What portion of trade is accounted for per category?

- A donut chart was chosen as it brings both numerical and visual cues for the audience. The donuts showed that POT consists of 36.58% of the total trade value which is 4% higher than the runner up: Finance and Banking (FB).

Trend: How have trade values per category changed over time?

- A line chart was used with 1 line per category. It showed that POT and the runner up FB have followed relatively similar trends but POT is able to decline slower and increase faster. Over time all categories have increased with some decreases along the way.

Custom: Has POT always been the highest valued category?

- To explore this a ribbon chart was used. From that it can be seen that from Q1 2014 to Q4 2017 POT only fell to second place four times due to FB. This means it was in the lead 75% of the time with FB holding second place every other time.

Final Communication Chart:

- For the presentation I chose to use the clustered bar chart from comparison because it easily visually and numerically depicted how POT was the highest valued trade per region. Furthermore, bar charts are intuitive so non-analysts would be able to understand with some visual tweaks. POT is the highest overall with FB following close behind in the west and central US. This would advise the manager to further invest in POT and FB.

Reflection:

- I faced a couple difficulties during this project mainly stemming from my lack of experience in PowerBI. During the project I struggled on choosing the charts. For count specifically I was struggling to choose between bar, card and table. Editing the chosen communicative chart was complicated as I needed to simplify the chart by removing info but still needed to be able to tell the whole story. There was lots of debate about what to do. An interesting fact is in Q1 2017 the combined value of the non-POT categories was only 13% higher than POT itself. For deeper exploration I would further break down the data into each region per state and even per month to get a more accurate understanding

of the business. Then models combined with strategists can decide the company's next steps.