



Underutilized Marketing Opportunities Exploration

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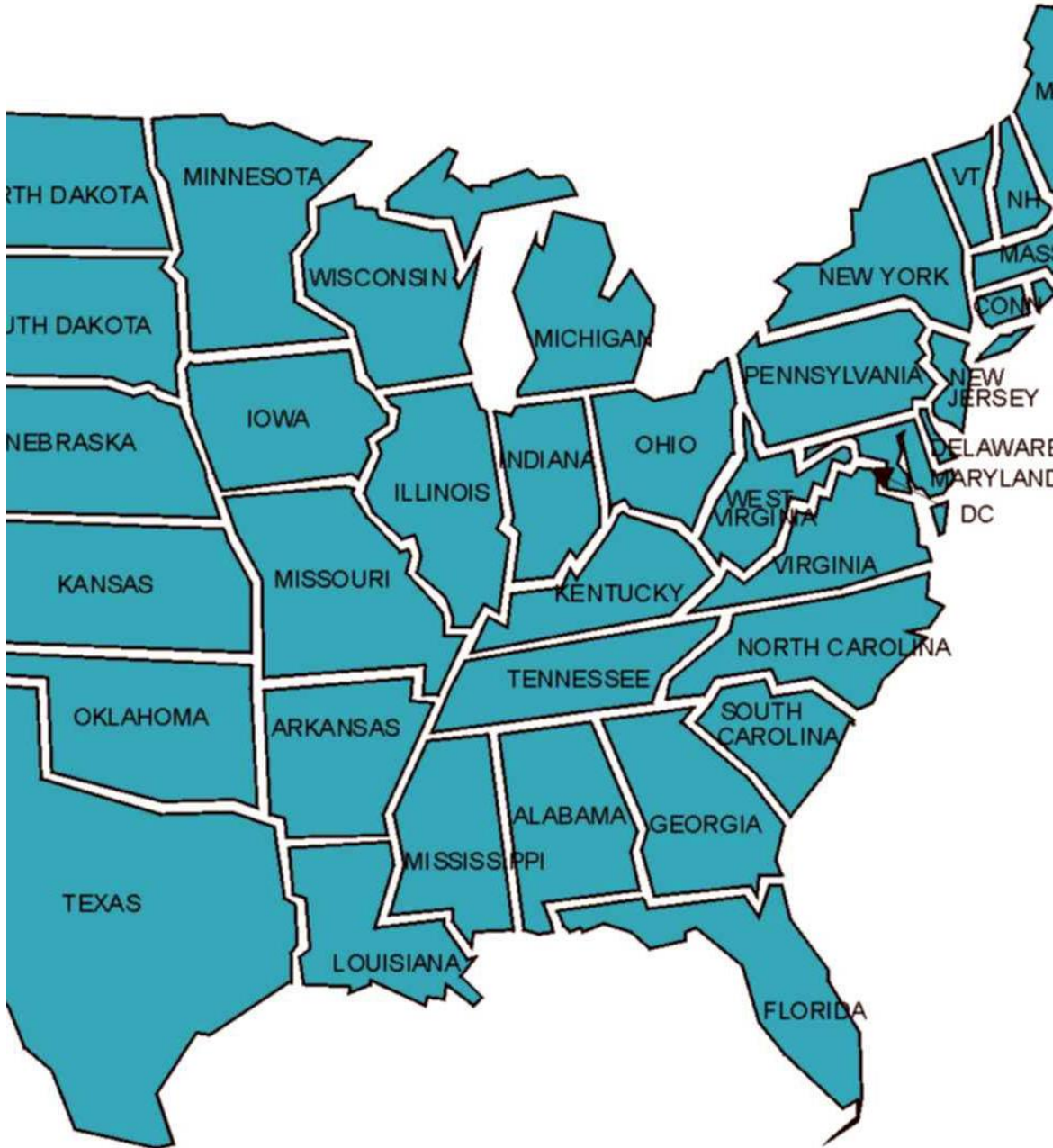


Preface:

The author is a data analyst in a superstore holding company, asked to find underutilized marketing opportunities in available data.

Dataset is obtained from [Kaggle](#)



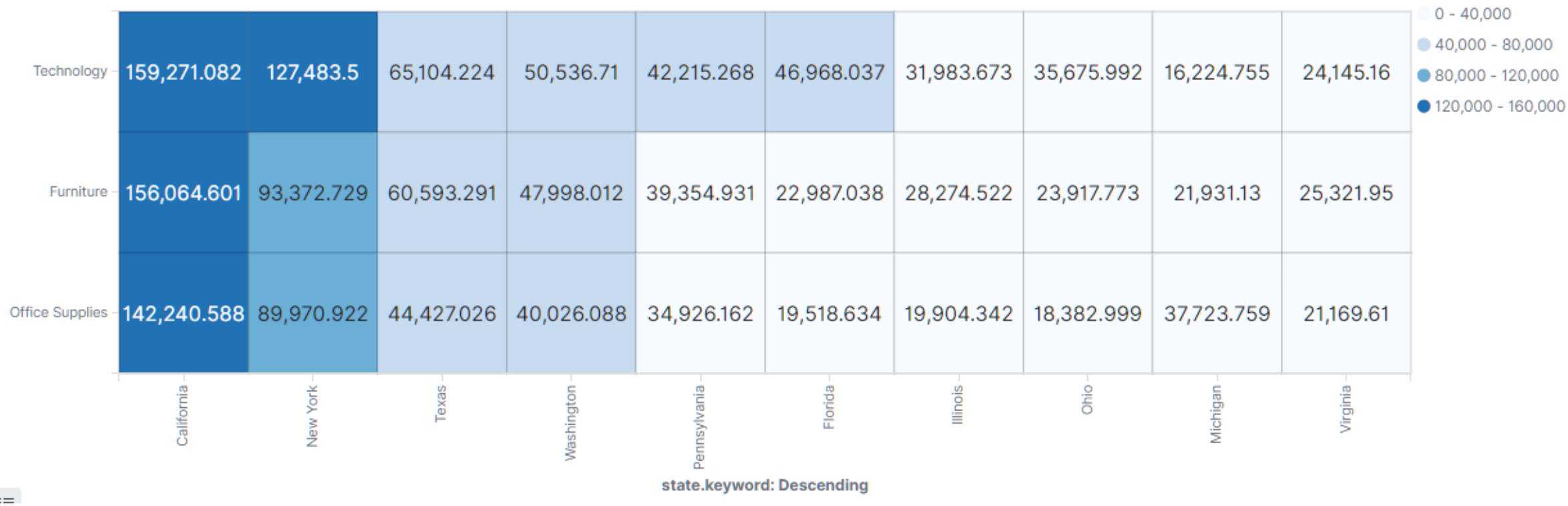


About the data

- From records of sales
- 9,977 records of sales
- Categories:
 - State
 - City
 - Region
 - Product Category and Sub-Category
 - Segment
 - ...
- The data was ran through data ETL pipeline before being used for visualization.

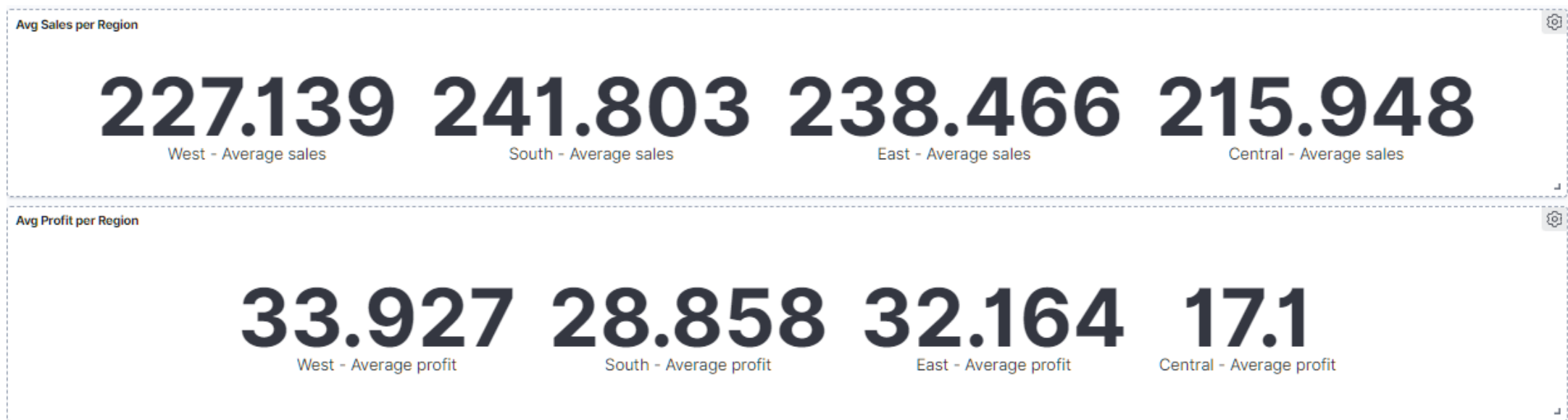
Data Analysis

Heatmap of Sales per State and Category



From this we can see that we can try to utilize selling in categories other than Office Supplies as they are seen to be underutilized. States that are in the top 10 highest frequency of sales should have a higher chance of success if we are to utilize them further.

Data Analysis



Average Profit Margin West:14.93% South: 11.93% East: 13.48% **Central: 7.9%**

The profit margin of Central area has potential to grow as it is still comparatively lower.

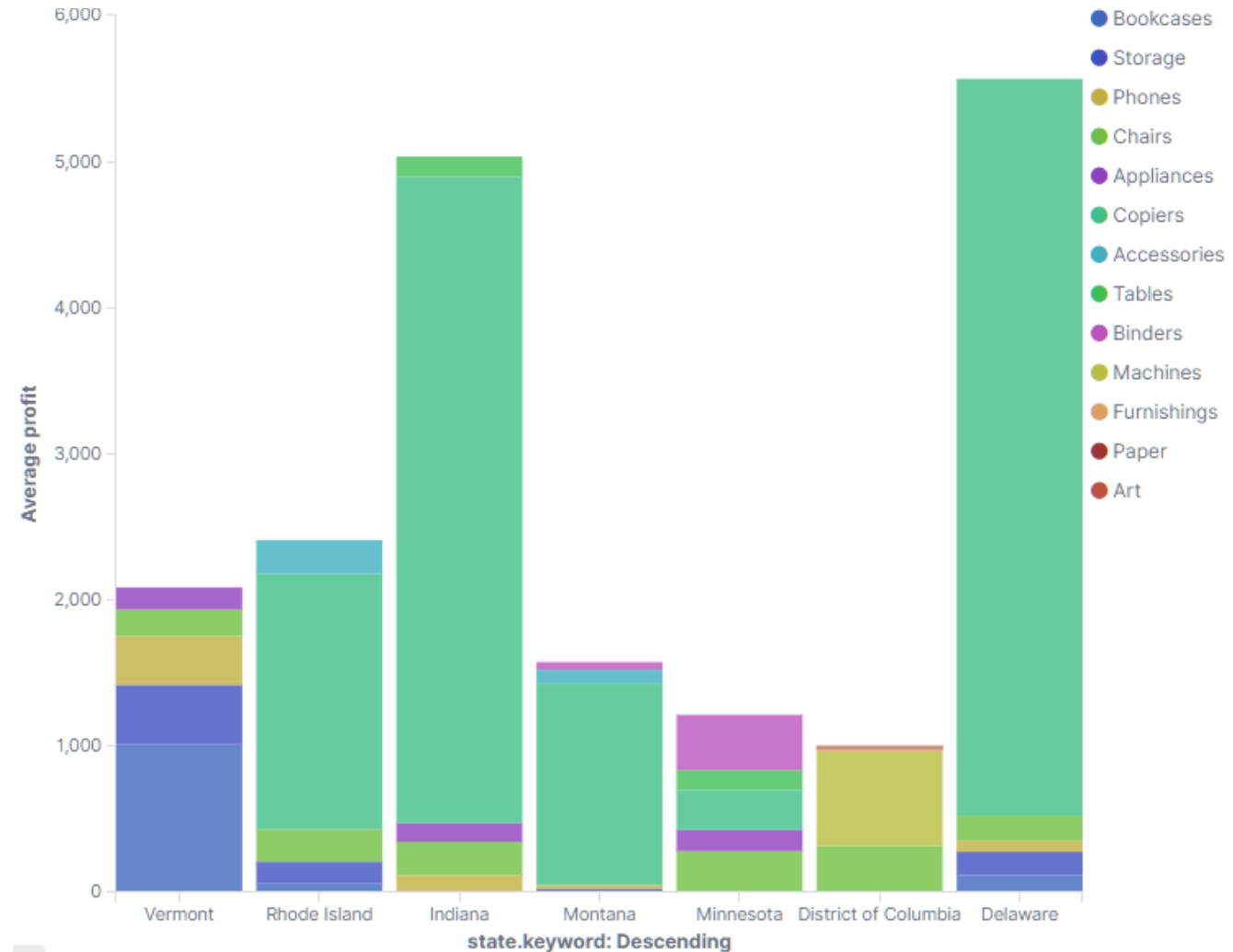
Data Analysis

These are the seven states with the highest-average profit per sale, meaning that they often buy high-margin items:

- 1) Delaware
- 2) Indiana
- 3) Rhode Island
- 4) Vermont
- 5) Montana
- 6) Minnesota
- 7) District of Columbia

The items that nets us the most profit margin are copiers, followed by machines, tables, and chairs. We should try to sell more of these in other states to increase profit.

Top 7 States ranked by Average Profit, and their Product Sub-Categories Composition



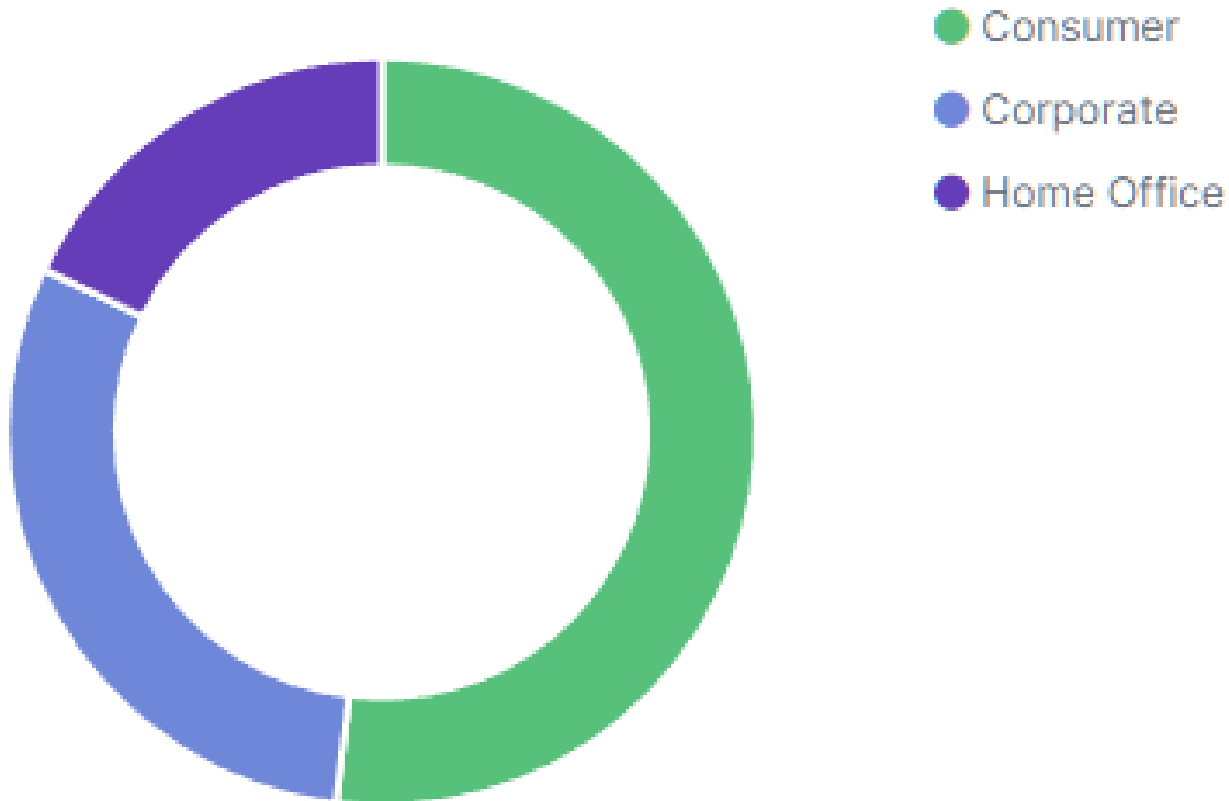
Data Analysis

Top 40 Cities ranked by number of Sales



The word cloud shows that there are some high-GDP metropolitan areas (based on [2022 US GDP Census](#)) that we have not yet fully utilized, marked by how small they are in the word cloud. Those high-GDP cities are: Jersey City, New Jersey, Anaheim, Atlanta, Long Beach, Miami, Phoenix, and San Jose.

Segment Pie Chart



Data Analysis

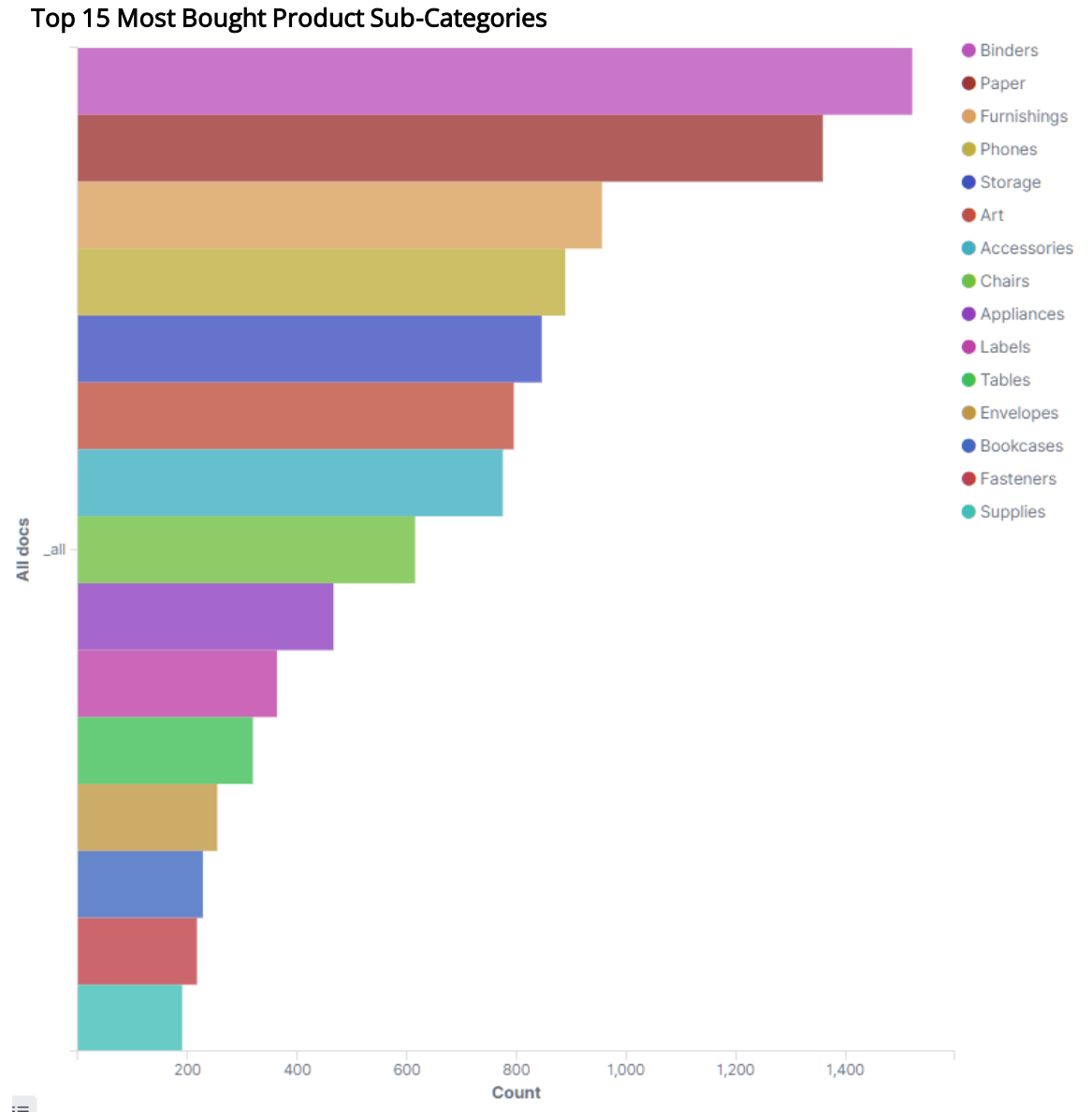
The pie chart shows that the most transactions came from customer segment. Which means we can try to leverage Corporate and Home Office segments, in other words, go heavier on B2B. With B2B it's important to build trust and focus on CRM.

Another suggestion is to make loyalty program that is beneficial to bulk buyers that are Corporate and Home Offices and to offer discount for those segments.

Data Analysis

The most often bought sub-categories are Binders and Papers, which are both in Office Supplies category. We can try to offer more of this category, such as with offering more stationeries, organizers, and other office supplies that are not yet offered.

We can also try to leverage “underdog” sub-categories in terms of sale frequency that are catered to our Office Supplies-loving customer base, such as by pushing phones, office chairs, office tables, and art supplies.



Conclusion

Here are the avenues that our company can take to further utilize our existing market:

- State-wise concentration:
 - Based on sales: Pennsylvania, Florida, Illinois, Ohio, Michigan, Virginia
 - Based on profit margin: Delaware, Indiana, Rhode Island, Vermont
- City-wise concentration:
 - Further utilize GDP cities (based on [2022 US GDP Census](#)): Jersey City, Long Beach, Anaheim, Atlanta, Miami (based on
- Proper market studies regarding the areas would still be needed to ensure high performance. (Olavarietta and Friedman 2008)



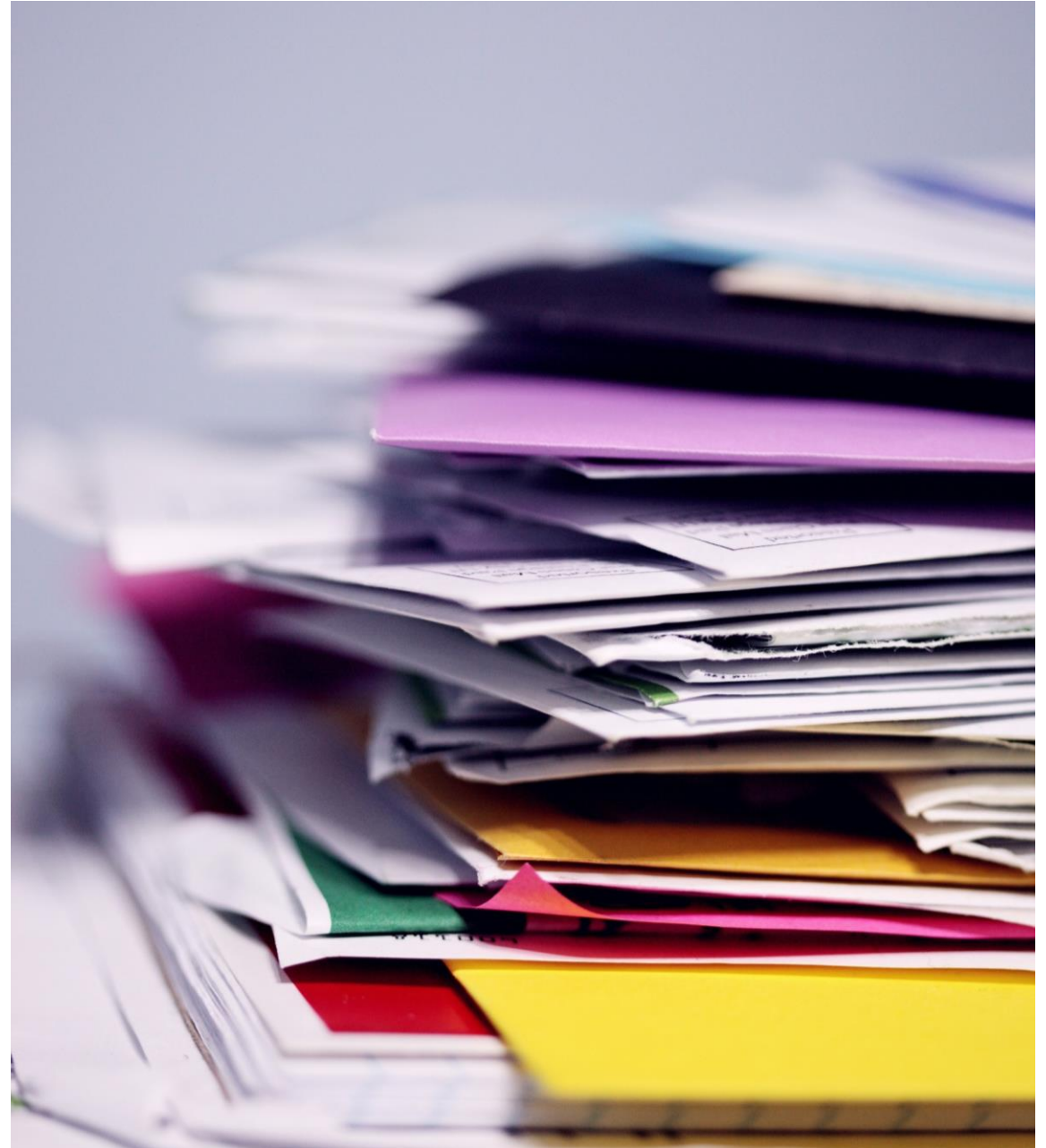


Conclusion

- Increase B2B: loyalty and discount programs. Prioritizing trust and Customer Relationship Management in B2B has been shown to increase sales. (Rodriguez 2011)
- Products:
 - Most sought out: Office Supplies, start pushing/offering Office-Supplies adjacent products, e.g. office chairs, office tables, phones, art supplies.
 - Highest profit margin: Copiers and Machines, refer to B2B strategy as copiers and machines are usually bought by corporate/office segment. Increasing salesforce deep product knowledge have been proven to affect sales positively (Jang and Nemeh 2017).

References

- Metropolitan Area, 2022." *Bureau of Economic Analysis*. December 7. Accessed January 29, 2024.
<https://www.bea.gov/sites/default/files/2023-12/lagdp1223.pdf>.
- Jang, Seongsoo, and Andre Nemeh. 2017. "Salespeople knowledge search behavior and sales performance: An investigation of printing equipment industrySalespeople knowledge search behavior and sales performance: An investigation of printing equipment industry." *Technological Forecasting and Social Change*, volume 120 323-333.
- Olavarrieta, Sergio, and Roberto Friedmann. 2008. "Market orientation, knowledge-related resources and firm performance." *Journal of Business Research* vol 61 issue 6 623-630.
- Rodriguez, Michael. 2011. "Customer Relationship Management (CRM)'s Impact on B to B Sales Professionals' Collaboration and Sales Performance." *Journal of Business to Business Marketing* Vol 18 Issue 4 335-356.





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