

Sales and Shipment Report 2015 - 2018

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Introduction

This report analyzes sales and shipment data to provide actionable insights into key performance indicators (KPIs). Using Excel, the dataset was explored, cleaned, and visualized to understand trends across different dimensions, including customer demographics, product categories, shipping modes, and regional sales performance.

Data Cleaning

During the data cleaning process, a key focus was placed on ensuring accurate and reliable analysis by addressing data inconsistencies. The Order Date and Ship Date columns were thoroughly inspected and standardized. Some entries in the date columns were incorrectly stored as strings rather than date values. These were converted to proper date formats to ensure consistency and enable accurate chronological analysis. Additionally, the date columns were right-aligned for better readability and formatting.

KPI Analysis

Sales Trend

The **Category and Sub-Category Profit Analysis** highlights the financial performance of products across various segments. Among the primary categories, **Technology** leads in total revenue and profit generation, with a profit of **\$413,727.94**, followed closely by **Furniture** and **Office Supplies**. The sub-category breakdown provides granular insights, showcasing the top-performing sub-categories such as **Chairs** and **Phones**, which contributed significantly to overall profitability.

Category	Total Revenue	Total Cost	Total Profit
Furniture	728658.58	364329.29	364329.29
Office Supplies	705422.33	352711.17	352711.17
Technology	827455.87	413727.94	413727.94

Table 1 Category Profit

Among the sub-categories, **Chairs** and **Phones** stand out as top performers, generating the highest total profits of **\$161,411.37** and **\$163,891.2** respectively. These sub-categories also lead in total revenue, showcasing their significant contribution to overall profitability. Other sub-categories like **Binders** and **Storage** also demonstrate strong performance with moderate costs and substantial profit margins.

Category	Total Revenue	Total Cost	Total Profit
Accessories	164186.70	82093.35	82093.35
Appliances	104618.40	52309.20	52309.20
Art	26705.41	13352.71	13352.71
Binders	200028.79	100014.39	100014.39
Bookcases	113813.20	56906.60	56906.60
Chairs	322822.73	161411.37	161411.37
Copiers	146248.09	73124.05	73124.05
Envelopes	16128.05	8064.02	8064.02
Fasteners	3001.96	1500.98	1500.98
Furnishings	89212.02	44606.01	44606.01
Labels	12347.73	6173.86	6173.86
Machines	189238.63	94619.32	94619.32
Paper	76828.30	38414.15	38414.15
Phones	327782.45	163891.22	163891.22
Storage	219343.39	109671.70	109671.70
Supplies	46420.31	23210.15	23210.15
Tables	202810.63	101405.31	101405.31

Table 2 Sub-Category Profit

The total sales across all cities amounted to **\$2,261,536.78**, with **New York City** emerging as the top-performing city, contributing an impressive **\$252,462.55** in sales. Other major contributors included **Los Angeles** with **\$173,420.18** and **Seattle** with **\$116,106.32**, highlighting their significant roles in driving overall revenue.

City	City Sales
New York City	252462.547
Los Angeles	173420.181
Seattle	116106.322
San Francisco	109041.12
Philadelphia	108841.749
Houston	63956.1428
Chicago	47820.133
San Diego	47521.029
Jacksonville	44713.183
Detroit	42446.944

Table 3 Top Performing City

Shipping Mode

The majority of customers (5,859) preferred **Standard Class** shipping, making it the most utilized mode of delivery. This is followed by **Second Class** and **First Class**, with 1,902 and 1,501 customers, respectively. **Same Day** shipping, while the least used, catered to 538 customers, likely due to its higher cost or limited need.

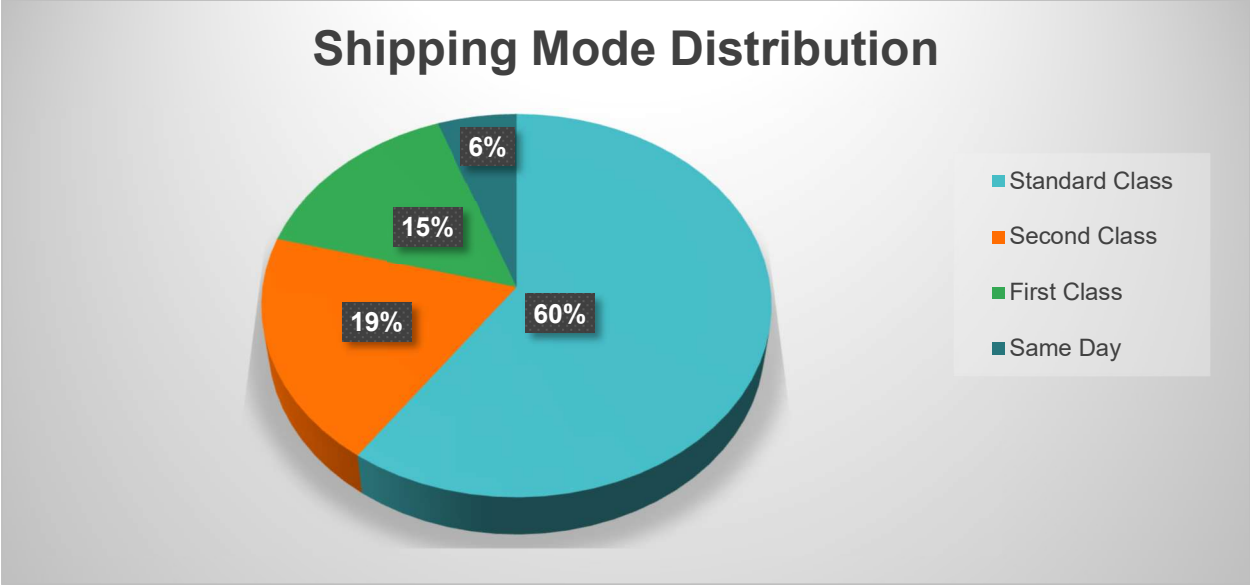


Figure 1 Shipping Mode Distribution

The **Highest Sales Per Unit** table provides a detailed view of the most profitable products on a per-unit basis. The product **TEC-MA-10002412** leads with the highest sales per unit at **\$22,638.48**, followed by **TEC-CO-10004722** with **\$61,599.82** over five units sold.

Product ID	Quantit y	Sales Per Product	Sum of Sales Per Unit
TEC-MA-10002412	1	22638.48	22638.48
TEC-CO-10004722	5	61599.82	12319.9648
TEC-MA-10004125	1	7999.98	7999.98
TEC-MA-10001047	2	14299.89	7149.945
TEC-MA-10001127	3	18374.90	6124.965
OFF-SU-10000151	3	17030.31	5676.770667
OFF-BI-10001120	3	15875.92	5291.972
TEC-MA-10000822	4	16829.90	4207.47525
TEC-MA-10002927	1	3991.98	3991.98
TEC-MA-10000984	2	7834.40	3917.2

Table 4 Highest Sales Unit

Customers Analysis

Among the **793 distinct customers**, **Sean Miller** leads with the highest total sales amounting to **\$25,043.05**, followed by **Tamara Chand** at **\$19,052.22** and **Raymond Buch** at **\$15,117.34**. These top contributors represent a significant portion of the revenue, indicating the importance of retaining and nurturing high-value customers. This data is crucial for developing targeted strategies to enhance customer satisfaction and drive repeat business.

Customer Name	Sales
Sean Miller	25043.05
Tamara Chand	19052.22
Raymond Buch	15117.34
Tom Ashbrook	14595.62
Adrian Barton	14473.57

Table 5 Top Five Customers

The analysis highlights that the **Consumer segment** accounts for the largest share of both sales (50.76%) and customer representation (52.05%), showcasing its critical role in driving revenue. The **Corporate segment**, contributing 30.44% of sales and 30.13% of customers, also represents a significant portion of the business, indicating the potential for targeted strategies to maximize its profitability. Meanwhile, the **Home Office segment** contributes 18.79% of sales and 17.82% of customers, indicating a smaller but steady contribution to overall performance.

In terms of revenue distribution across product categories, **Technology** leads with 36.59% of total sales, underscoring its high demand and profitability. This is closely followed by **Furniture** and **Office Supplies**, contributing 32.22% and 31.19% of sales, respectively

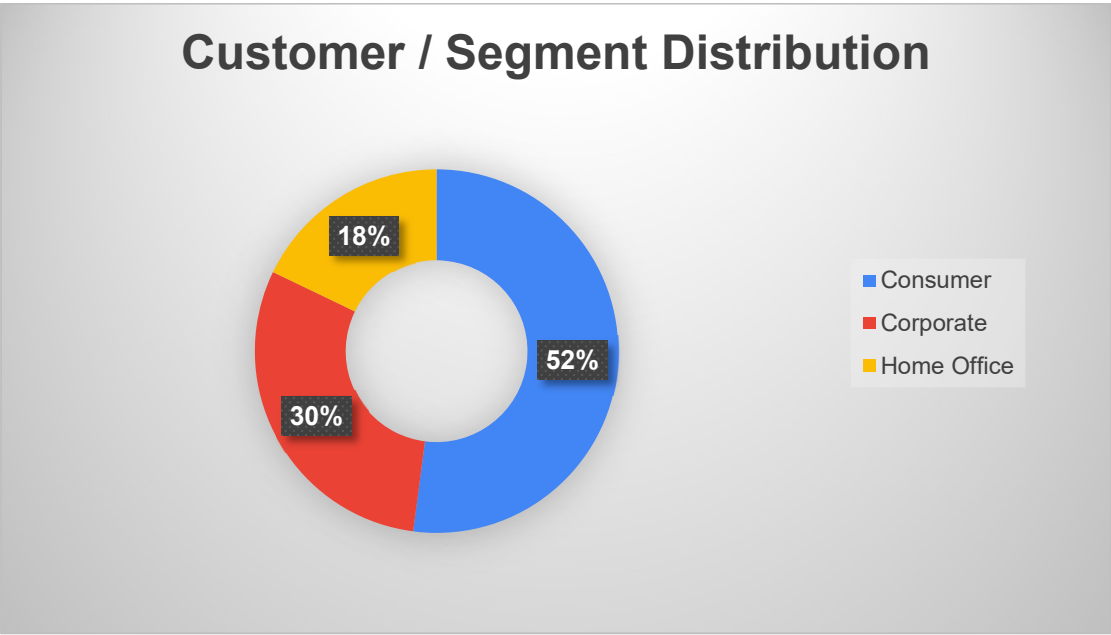


Figure 2 Customer Segment Distribution

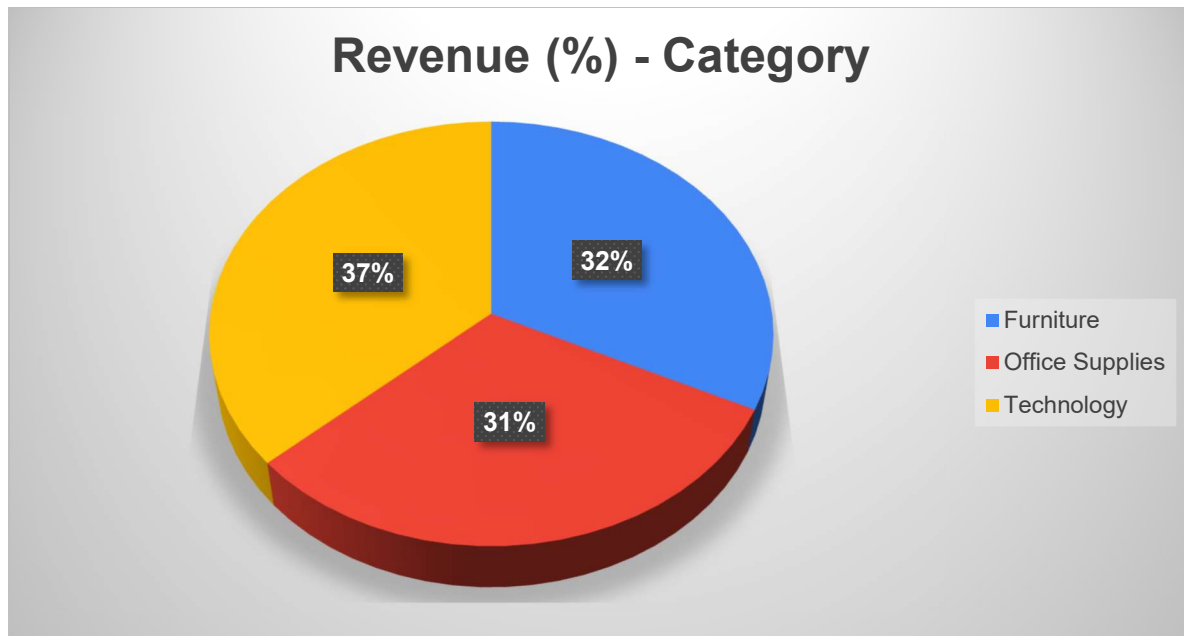


Figure 3 Revenue Percentage – Category

Regional Insights

California emerges as the top-performing state, contributing the largest share of total revenue, followed by **New York** and **Texas**, which collectively account for a significant portion of overall sales. Mid-tier states such as **Washington**, **Pennsylvania**, and **Illinois** also show substantial contributions, presenting opportunities for further growth. In contrast, a large number of states exhibit minimal individual contributions, as indicated by the flatter portion of the cumulative curve, suggesting room for expansion in these regions. The Pareto analysis reveals that a small number of states drive the majority of sales, underscoring the importance of focusing resources on high-impact regions like California, New York, and Texas, while also exploring growth potential in mid-tier markets and addressing barriers in underperforming states.

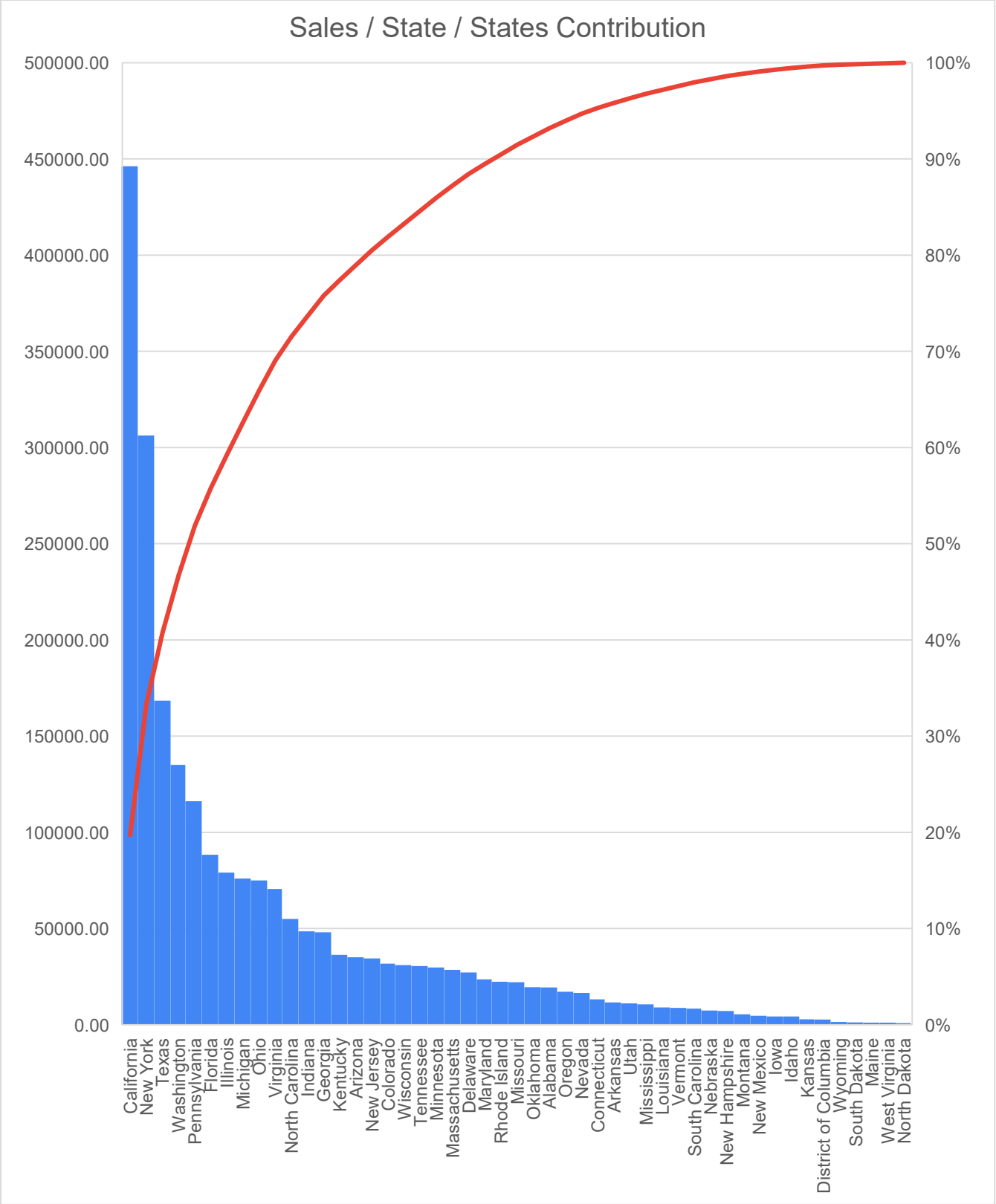


Figure 4 Sales-State Contribution

The **West region** shows the highest sales overall, with **Technology** leading at **\$247.40K**, closely followed by **Furniture** and **Office Supplies**. Similarly, the **East region** demonstrates strong performance, particularly in **Technology** at **\$263.12K**, making it the highest sales for Technology across all regions. Other regions like the **Central** and **South** show more balanced contributions but relatively lower sales, with Furniture being the most consistent performer in these regions.

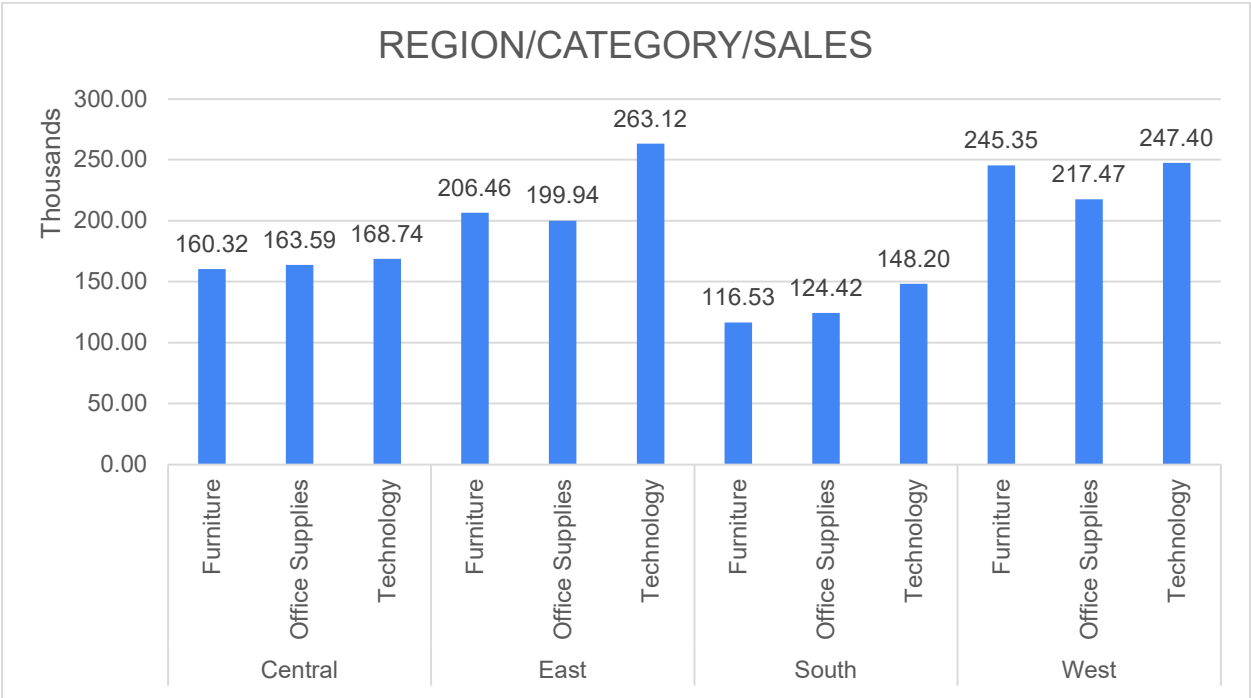


Figure 5 Region Category Sales

The second chart focuses on the **average sales order value by region**. The **South region** leads with the highest average sales order value of **\$243.52**, followed by the **East region** at **\$240.40**. The **West region**, despite its high total sales volume, has an average order value of **\$226.18**, while the **Central region** has the lowest average at **\$216.36**. These insights suggest that while the **West region** thrives in overall sales volume, focusing on strategies to increase average order values in this region could yield further growth.

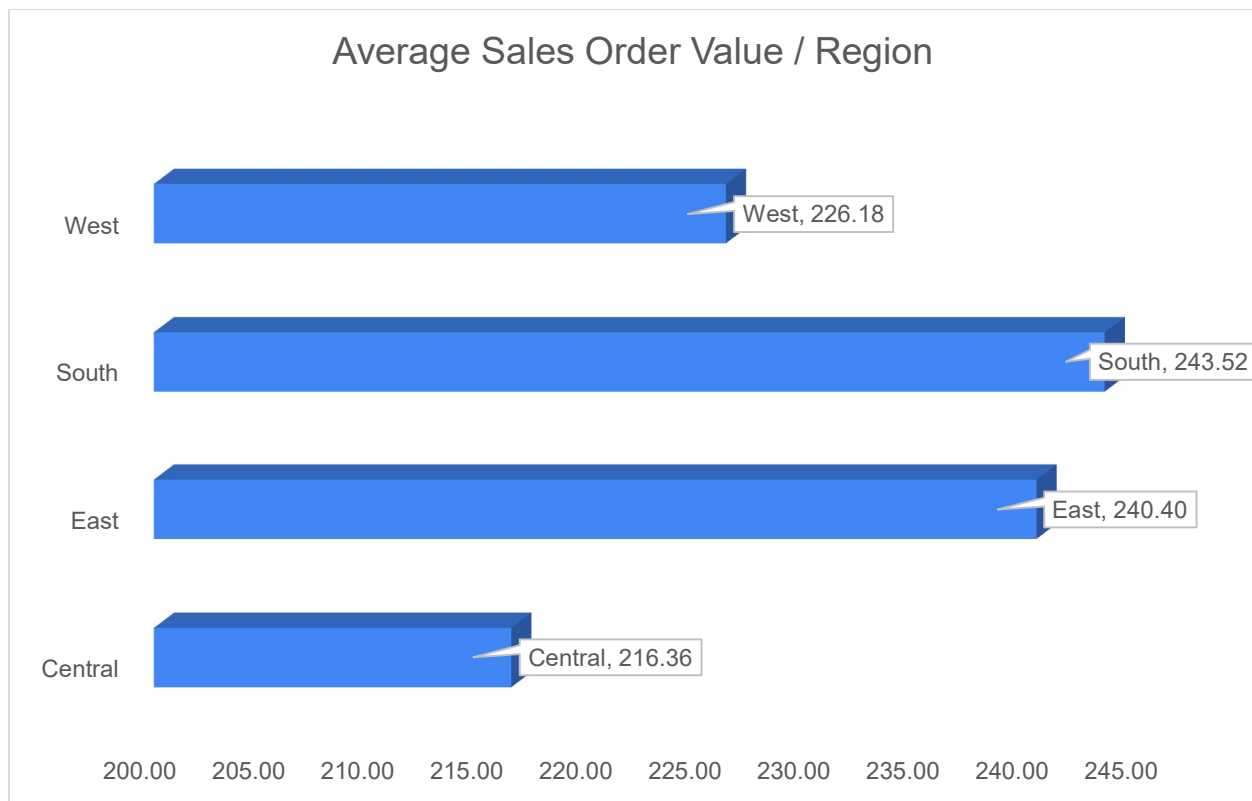


Figure 6 Average Order Value among Regions

The **West region** leads with the highest sales at **\$710,219.68**, accounting for **31.40%** of the total sales contribution. The **East region** follows closely with **\$669,518.73** and a **29.60%** contribution, indicating strong market performance in these areas. The **Central region**, with **\$492,646.91** and a **21.78%** contribution, holds a moderate share, while the **South region** contributes the least, with **\$389,151.46** and a **17.21%** share.

Region	Sales	Sales Contribution
West	710219.68	31.40%
East	669518.73	29.60%
Central	492646.91	21.78%
South	389151.46	17.21%

Table 6 Sales Contribution Per Region

The majority of orders, **6,101**, fall under the sales range of **less than \$100**, indicating a high volume of low-value transactions. The second highest count, **1,162 orders**, is observed in the **\$100 to \$200** range, further highlighting the prevalence of smaller transactions.

As the sales range increases, the number of orders decreases, with only **462 orders** exceeding **\$1,000**, representing high-value transactions.

Ranges	Order Count
<100	6101
>= 100 AND < 200	1162
>= 200 AND < 300	658
>= 300 AND < 400	445
>= 400 AND < 500	288
>= 500 AND < 600	214
>= 600 AND < 700	174
>=700 AND < 800	111
>= 800 AND < 900	117
>=900 AND < 1000	68
>= 1000	462

Table 1 Order Count per Range

Recommendations

1) Focus on High-Performing Regions

- Strengthen marketing and sales strategies in the **West** and **East** regions to maintain their dominance.
- Develop targeted campaigns to boost sales in the **South** and **Central** regions, leveraging regional preferences.

2) Boost Average Order Value

- Introduce bundling offers or discounts for higher-value purchases to increase the proportion of mid-to-high-value transactions.
- Promote premium product categories, such as **Technology**, with value-added services.

3) Expand High-Demand Product Lines

- Prioritize inventory for top-performing sub-categories like **Phones** and **Chairs** to meet demand.
- Explore similar products to diversify offerings in these high-profit segments.

4) Enhance Customer Segmentation

- Develop loyalty programs for the **Consumer** segment to retain high-value customers.
- Target the **Corporate** segment with tailored solutions to maximize their potential for high average order values.

5) Optimize Shipping Strategies:

- Offer incentives for faster shipping modes, such as **First Class**, to improve customer satisfaction for high-value transactions.
- Ensure **Standard Class** remains competitive to cater to its broad base of users.

Conclusion

The analysis highlights critical insights into sales performance, customer behavior, and regional contributions. Key regions like the **West** and **East** dominate in total sales, while the **South** and **Central** regions present opportunities for growth. Product categories like **Technology** and sub-categories such as **Phones** and **Chairs** stand out as top performers, contributing significantly to revenue. However, a large volume of transactions falls into low-value sales ranges, emphasizing the need to increase average order values. The **Consumer segment** is the primary revenue driver, while other segments, such as **Corporate**, offer potential for higher-value growth. Shipping modes like **Standard Class** are the most preferred, reflecting customer priorities for affordability.