

Superstores Sales Dataset

Analysis using MS Excel

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Outliers Detection & Fixing attributes

IQR Method for Outlier Removal:

Q1 → 17.28 Q2 → 209.94

IQR → 192.66

Formula used for Outlier Detection

=IF(OR(A3<(17.28-1.5*192.66), A3>(209.94+1.5*192.66)), "Outlier", "OK")

Replacing outliers with median of Sales (54.49)

=IF(OR(A3<(17.28-1.5*192.66), A3>(209.94+1.5*192.66)),54.49, A3)

Replacing outliers with median of Discount (0.2)

=IF(OR(I3<(0-1.5*0.2), I3>(0.2+1.5*0.2)),0.2, I3)

FORMULA USED To Calculate Key metrics:

Adjusted Sales: $\text{Sales} - (\text{Sales} * \text{Discount})$

Total Revenue or Total Sales : $\text{SUM}(\text{Adjusted Sales Range}) \rightarrow \$711,797.79$

Average Sales Per Order: $\text{Total Revenue} / \text{Count (No. of Orders)} \rightarrow \71.22251

Total Discount Applied: $\text{SUM}(\text{Sales range} * \text{Discount range}) \rightarrow 0$

Total Profit: $\text{SUM}(\text{Entire profit range}) \rightarrow \$286,397.02$

Total Quantity: $\text{SUM}(\text{Entire Quantity range}) \rightarrow 37873$

COUNTIFS: $=\text{COUNTIFS}(\text{'SuperS_sales dataset - Copy'!O2:O9995}, \text{"Furniture"}, \text{'SuperS_sales dataset - Copy'!H2:H9995}, \text{"Consumer"})$

AVERAGEIF: $=\text{AVERAGEIF}(\text{'SuperS_sales dataset - Copy'!H2:H9995}, \text{"Corporate"}, \text{'SuperS_sales dataset - Copy'!X2:X9995})$

TIME BASED ANALYSIS

Insights:

Lower sales rate during first two quarters (gradually increasing), towards the mid Q3 and end of the Q4 seen to be high comparatively for every year.



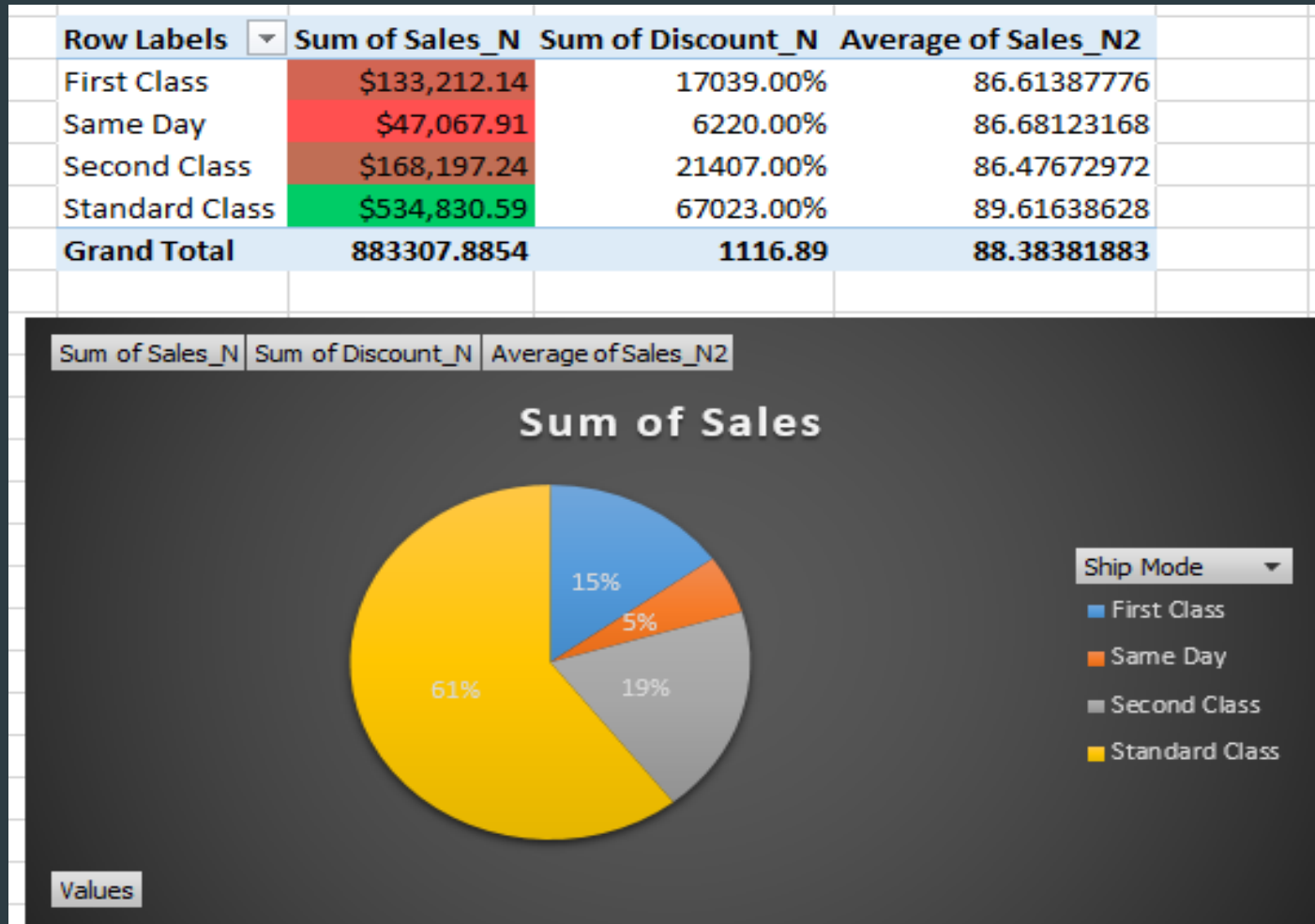
Lower Sales in Q1 & Q2:

- **Post-Holiday Slump** - Consumers recover from holiday spending.
- **Budget Constraints** - Businesses and individuals set budgets early in the year.
- **Seasonal Demand** - Many industries have slow seasons in Q1 & Q2.
- **Tax Season Impact** - Consumers prioritize tax payments over spending.
- **Weather Factors** - Harsh winters (Q1) or school closures affect shopping patterns.

Higher Sales in Q4:

- **Holiday Season (Black Friday, Christmas, New Year)** - Increased consumer spending.
- **Year-End Bonuses & Budget Utilization** - Businesses and individuals spend remaining budgets.
- **Seasonal Demand Peaks** - Retail, travel, and electronics see a surge.
- **Festive & Discount Offers** - Major promotional campaigns drive purchases.
- **New Product Launches** - Companies release new models (e.g., tech & fashion).

SALES & DISCOUNTS Vs Shipment mode



Sum of sales varies based on the shipment mode in the following order:
Standard Class > Second Class > First Class > Same Day

Key Insights:

Common reasons:

- Cost Sensitivity - **cheapest shipping option**, making it the **most preferred** by cost-conscious customers
- Bulk & Large Orders - Businesses and individuals ordering in bulk often choose **Standard or Second Class** to save on shipping costs.
- Customer Purchase Behavior - **Same Day & First Class** are used for urgent purchases but make up a **smaller percentage** of overall sales.
- Overall: **Standard Class** is often the **default shipping option**, leading to higher selection rates.
- In **Superstore Sales**, discounts are seen to be **directly proportional to sales**: Superstores often run "Buy More, Save More" offers (e.g., **10% off on 3 items, 20% off on 5 items**), encouraging higher sales. Often this pattern is seen in **Festive & Holiday Sales / Clearance & End-of-Season Sales**.

SUM OF SALES BASED On PRODUCT CATEGORY & QUANTITY

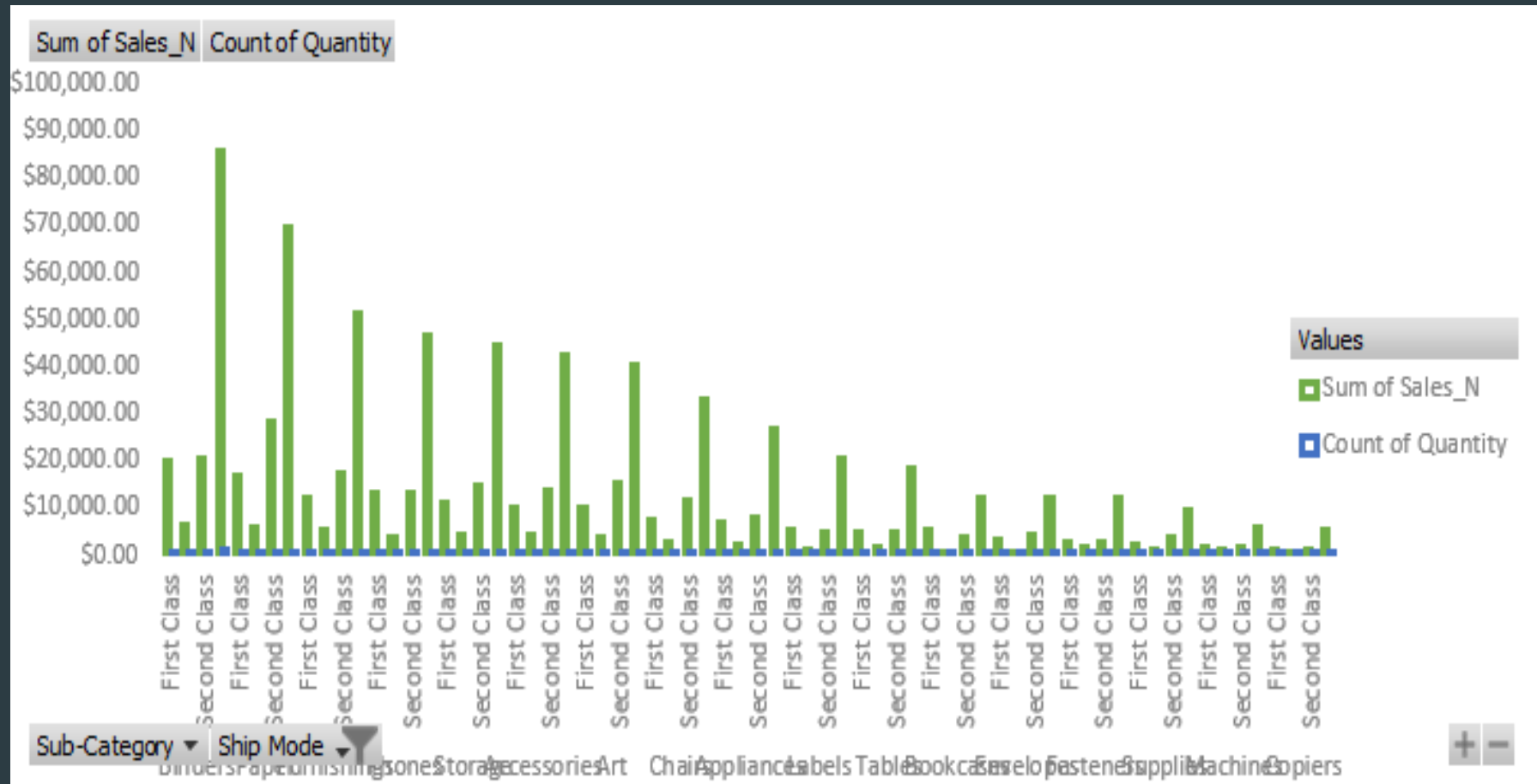
Row Labels	Sum of Sales_N	Sum of Quantity
Furniture	\$191,406.69	8028
Office Supplies	\$526,608.92	22906
Technology	\$165,292.28	6939
Grand Total	883307.8854	37873

Top Performing Products

Top performing Products

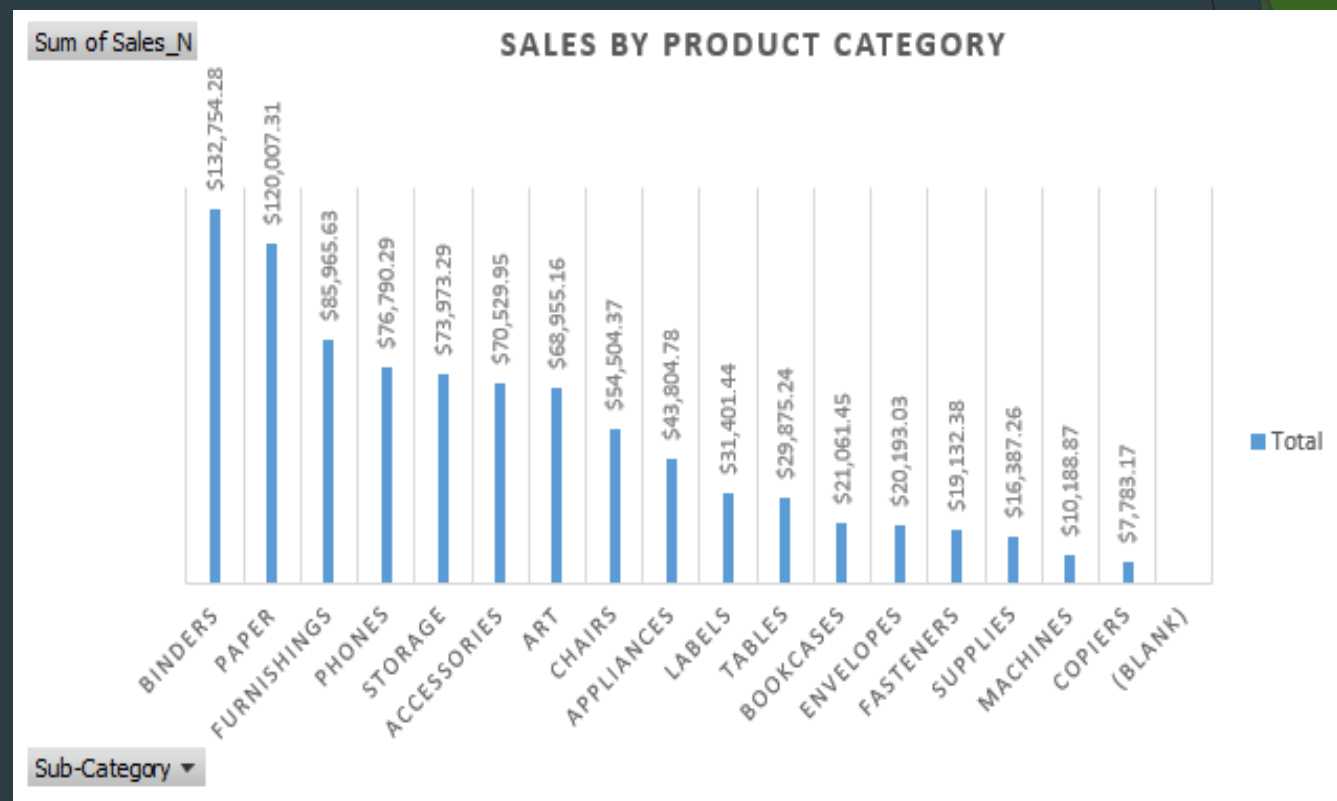


SUM OF SALES BASED ON PRODUCT CATEGORY, SHIPMENT MODE & QUANTITY

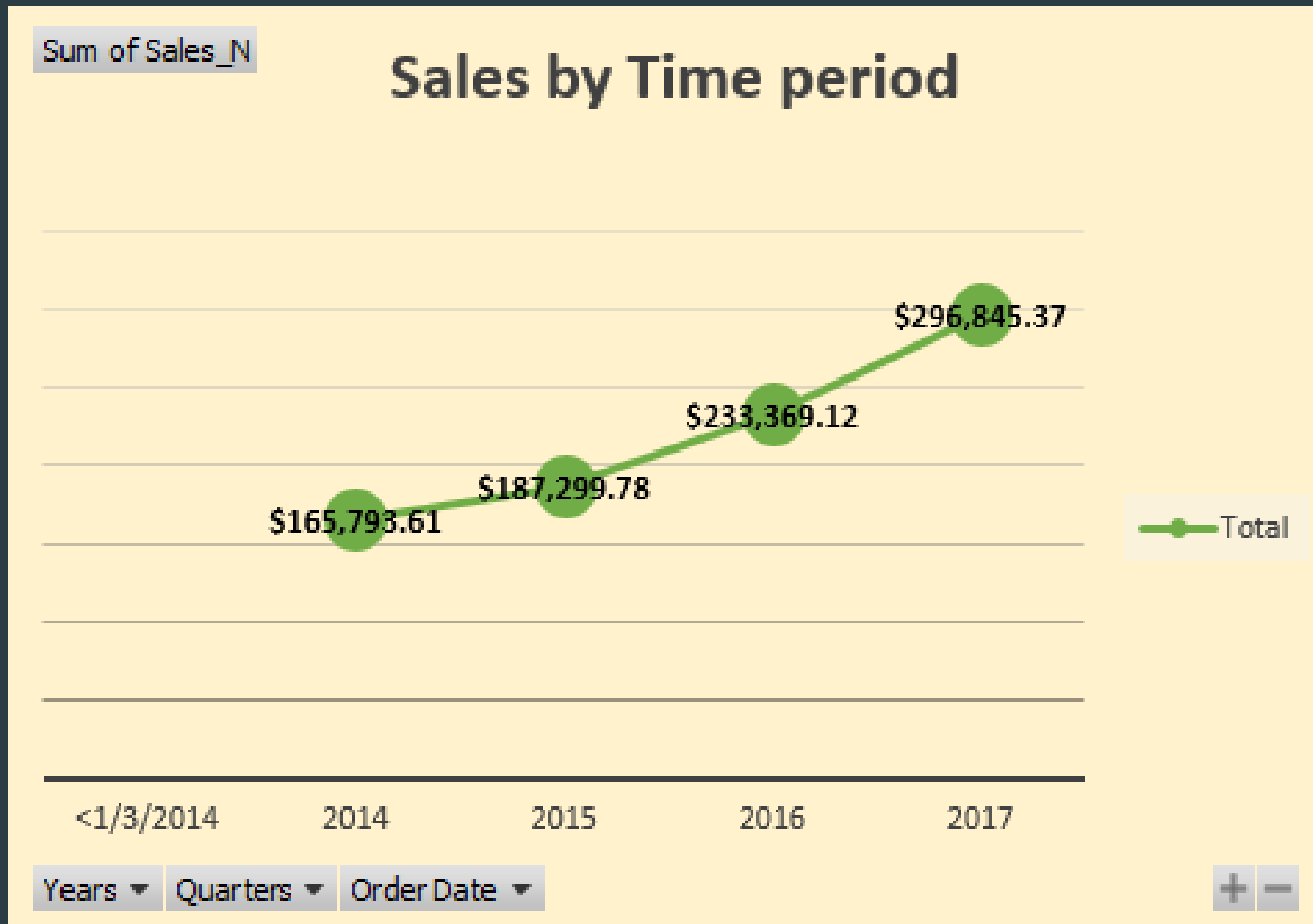


The range of Sales rating from highest to lowest, based on the quantities purchased for the product category are as follows:

1. Binders
2. Paper
3. Furnishings
4. Phones
5. Storage
6. Accessories
7. Art
8. Chairs
9. Appliances
10. Labels
11. Tables
12. Bookcases
13. Envelopes
14. Fasteners
15. Supplies
16. Machines
17. Copiers



SALES BY TIME PERIOD

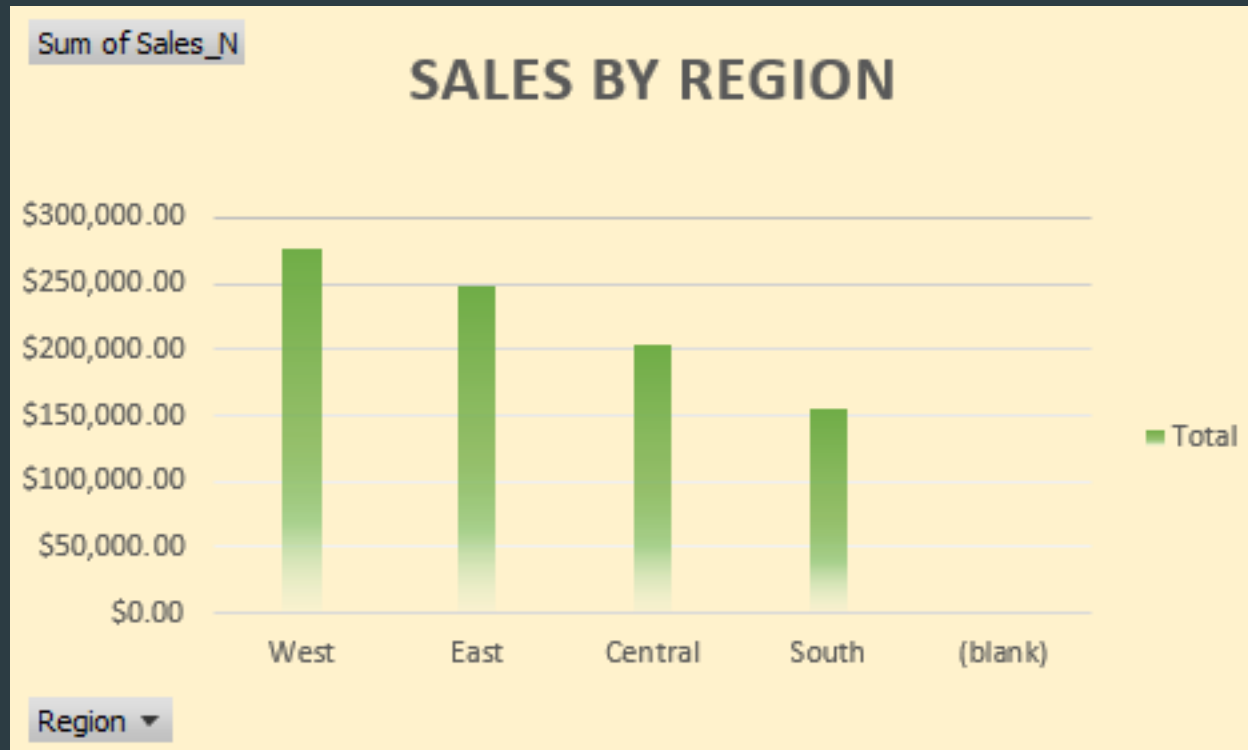


Key Insights:

Common reasons:

- More customers become aware of their products/services. Referrals, and positive reviews contribute to **steady sales growth**.
- Initial sales are slow as the business gains traction, but over time, repeat customers and new audiences drive growth.
- Over time, businesses optimize **advertising, social media, and sales campaigns**, leading to better reach and higher sales.
- Businesses **enhance their offerings based on customer feedback**
Companies introduce **strategic discounts and bundle offers**, attracting more customers and boosting sales.
- Expanding to **new locations, launching new products, or entering new markets** gradually increases sales.

SALES BY REGION



Common Reasons:

Economic Conditions

Cultural differences influence **product demand**

Market Competition existing in a region

Marketing & Brand Awareness

Demographics & Population Density

Supply Chain & Logistics

