

US Regional Sales

# Data Analysis Report

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Report By

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# Introduction

In today's dynamic business landscape, the ability to harness and analyze data has become an indispensable tool for informed decision-making and sustainable growth. This data analysis report delves into the sales performance of **US Regional** over the past 4 years i.e. is from 2014 to 2017, aiming to provide a comprehensive understanding of its revenue trends, customer behavior, and key insights that can inform strategic actions.

As businesses navigate an increasingly competitive market, gaining insights into sales data has never been more critical. Accurate and timely analysis allows organizations to adapt to changing consumer preferences, optimize inventory management, enhance marketing strategies, and ultimately, drive profitability.

In this report, we employ a variety of analytical tools and techniques to dissect the sales data of **US Regional**. By exploring historical sales patterns, identifying seasonal trends, and examining the impact of external factors, we aim to uncover hidden opportunities and challenges that can guide the store's future endeavors.

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# Purpose Of Analysis

The primary objective of this data analysis report is to provide a comprehensive and insightful examination of the sales performance of company during the specified time period. The analysis serves several key purposes:

1. **Performance Evaluation:** This analysis aims to assess the historical sales performance of SuperStore to gauge how well it has met its revenue targets and to identify any growth or contraction trends over time. By evaluating past performance, we can gain valuable insights into the store's financial health.
2. **Trend Identification:** The report will seek to identify and analyze sales trends within the data. By recognizing patterns in sales data, we can understand seasonal fluctuations, identify peak sales periods, and uncover any recurring buying behaviors exhibited by customers.
3. **Customer Behavior Analysis:** Understanding customer behavior is vital for a retail establishment. This analysis will delve into customer purchase patterns, demographics, and preferences to inform marketing strategies, inventory management, and customer engagement initiatives.
4. **Key Insights for Decision Making:** Our analysis will provide actionable insights that [Store Name] can use to make data-driven decisions. Whether it's optimizing product offerings, refining pricing strategies, or enhancing the customer experience, these insights aim to guide strategic actions that will ultimately improve sales.

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# Model Used

## **RFM Model:**

The RFM model is a powerful tool for customer segmentation and analysis, providing insights into customer behavior and helping businesses tailor their marketing strategies. It focuses on three key aspects of customer engagement:

### **1. Recency (R):**

- Recency measures how recently a customer has made a purchase.
- It is calculated by determining the time elapsed since the customer's last purchase, usually in days.
- Customers who have made recent purchases are assigned higher recency scores, indicating their engagement with the business.

### **2. Frequency (F):**

- Frequency assesses how often a customer makes purchases.
- It is calculated by counting the number of unique purchase transactions within a specified time frame.
- Customers with more frequent purchases receive higher frequency scores, reflecting their loyalty and engagement.

### **3. Monetary (M):**

- Monetary represents how much money a customer spends.
- It is calculated by summing the total purchase amounts made by the customer within a specific time period.
- Customers who spend more money receive higher monetary scores, signifying their value to the business.

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## Utilizing RFM Analysis:

RFM analysis provides businesses with several advantages, including:

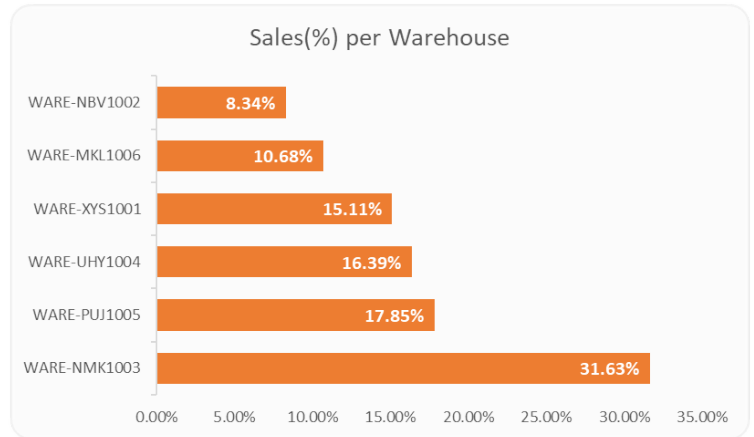
- **Customer Segmentation:** Businesses can categorize customers into distinct segments based on their RFM scores. These segments may include "High-Value Customers," "Loyal Customers," "Churned Customers," and more.
- **Targeted Marketing:** By understanding customer behavior, businesses can create tailored marketing campaigns for each RFM segment. For example, they can offer special promotions to re-engage lapsed customers or reward loyal customers with exclusive offers.
- **Retention Strategies:** RFM analysis helps identify at-risk customers (low recency and frequency) and allows businesses to implement retention strategies to prevent churn.
- **Revenue Growth:** By focusing marketing efforts on high-value and loyal customers, businesses can maximize revenue and profitability.
- **Data-Driven Decision-Making:** RFM analysis empowers data-driven decision-making by providing actionable insights into customer behavior and preferences.

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## Insights

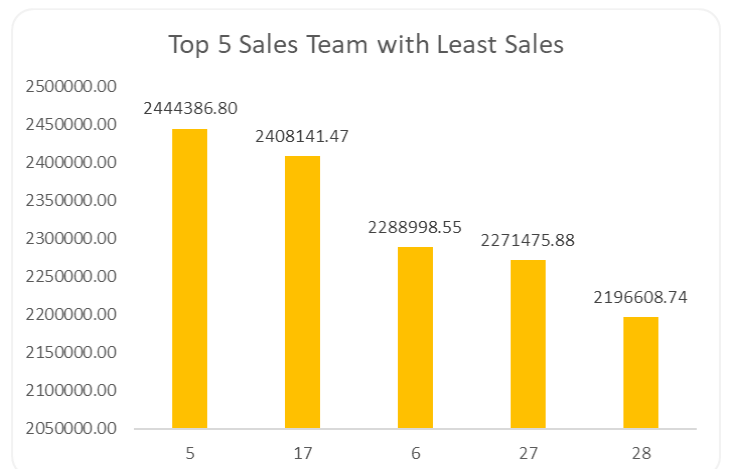
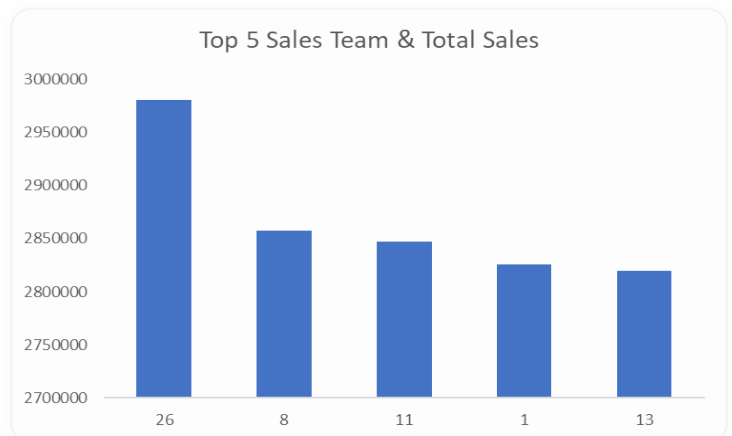
## Sales(%) per Warehouse

- In the bar chart, we can see that warehouse **WARE-NMK1003** has had the highest sales of **31.63%** for all the years combined.
- Warehouses **WARE-XYS1001**, **WARE-UHY1004**, **WARE-PUJ1005** made a moderate amount of sales up to **15%**, **~16%** & **~18%**.
- Whereas warehouses **WARE-MKL1006** & **WARE-NBV1002** have recorded the least amount of sales which is **10.86%** & **8.34%**.



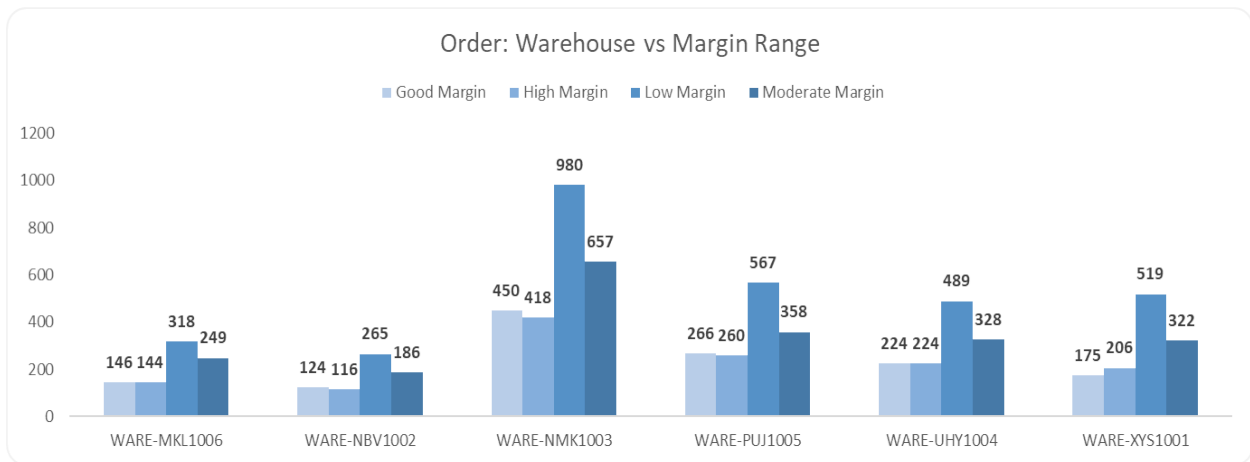
## Top 5 Sales Teams with Highest Sales

- Sales Team 26 is the team who made the highest sales of all time which is approx. \$2.98M.
- While the remaining 4 teams of this top 5 which are **8, 11, 1 & 13** have made nearly half of team 26 in terms of sales.
- In the chart at the bottom, we can see the top 5 sales teams which have made the least sales.
- Starting from sales team 5 which have made a total sales of **\$2.44M**. Following the team we see **17, 6 & 27** with total sales of **\$2.40M**, **%2.28** & **\$2.27**.
- Team with the least sales of all time is team **28** with overall sales of **\$2.19M**.





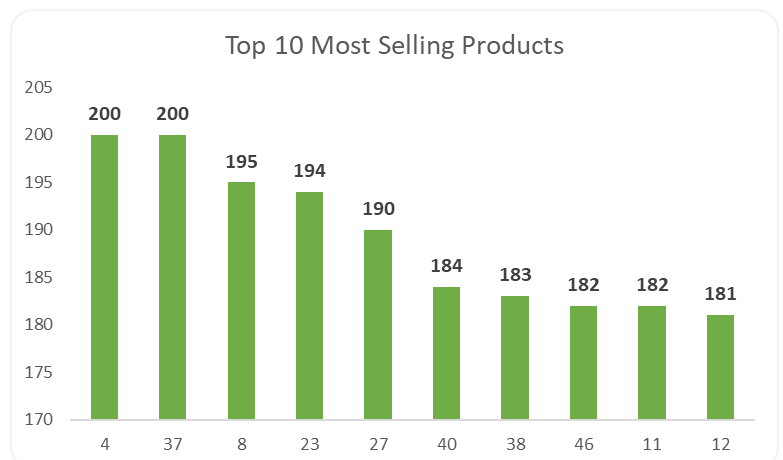
## Number of Orders per Margin Range per Warehouse



- In the above chart, we can see that each store has seen more orders for products which are in the category of **Low Margin & Moderate Margin**.
- Warehouse with the highest number of orders in the above mentioned categories is **WARE-NMK1003**.
- Due to the high cost of products in the Good **Margin & High Margin** category, each store has had the least number of orders for those products.

## Top 10 Most Selling Products

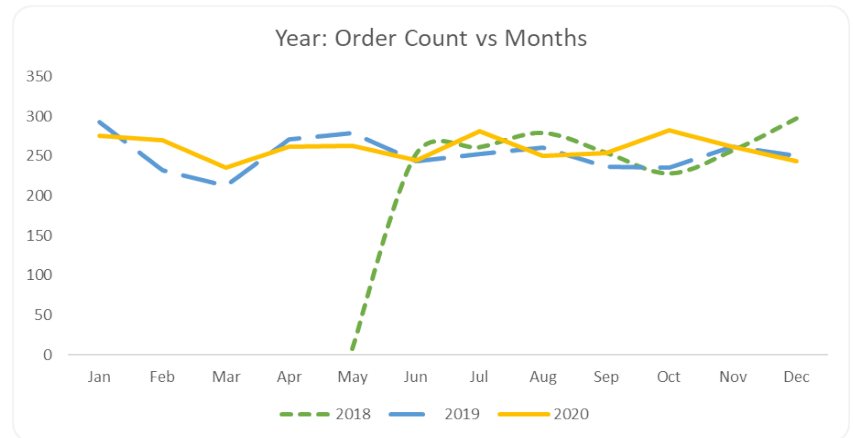
- In the chart, we can see the top 10 most selling products.
- ProductID **4,37,8,23 & 27** had the most number of orders for them ranging between 190 - 200.
- While ProductIDs **40, 38, 46, 11 & 12** had the orders between 180 - 185.



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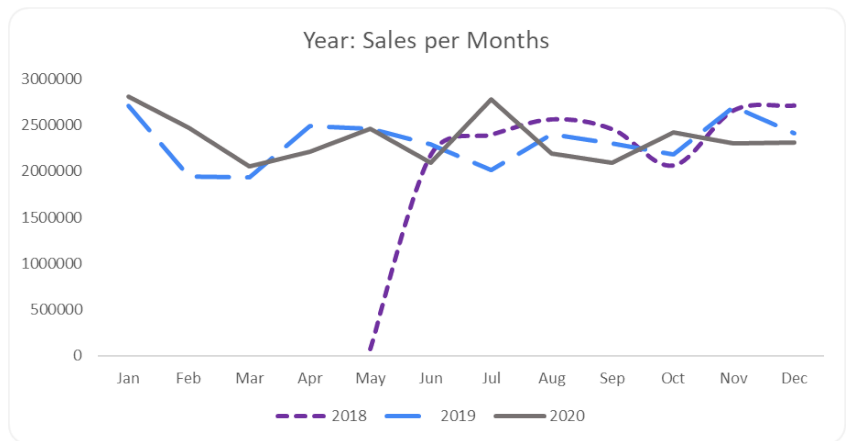
## Year Wise Seasonality: Order Count per Month

- Starting from **2018**, In the month of May when the Company began, the rise in orders can be seen.
- Company had a pretty good number of orders in its first year ranging between **200 - 300**.
- Company saw a dip in the number of orders in the month of **Oct** after which we can see a steady rise again till the end of the year.
- From the beginning of the year **2019**, we can see a steady decline in the quarter **Q1 (Jan - Mar)**.
- After the **mid of March 2019**, we see a rise in orders till the end of the next quarter **Q2 (Apr - Jul)**. In the second half of the year **2019** there was not much up & down and the company saw a consistent number of orders ranging between **220 - 270**.
- In the beginning of the year **2020**, we see a pretty high number of orders and amount of sales in the month of **Jan** after which the number of orders start to decline till the end of the quarter **Q1**.
- From the second half of **Mar 2020**, the number of orders started to rise again till **mid Apr**.
- In the last two quarters of 2020, we don't see much fluctuation in the number of orders and the average number of orders remains constant for both the quarters.



## Year Wise Seasonality: Sales Amount per Month

- In 2018, after the start of the company, the company saw a steady sales amount till the month of **Sept.**
- In the month of **Oct**, We see a significant dip in the total sales amount.
- In the last two months of 2018, we saw a good rise in the sales amount touching the year's high of approx. **\$2.55M.**
- In the year **2019**, we see quite a few ups and downs in the total sales amount. Starting from the quarter **Q1**, after the rise from last year, the sales amount touches the all time low of approx. **\$1.80M** in the mid of **Feb.**
- From the end of first quarter, the sales amount increases to the average.
- In the second half of **2019**, the sales ranges between **\$2.00M - \$2.40M.**
- In the last two months of **2019**, sales amount increased to more than **\$2.5M.**
- In **2020**, Company sees the same seasonality as in 2019.
- Company makes the bottom of **\$2.0M** till the end of first quarter of 2020.
- In the second quarter, the total sales amount comes back to **\$2.5M** and in the following month of **July**, the total sales touches the all time high of approx. **\$2.9M.**
- In the last quarter of the year 2020, the curve flattens out at average sales of **\$2.3M.**



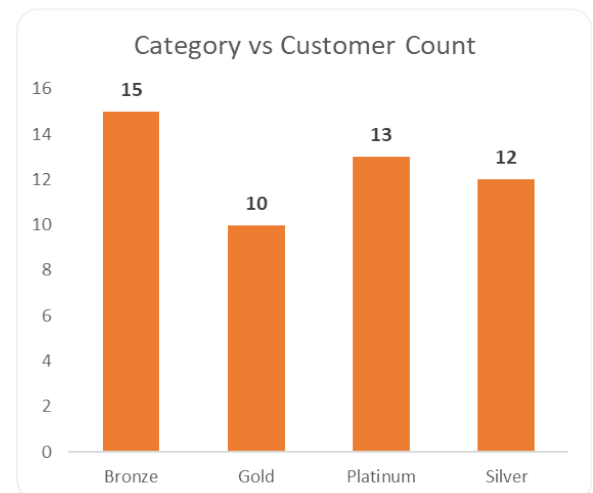
## Top 10 Most Profit Making Stores

- If we look at the chart, store ids **13 & 179** have made the least profit of more than **\$35K**.
- Stores ranging between **\$30K to \$35K** profit range are store ids **67, 109, 50 & 235**.
- Store ids **108, 10, 118 & 254** are the stores with profit ranging between **\$27K to \$30K** completing the list of top 10 stores with least profits of all time.



## Top 10 Most Profit Making Stores

- In the last chart of our report, this chart shows the customer segmentation which was prepared using the RFM model.
- The chart says that most of our customers fall into the **Bronze** category which is **30%** of the total customers.
- **Platinum** category which is considered as the most important customer range as **13** customers which is **26%** of total customers.
- And in the end, **Silver & Gold** categories have **12 & 10** customers respectively which **24% & 20%** of total customer base.



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# Conclusion

1. **WARE-NMK1003** is the top warehouse making the highest sales of **31.63%**. Meanwhile warehouses **WARE-XYS1001, WARE-UHY1004 & WARE-PUJ1005** are making moderate sales ranging between **15% to 18%**. **WARE-MKL1006 & WARE-NBV1002** are the warehouses recording the least sales between **5% to 10%**.
2. Sales Teams **26, 8, 11, 1 & 13** are the top 5 teams making the highest sales which is between **\$2.98M to \$2.81M**.
3. Meanwhile sales teams **5, 17, 6, 27 & 28** are teams with least sales of all time ranging between **\$2.44M to \$2.19M**.
4. From the chart **Order: Warehouse vs Margin Range**, we can draw the conclusion that the majority of orders are for products from **Low & Moderate** margin while orders for products from **Good & High Margin** range are low each year.
5. Product Ids **4, 37, 8, 23 & 27** are the products with orders of more than **190** making them the product with high demand. Product ids **12, 11, 46, 38 & 40** are the products with order numbers ranging between **180 to 185**. These are the top 10 highest selling products of all time.
6. Looking at the seasonality of orders which is one of the crucial parameters for decision making, years **2019 & 2020** have seen a dip in the order in the **first quarter (Jan - Feb)**. In the first two months of the **second quarter (Apr - Jun)**, the number of orders recovered to an average of nearly **250**. **Third quarter (Jul - Sep)** continued with normal sales for all the 3 years. By the end of the year, except 2020, **2018 & 2019** had decreased in the orders which recovered in the last two months of the year.
7. The pattern of seasonality is followed by the total sales amount each year. Years **2019 & 2020** had the decreased sales amount which then recovered in the **second quarter (Apr - Jun)**. **Third quarter (Jul - Sep)** of each year has small ups & downs in the sales but not significant. **October** had a significant decrease in sales in 2018 & 2019.
8. Store ids **13, 179,235,50 & 109** are the first top 5 stores seeing the least profits of all time ranging between **\$32K - \$37K**. Last group of stores with the least sales are **67,108,10,118 & 254** with profit between & **\$27K - \$31K**.

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## Recommendations

1. The Company needs to focus on the parameters like the location, demand etc. in order to improve the sales of warehouse **WARE-MKL1006 & WARE-NBV1002** and bring the products which match the demand. For the stores **WARE-XYS1001, WARE-UHY1004 & WARE-PUJ1005**, the company can introduce some offers to the regular customers who receive products from these warehouses or drop the price.
2. For the sales team with average and least sales, the company needs to identify the factors like team performance, type of products being offered by the teams, if the products match the demand etc and also the professional and soft skills of the team members. If the company has the budget to train and upskill these teams then the company should go with it otherwise the company can resort to firing the least performing employees and hiring good ones.
3. Since the company has seen that most of the customers are not going for the products in **Good & High Margin** range, the company should consider cutting the margin by a few percent or consider introducing new & efficient products which have low cost as well.
4. For the least selling products, companies should try to get the feedback from previous buyers of those products and based on the feedback, the company should consider replacing or improving those products.
5. Companies should focus on understanding the seasonal trend, demand or necessity in the months like **February, March & October** in which the company has consistently recorded decrease in the sales and order numbers and based on the information, the company should make changes to their marketing strategy.
6. Companies should consider factors like the population of a location, demand, price vs spending capacity for locations where the stores with least profits are located and make the appropriate decision based on that data.
7. The company should consider reaching out to the customers of **Bronze & Silver** category during special occasions, festivals, holidays etc. and companies should keep introducing new offers & new products from time to time to keep the customers engaged in exploring new options to maintain a good sales and orders average.