



# Super Store Sales Analysis Project

**Prepared for**

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## Executive Summary

This report provides a comprehensive analysis of SuperStore's sales performance, customer behavior, and operational efficiency. Leveraging SQL for data querying and Power BI for visualization, we identified key trends, regional disparities, and product performance.

## Introduction

In a competitive retail landscape, data-driven decision-making is critical. This report analyzes SuperStore's transactional data (2015–2018) to uncover trends in sales, customer segments, and shipping efficiency. The findings aim to guide strategic improvements in inventory, marketing, and operations.

## Project Objectives

1. Analyze sales trends across categories, regions, and time.
2. Identify top-performing products and loss-making subcategories.
3. Evaluate customer segment contributions.
4. Assess regional performance and shipping efficiency.
5. Forecast future sales to aid resource planning.

## Dataset Description

Three primary datasets were used:

1. **Orders:** Sales transactions, shipping details, and profit margins.
2. **Customers:** Segment classifications (Consumer, Corporate, Home Office).
3. **Products:** Category and subcategory hierarchies.

### Data Preparation:

- Cleansed in Excel (removed duplicates, standardized formats).
- Validated for missing values and inconsistencies.

## Methodology

Our structured approach included:

- **Excel:** Data cleaning and validation.
- **SQL:** Writing targeted queries to answer specific business questions.
- **Power BI:** Building interactive dashboards and forecasting models to visualize patterns and project future trends.

*With these tools and methods in place, we addressed the business's core questions as follows:*

## Business Questions and Analysis

### 1. Sales & Performance:

#### 1.1 What are the total sales trends over time?

SuperStore's annual sales show consistent growth from **\$479,856** in 2015 to **\$722,062** in 2018, with a temporary dip in 2016. This **50.5%** overall growth indicates strong market performance, though the 2016 decline suggests potential operational challenges worth investigating to prevent future downturns.

#### 1.2 Which regions generate the most revenue?

The West region dominates with **\$744,294** in sales (32.4%), followed by the East (**\$606,351**), Central (**\$514,251**), and South (**\$396,641**). The significant underperformance in the South region presents a clear opportunity for targeted improvements in marketing and distribution.

#### 1.3 What are the best-selling product categories?

Technology (particularly Phones at **\$327,782**) and Furniture (Chairs at **\$322,823**) are the top performers. Office Supplies like Storage (**\$219,143**) and Binders (**\$199,762**) also contribute significantly. These categories should receive priority in inventory planning and promotional activities.

### **1.4 How do monthly sales trends vary?**

Sales exhibit strong seasonality, peaking in November (**\$117,938**) and December (**\$83,030**) due to holiday shopping. January typically shows the lowest numbers, suggesting the need for post-holiday recovery strategies like clearance sales or new product launches.

### **1.5 What are the top-selling individual products?**

The Canon imageCLASS copier leads with **\$83,200** in sales, followed by Fellowes binding machines (**\$57,450**) and Cisco teleconferencing systems (**\$22,595**). These high-value office equipment items represent key revenue drivers that could benefit from accessory bundling strategies.

## **2. Customer & Market Insights**

### **2.1 Who are our highest-value customers?**

Sean Miller (**\$26,842**) and Tamara Chand (**\$19,852**) top the customer list, primarily located in major metropolitan areas. These customers represent prime candidates for exclusive loyalty programs and personalized service offerings to enhance retention.

### **2.2 How are sales distributed across customer segments?**

Consumers drive **57.4%** of total sales (**\$1,148,061**), significantly outperforming Corporate (**34.4%**) and Home Office (**21.2%**) segments. This distribution suggests that consumer-focused marketing strategies yield the highest returns.

### **2.3 Which geographic markets perform best?**

New York City leads with **\$209,428** in sales, followed by Los Angeles (**\$139,025**) and Philadelphia (**\$129,953**). The concentration of high sales in coastal cities indicates potential for expansion in inland metropolitan areas.

### **2.4 How do customer segments impact regional sales?**

Consumer spending dominates all regions, particularly in the West (**\$438,747**). Corporate sales are strongest in the East (**\$216,597**), while Home Office shows balanced regional distribution. This data supports region-specific segment targeting in marketing campaigns.

### 3. Operations & Shipping

#### 3.1 What are the shipping mode preferences?

Standard Class shipping accounts for **59%** of shipments due to its cost-effectiveness, despite longer delivery times. Second Class (**20%**), First Class (**15%**), and Same Day (**5%**) complete the distribution, suggesting customers prioritize price over speed in most cases.

#### 3.2 What is our average shipping time?

The average order takes **4 days** to deliver, meeting general industry standards. However, this figure masks significant regional variations that require attention to maintain customer satisfaction.

#### 3.3 What percentage of deliveries experience delays?

**18.2%** of shipments arrive late (exceeding promised delivery dates).

This exceeds acceptable thresholds in e-commerce and risks damaging customer trust and retention rates.

#### 3.4 How do delays vary by region?

The West region experiences the worst delay rates at **34.2%**, followed by the East (**25.4%**) and Central (**24.1%**). These figures indicate potential issues with regional distribution centers or carrier performance that require immediate operational review.

#### 3.5 How does shipping mode affect sales performance?

First Class shipments generate the highest average order value (**\$238**), suggesting customers spending more prefer faster delivery. Standard Class, while most popular, yields lower average values (**\$229**), indicating an opportunity to upsell faster shipping options.

## Forecasting

Our forecasting, conducted via Power BI's advanced tools, revealed:

- **Power BI** projects continued growth, with seasonal peaks in **Q4**.
- **Inventory planning** should align with holiday demand.

## Key Findings

1. Technology and Furniture categories are profit leaders.
2. West region outperforms; South needs intervention.
3. Consumer segment is the most lucrative.
4. Shipping delays are concentrated in the West.
5. Discounts above 20% erode margins (observed in Tables/Bookcases).

## Conclusion and Recommendations

Our analysis journey revealed both the strengths and challenges facing SuperStore. The company's data highlights clear opportunities for optimization.

### **We recommend the following actions:**

1. Product Optimization: Discontinue or repricing loss-making products (e.g., Tables).
2. Regional Focus: Boost marketing in the South; address West's shipping delays.
3. Customer Retention: Reward top customers (e.g., Sean Miller) with loyalty programs.
4. Discount Strategy: Limit discounts to <20% to protect margins.

## Appendix

GitHub Link:

<https://github.com/mariamrg212/superstore-analysis-project>