

E-Commerce Sales & Profitability Dashboard Report

1. Executive Summary

This report provides a detailed analysis of the **E-Commerce Sales & Profitability Dashboard**, developed using **Microsoft Power BI**.

The dashboard consolidates sales data from a U.S.-based e-commerce company to provide **real-time insights into sales, profit, and operational efficiency**.

It enables decision-makers to:

- Track **key business metrics** at a glance.
- Understand **regional and product-level performance**.
- Identify **growth opportunities and underperforming areas**.

2. Project Objective

The primary goal of this project was to:

- Design an interactive dashboard for **monitoring Year-to-Date (YTD)** performance.
- Compare **Year-over-Year (YoY, also known as Year-on-Year)** growth trends.
- Provide actionable insights across **customer categories, products, regions, and shipping modes**.

3. Key Performance Indicators (KPIs)

KPI	Metric	YoY Change	Business Interpretation
YTD Sales	\$ 11.53M	↓ -0.83%	Slight decline in total revenue compared to last year.
YTD Profit	\$ 1.34M	↑ +4.50%	Profit has improved despite sales dip operational efficiency improved.
YTD Quantity Sold	107.2K	↓ -7.29%	Lower sales volume indicates demand fluctuation or pricing changes.
YTD Profit Margin	11.58%	↑ +5.37%	Strong margin growth shows better cost control and higher profitability.

4. Category-Level Insights

Category	YTD Sales	PYTD Sales	YoY Growth	Observation
Office Supplies	\$6.92 M	\$7.00 M	-1.22% ↓	Still the highest contributor but slightly declined YoY.
Furniture	\$2.52 M	\$2.50 M	+0.73% ↑	Stable performance with minor growth.
Technology	\$2.10 M	\$2.13 M	-1.37% ↓	Decline may indicate competitive pressure or product lifecycle maturity.

Interpretation:

While *Office Supplies* remains the largest category by sales, its YoY decline and the drop in *Technology* highlight areas to explore for product line refresh or targeted campaigns.

5. Regional & Geographical Insights

Region	% of Total YTD Sales	Observation
West	32.22%	Highest-performing region, leading overall revenue.
East	28.42%	Second-highest contributor with consistent growth.
Central	23.19%	Moderate performance — potential to improve with localized promotions.
South	16.17%	Lowest contribution; consider sales strategy adjustments.

State-level Map:

The dashboard visualizes individual state sales, enabling granular geographic analysis for territory performance management.

6. Product Insights

Top 5 Products by YTD Sales:

1. Staple Envelope — \$57K
2. Staples — \$52K
3. Easy-Staple Pack — \$47K

4. Misc. Staples — \$26K
5. KI Adjustable Chair — \$22K

Bottom 5 Products by YTD Sales:

1. Eldon Jumbo Paper Clips — \$0.38K
2. Lexmark X957 Printer — \$0.27K
3. Cisco SPA525G Phone — \$0.25K
4. Xerox Blank Copier Paper — \$0.23K
5. Rediform S.O.S Notepad — \$0.18K

Observation:

- Strong concentration of sales in office consumables.
- Low-performing tech items suggest obsolete SKUs or poor marketing.
- Data can guide **inventory optimization** and **discontinuation decisions**.

7. Shipping Mode Insights

Shipping Mode	% of YTD Sales	Observation
Standard Class	60.51%	Dominant mode, indicates customer preference for cost-effective delivery.
Second Class	19.22%	Balanced option for moderate urgency.
First Class	15.10%	Premium service used less frequently, possible upsell opportunity.

8. Key Findings & Business Recommendations

Findings

- Slight **revenue decline (-0.83%)**, but **profit growth (+4.5%)** reflects improved efficiency.
- **Office Supplies** continues to dominate, but some **product stagnation** observed.
- **West region** remains the strongest performer.
- **Standard shipping** leads in order volume.

Recommendations

1. **Product Strategy:**
 - Refresh underperforming technology SKUs.
 - Promote fast-moving office products via bundle offers.
2. **Regional Focus:**
 - Expand sales initiatives in **Central** and **South** regions.

- Offer targeted discounts to stimulate demand.
- 3. **Operational Efficiency:**
 - Continue cost optimization strategies that improve profit margin.
 - Analyze shipping efficiency for potential logistics savings.

- 4. **Customer Insights:**
 - Investigate purchasing patterns in declining categories.
 - Improve customer segmentation in Power BI for better targeting.

9. Tools & Technologies Used

- **Microsoft Power BI** – for visualization and dashboard development.
- **MS SQL Server** – for data storage and extraction.
- **Power Query** – for data transformation and cleaning.
- **DAX (Data Analysis Expressions)** – for custom KPIs and time intelligence calculations:
 - TOTALYTD(), SAMEPERIODLASTYEAR(), CALCULATE(), DIVIDE(), SUMX()
- **Visualization Techniques** – Conditional Formatting, Dynamic Icons, Sparklines, Maps.

10. Conclusion

The **E-Commerce Sales & Profitability Dashboard** delivers a comprehensive view of the company's performance across categories, products, and regions. It empowers decision-makers with **data-driven insights** to improve profitability, streamline operations, and align strategic goals with business outcomes.

This report demonstrates practical use of **Business Intelligence (BI)** to transform raw data into **actionable insights**, supporting continuous improvement and strategic growth.