

The background of the slide features a financial report. On the left, there is a pie chart divided into approximately 12 segments of various colors (blue, green, brown, grey). Above the pie chart is a bar chart with labels for months: jul, aug, sep, oct, nov, dec. Below the pie chart is a table with three columns of numerical data. A silver pen is visible in the bottom left corner, pointing towards the table.

Sales and Profit Analysis Report

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- Last Updated: **23.th October 2025**

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Objective



What are we talking about?

analyze sales performance and profitability across products, regions, and time periods to **identify key factors driving profit** and **recommend actionable strategies** to increase overall business growth and efficiency.

Business Task



The Superstore Wants to Increase overall profit by identifying key drivers and weak areas in sales performance.



Which **Products** generate the **highest** and **lowest** sales profits?



Which **time periods** (months/ quarters) show the **strongest** sales performance?



Which **regions** contribute **most** to profit, and which **underperform**?

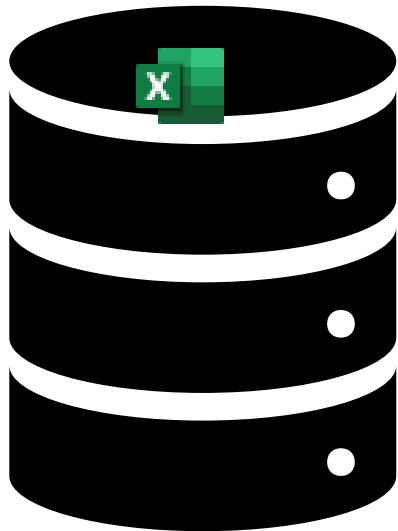


How does **profit margin** vary across **categories** and **sub-categories**?



What **marketing** or **pricing strategies** can help **boost** sales and profitability?

Data source



Data set

- The dataset used in this analysis comes from the [Superstore Data Set](#) — available on [Kaggle](#)

License: Open dataset provided for educational and analytical purposes.
The data has been used strictly for **learning and non-commercial analysis**.

- **Data License:**
© Motivate International Inc. | Public data used for educational purposes only.

Data cleaning summary



Data cleaning

✓ **Removed duplicates**

- ✓ Ensured each transaction record is unique to prevent double-counting.

✓ **Handled missing values**

- ✓ Checked for missing **Sales, Regions, Discount, or Dates**.
- ✓ Imputed missing values where necessary or excluded incomplete rows.

✓ **Standardized formats**

- ✓ Ensured consistent **States and city names** (fixed typos or inconsistent naming).
- ✓ (Order Date, Ship Date) to **DD/MM/YYYY**.
- ✓ **Cleaned currency symbols and spaces** in Sales and Profit columns for numerical calculations.



Data cleaning

✓ **Validate Relationships**

- ✓ Between fields (e.g., no negative sales or incorrect dates).

✓ **Ensured consistent text formatting**

- ✓ (e.g., product names, region names).

✓ **Created** new calculated columns:

- ✓ Ship Days : Difference between **Ship Date** and **Order Date**.
- ✓ Shipping Speed : Slow, Average, Fast on **Ship Days**
- ✓ Year, Quarter, Month extracted from **Order Date**
- ✓ Avg Profit Margin = **Profit / Sales**
- ✓ Sales Category = Profitable / Loss based on **Profit** value

✓ **Result:**

Clean and structured dataset ready for analysis and dashboard creation.

The story with data

Monthly Profit Trend

When do we make the most profit?

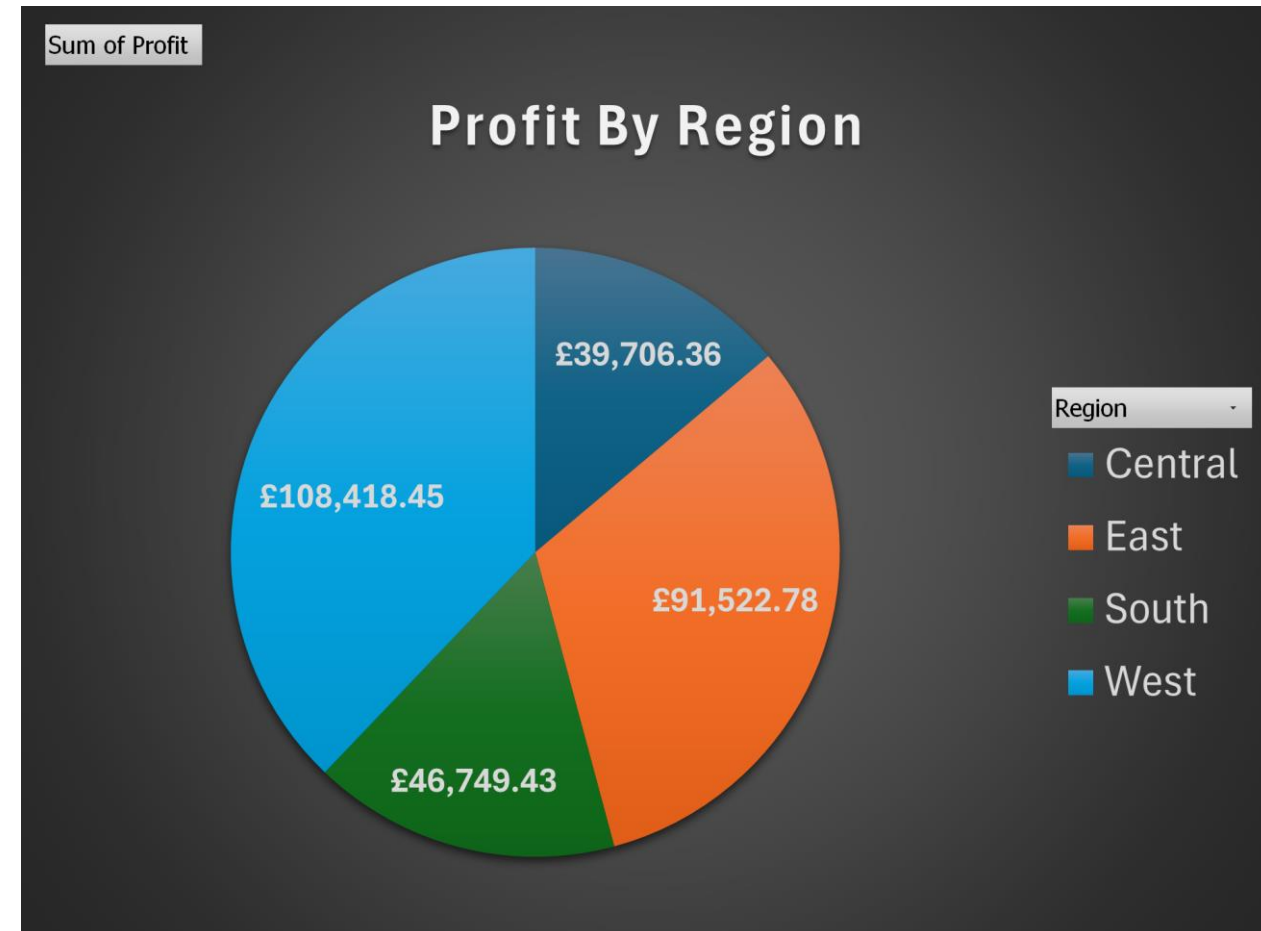
- **Jan** and **Feb** Profits are very low showing a post-holiday slump
- Profits from **May** to **August** remain steady
- Nearly **40%** of annual profit comes from **Q4** indicating heavy reliance on holiday-season sales



Profit by Region

Where do we make or lose the most?

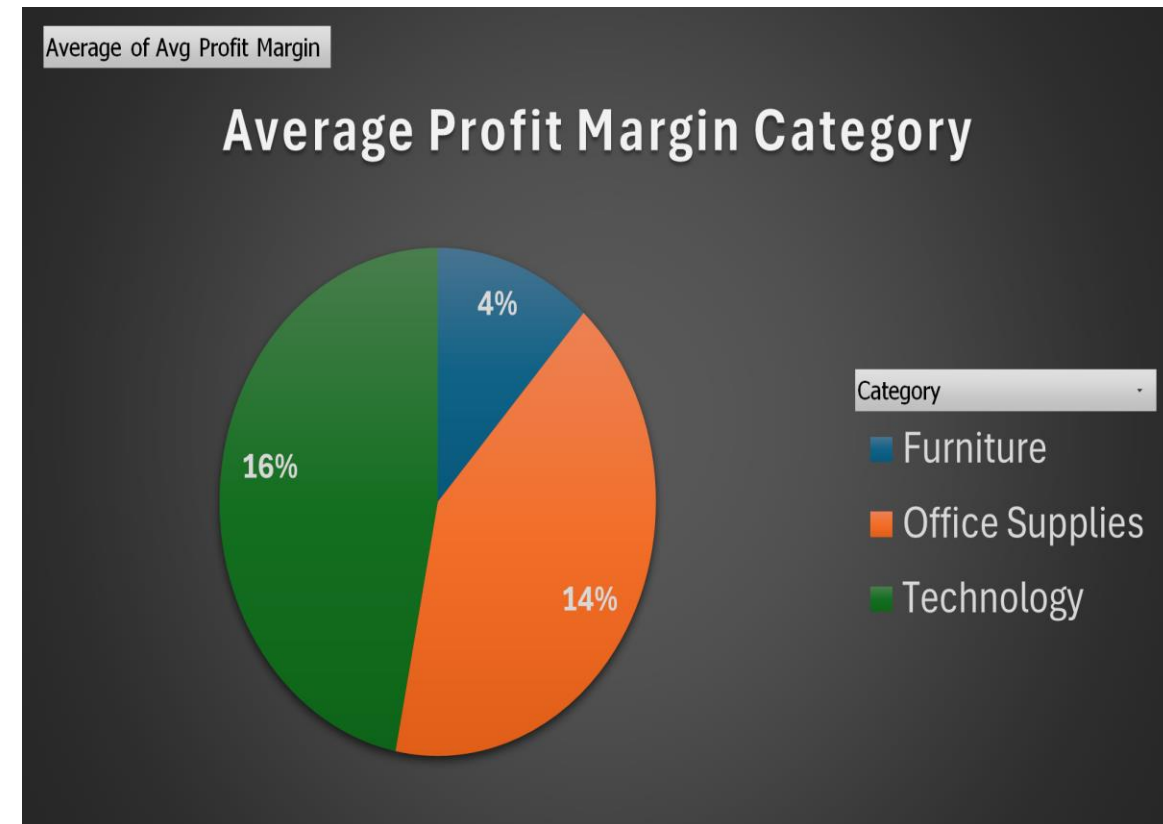
- Over **70%** of profits come from the **West** and **East**, highlighting strong performance in these markets.
- **Central** and **South** lag behind, signaling opportunities to grow through targeted promotions.
- Focusing on these underperforming regions could meaningfully boost overall revenue



Average Profit Margin by Category \$

Which category drive the most profit?

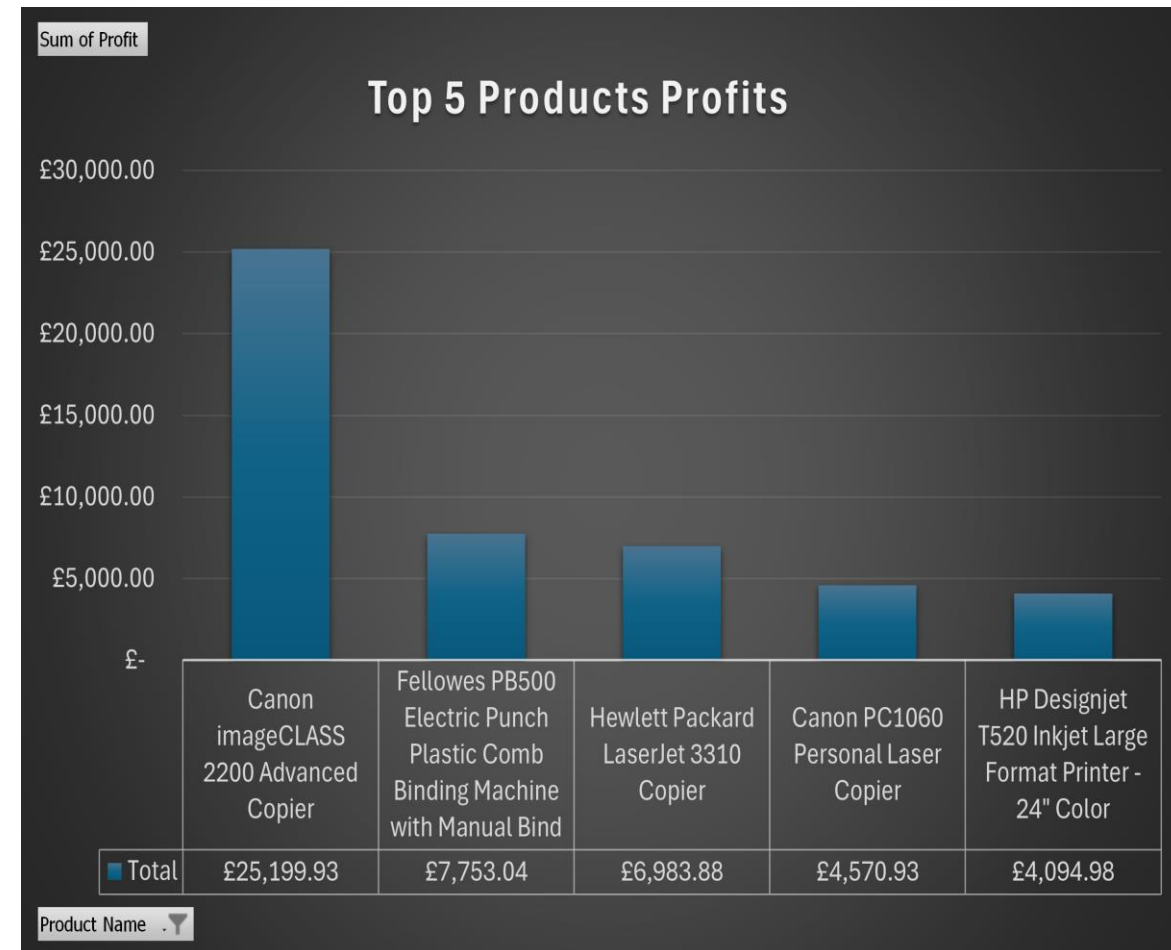
- **Technology** and **Office** Supplies drive strong profitability with margins of **16%** and **14%**
- whereas **Furniture's 4%** margin is significantly underperforming. This indicates that Furniture is eroding overall profitability
- So, strategies like cost **optimization**, **premium pricing**, or **product mix** adjustments are needed to improve returns in this category.



Top 5 Products by Profit \$

Which products drive the most profit?

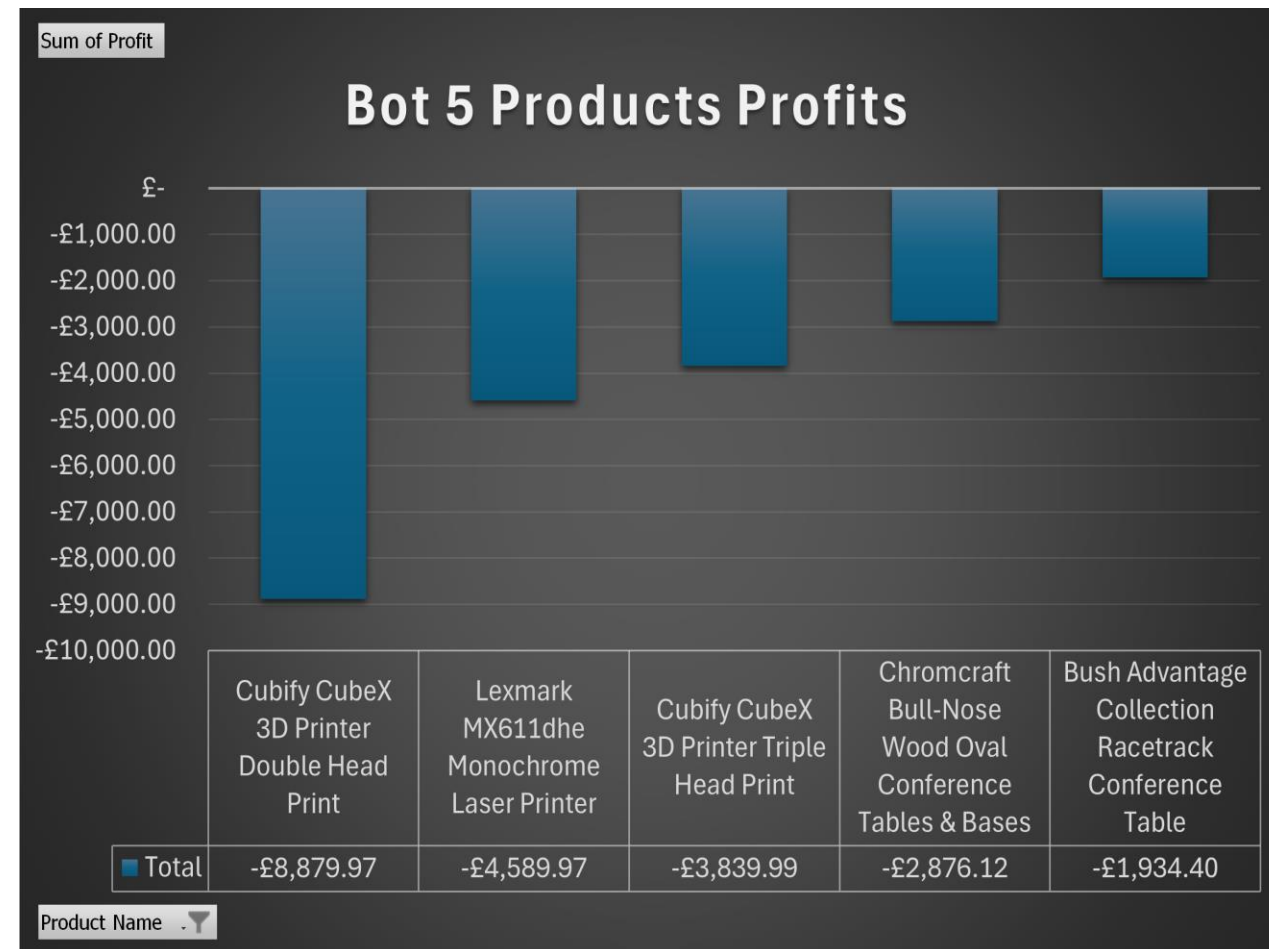
- Over **half** of profits come from the **Canon**, showing heavy reliance on a single top performer.
- Other products contribute modestly, highlighting opportunities to boost sales of lower-performing items.
- Diversifying revenue across multiple products could reduce risk and stabilize overall profit.



Bottom 5 Products by Profit

Which products cause losses or low profit?

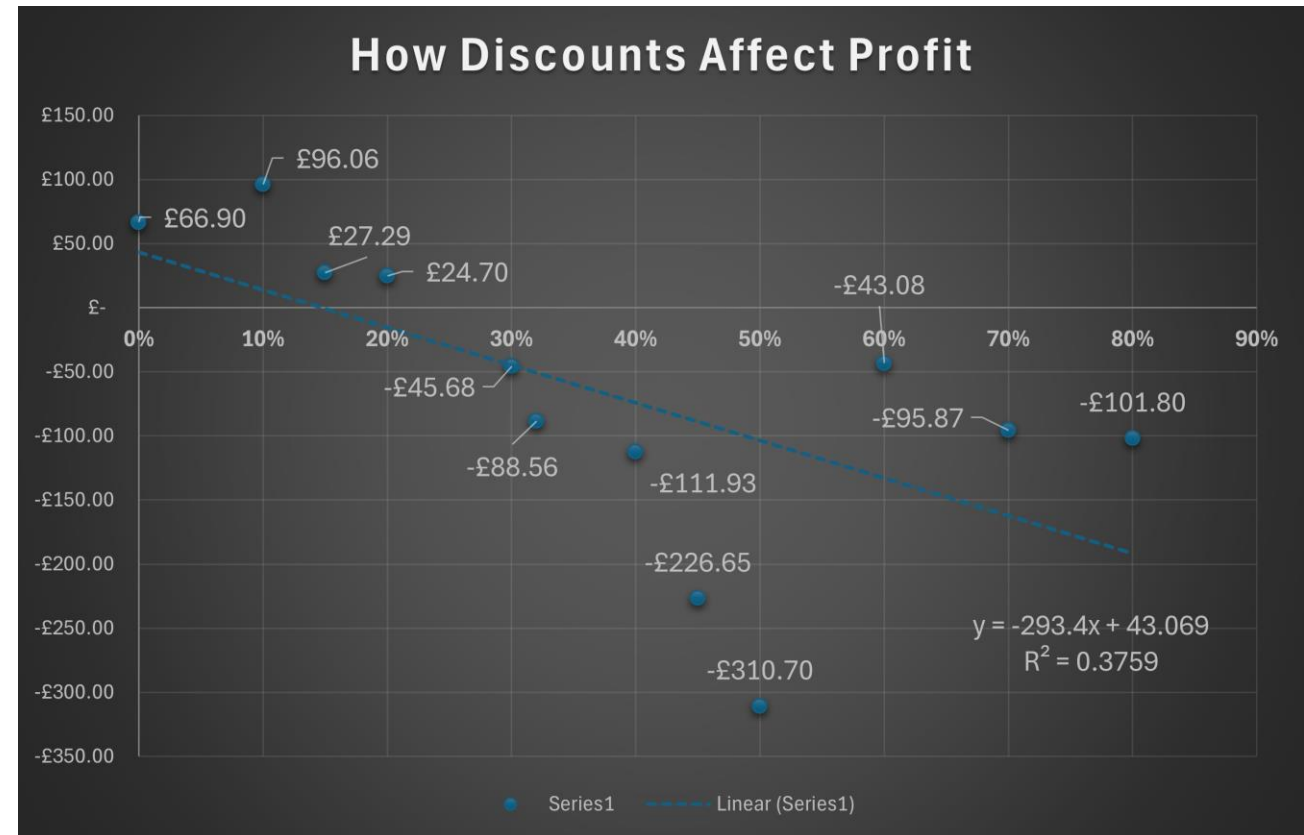
- The top five loss-making products total **£22,120** in losses, led by **Cubify CubeX**.
- High costs or low demand are driving these negative results. **Reviewing pricing, cutting costs, or discontinuing underperforming items** is critical to protect overall profitability.



How Discounts Affect Profit

Do discounts actually help or hurt profit?

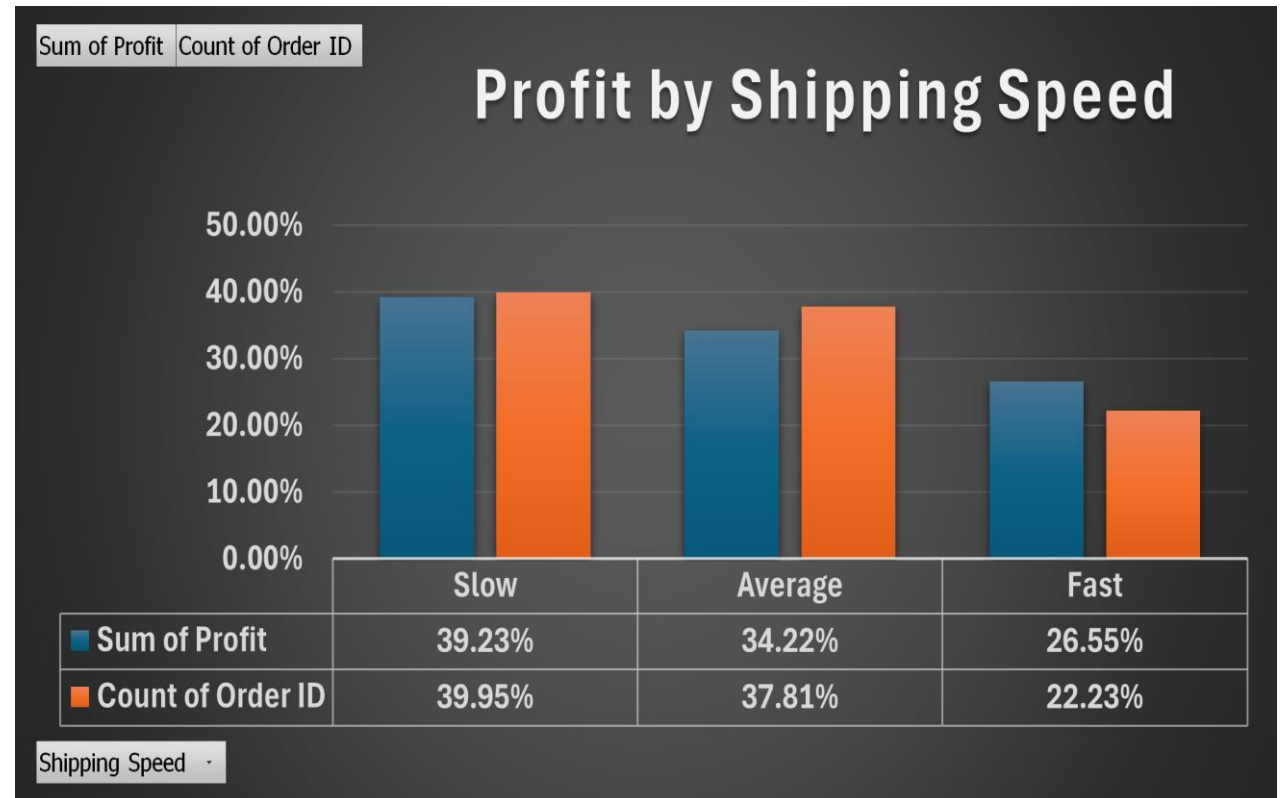
- The scatter plot shows a clear **negative relationship** between discount and profit.
- Higher discount rates **above 30%** lead to significant profit losses.
- To increase profitability, limit high discounts or apply them only to low-demand products.



Profit by Shipping Speed

Does faster delivery increase or reduce profitability?

- Slow shipping drives the highest profit **39%** and order volume **40%**.
- Fast shipping contributes the least. This indicates slower shipments are linked to higher-value orders.
- Optimizing shipping strategies could balance speed with profitability to improve margins.



Conclusion

Sales and Profits Summary

1

Profit shows strong **seasonality**, with Q4 contributing nearly **40%** of annual revenue.

2

Certain regions (West and East) and products (**Canon imageCLASS 2200**) dominate profits, while others lag significantly.

3

Low-margin categories (Furniture) and loss-making products (**Cubify 3D printers**) are dragging overall profitability.

Sales and Profits Summary

4

High-margin products
(**Technology, Office Supplies**)
and top sellers
drive most profits

5

The business relies heavily on a **few top products** and regions for profit, creating risk if demand shifts

6

Shipping speed data suggests **slower** shipments are linked to **higher-value** orders, presenting an opportunity to optimize logistics.

Recommendations

Potential Marketing Focus Areas

1

Boost Early-Year Sales: Target **January–March** with promotions or campaigns to reduce post-holiday slump.

2

Regional Growth: Focus on underperforming regions (**Central and South**) through localized advertising, events, or promotions.

3

Seasonal Campaigns: Leverage **Q4** trends with pre-holiday marketing to maximize peak-season profits.

Potential Marketing Focus Areas

4

Cross-Selling & Bundling:

Use insights from shipping patterns and popular products to bundle items, encourage higher-value purchases, and optimize delivery options for profitability.

5

Product Mix Optimization:

Promote high-margin products (**Technology, Office Supplies**) and top performers (**Canon imageCLASS 2200**) while reviewing pricing/costs for low-margin or loss-making items.



Thank You!

- **Omer Metwally | Aspiring Data Analyst**
- Tools: Excel, PivotTables, Charts
- Last Updated: **23.th October 2025**

