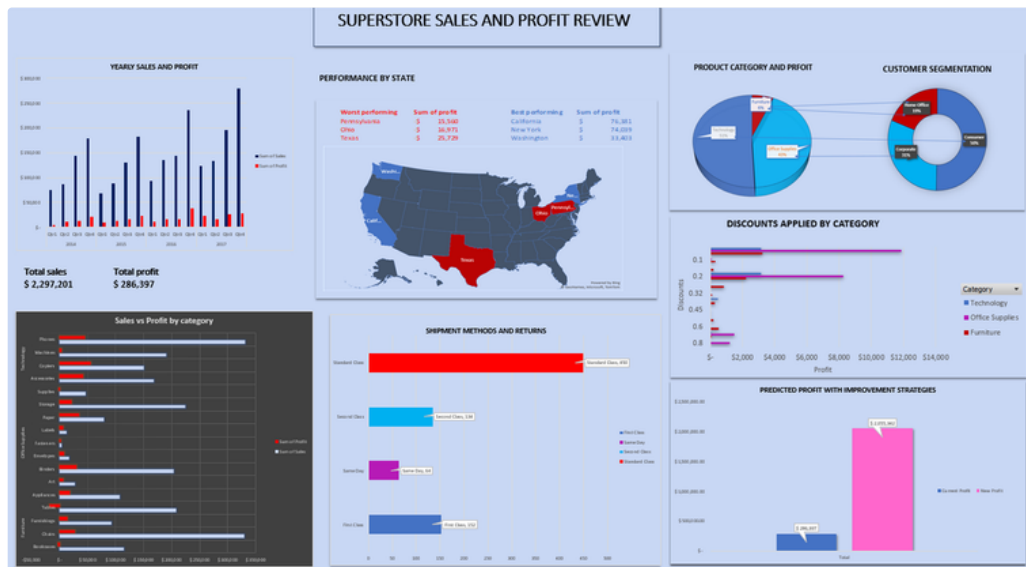# Esther: Excel Sales Data Analysis

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**Analysis Breakdown: 6 phases**

1. Sales and profit by year and category
2. Product category and customer segmentation
3. Performance by state
4. Shipment and returns
5. Discounts and profit
6. Improvement strategies and predicted profit

**Sales and profit by year and category**

# Sales and Profit

| Year | Sum of Sales | Sum of Profit |
|---|---|---|
| ⊟2014 | $ 484,247 | $ 49,544 |
| ⊞Qtr1 | $ 74,448 | $ 3,811 |
| ⊞Qtr2 | $ 86,539 | $ 11,204 |
| ⊞Qtr3 | $ 143,633 | $ 12,805 |
| ⊞Qtr4 | $ 179,628 | $ 21,724 |
| ⊟2015 | $ 470,533 | $ 61,619 |
| ⊞Qtr1 | $ 68,852 | $ 9,265 |
| ⊞Qtr2 | $ 89,124 | $ 12,191 |
| ⊞Qtr3 | $ 130,260 | $ 16,854 |
| ⊞Qtr4 | $ 182,297 | $ 23,309 |
| ⊟2016 | $ 609,206 | $ 81,795 |
| ⊞Qtr1 | $ 93,237 | $ 11,441 |
| ⊞Qtr2 | $ 136,082 | $ 16,390 |
| ⊞Qtr3 | $ 143,787 | $ 15,824 |
| ⊞Qtr4 | $ 236,099 | $ 38,140 |
| ⊟2017 | $ 733,215 | $ 93,439 |
| ⊞Qtr1 | $ 123,145 | $ 23,506 |
| ⊞Qtr2 | $ 133,764 | $ 15,499 |
| ⊞Qtr3 | $ 196,252 | $ 26,985 |
| ⊞Qtr4 | $ 280,054 | $ 27,449 |
| Grand Total | $ 2,297,201 | $ 286,397 |

**YEARLY SALES AND PROFIT**

**Total sales**
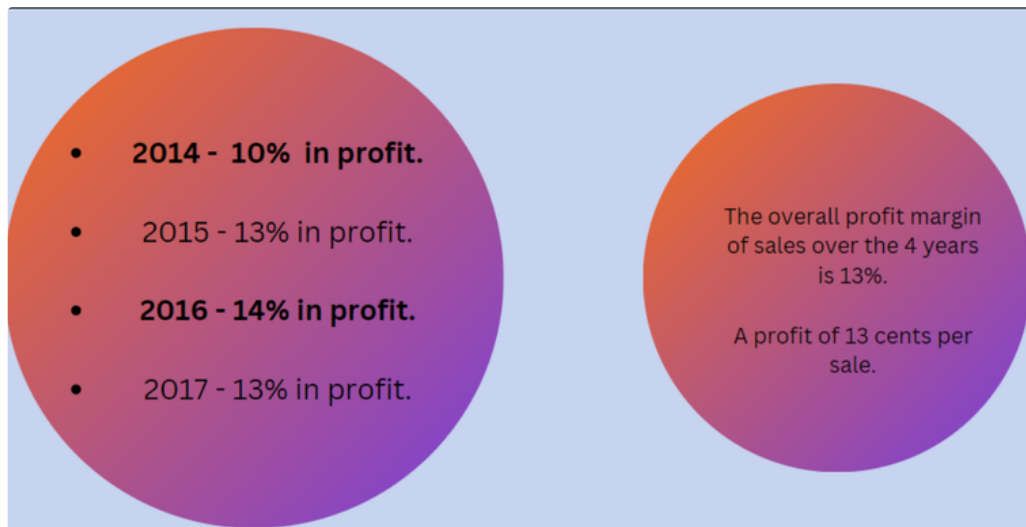**$2,297,201**

**Total profit**
**$286,39**

The company is making a good amount of sales, however, if you compare their sales to their profit they are making very little profit (roughly just over 10% in profit).

- In e-commerce/superstore, the general rule of thumb is that gross profit margins between 40-70% are considered "good."

Best and least performing Quarters:

- Q1 and Q2 are the least performing in terms of their sales and profit. This can be linked to the time of the year.
- Q3 and Q4 are the best performing both in sales and profit. This makes up most of their profit.

Profit margin:

- **2014 - 10% in profit.**
- 2015 - 13% in profit.
- **2016 - 14% in profit.**
- 2017 - 13% in profit.

The overall profit margin of sales over the 4 years is 13%.

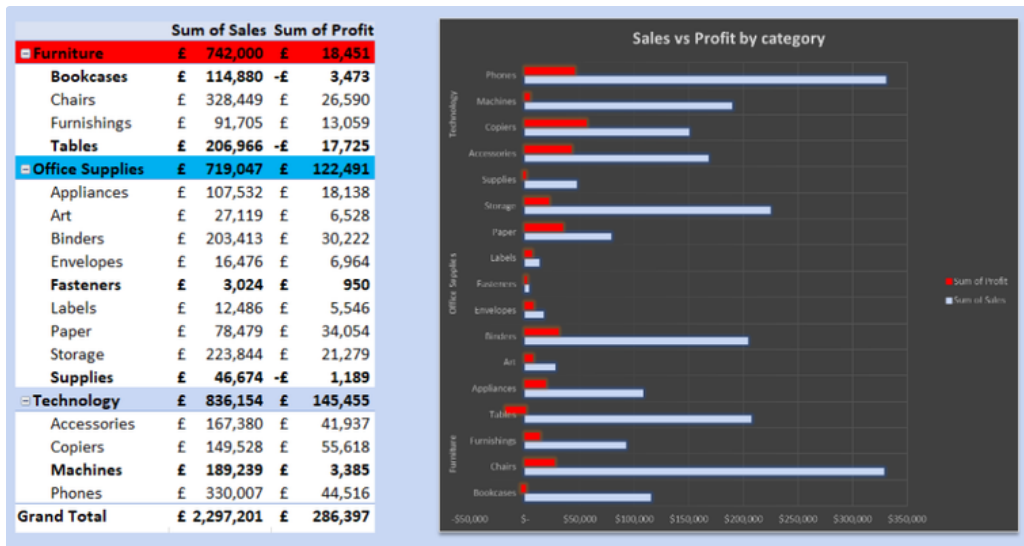A profit of 13 cents per sale.

The best performing year for profit is 2016 – making 14% in profit.
The best performing year for sales was 2017 – making 733,215 in sales but only 13% in profit.

The least performing years were 2014 and 2015 – but in 2015 there were fewer sales ($470,533) but more profit ($61,619).
The overall profit margin of sales over the 4 years is 13%, this translates to a rough profit of 13 cents per sale.

| | Sum of Sales | Sum of Profit |
|---|---|---|
| **Furniture** | **£ 742,000** | **£ 18,451** |
| Bookcases | £ 114,880 | -£ 3,473 |
| Chairs | £ 328,449 | £ 26,590 |
| Furnishings | £ 91,705 | £ 13,059 |
| **Tables** | £ 206,966 | -£ 17,725 |
| **Office Supplies** | **£ 719,047** | **£ 122,491** |
| Appliances | £ 107,532 | £ 18,138 |
| Art | £ 27,119 | £ 6,528 |
| Binders | £ 203,413 | £ 30,222 |
| Envelopes | £ 16,476 | £ 6,964 |
| **Fasteners** | **£ 3,024** | **£ 950** |
| Labels | £ 12,486 | £ 5,546 |
| Paper | £ 78,479 | £ 34,054 |
| Storage | £ 223,844 | £ 21,279 |
| **Supplies** | **£ 46,674** | **-£ 1,189** |
| **Technology** | **£ 836,154** | **£ 145,455** |
| Accessories | £ 167,380 | £ 41,937 |
| Copiers | £ 149,528 | £ 55,618 |
| **Machines** | **£ 189,239** | **£ 3,385** |
| Phones | £ 330,007 | £ 44,516 |
| **Grand Total** | **£ 2,297,201** | **£ 286,397** |


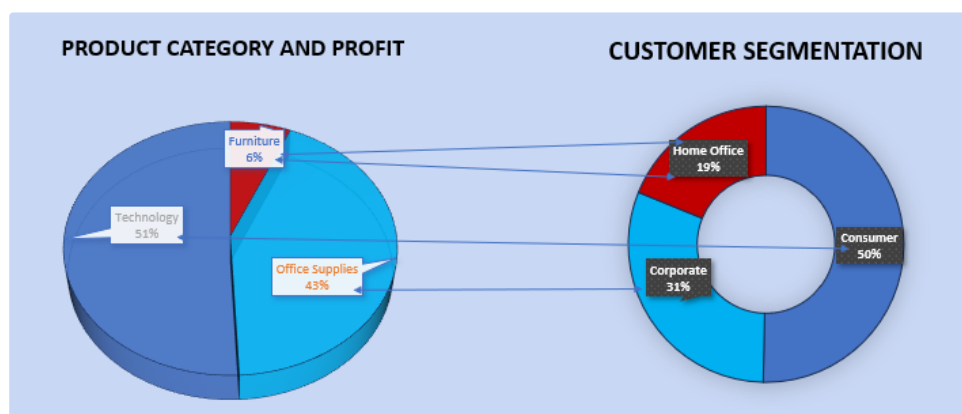
Sales vs Profit by category

Best performing categories:

- Furniture = chairs has the most profit.
- Office supplies = paper and binders had the most profit in this category.
- Technology = copiers and phones had the most profit in this category.

Least performing categories:

- Furniture = bookcases and tables have led to a loss in profit.
- Office supplies = Fasteners and supplies.
- Technology = Machines

**Product category and customer segmentation**



PRODUCT CATEGORY AND PROFIT

Furniture 6%
Technology 51%
Office Supplies 43%

CUSTOMER SEGMENTATION

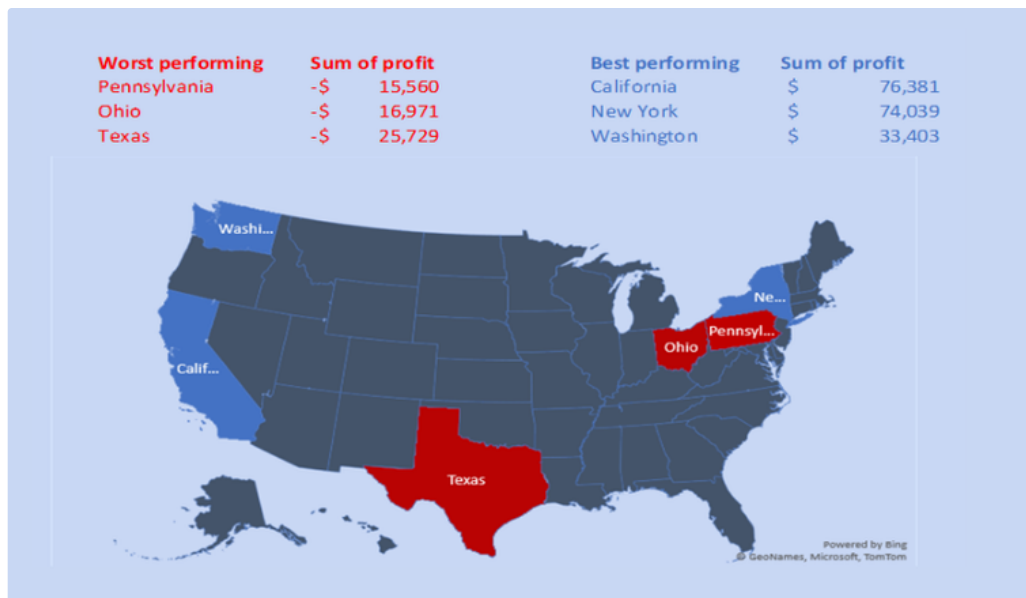Home Office 19%
Consumer 50%
Corporate 31%

Technology counts for 51% of the company's profit.

Office supplies make up 43% of the company's profit.

Furniture makes up only 6% of profit.

**Performance by state**

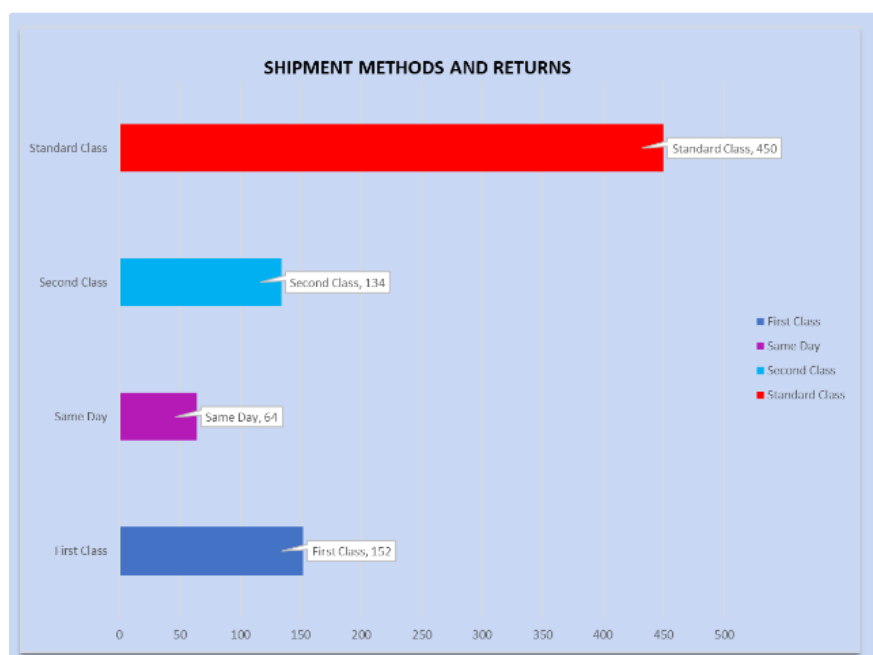| Worst performing | Sum of profit | Best performing | Sum of profit |
|---|---|---|---|
| Pennsylvania | -$ 15,560 | California | $ 76,381 |
| Ohio | -$ 16,971 | New York | $ 74,039 |
| Texas | -$ 25,729 | Washington | $ 33,403 |

The worst-performing states are causing the company to lose $58,260.

- Pennsylvania
- Ohio
- Texas

The best performing states are

- California
- New York
- Washington

**Shipment and returns**

Most returns were the products delivered by standard class (450 returns )

- The most returned category was office supplies.

Total Returns by each category:

Furniture had 171 returns in total

Office supplies - 473 returns – with the most returns being in standard class

Technology – 156

The least returned products by the delivery method were same day with only 64 returns.
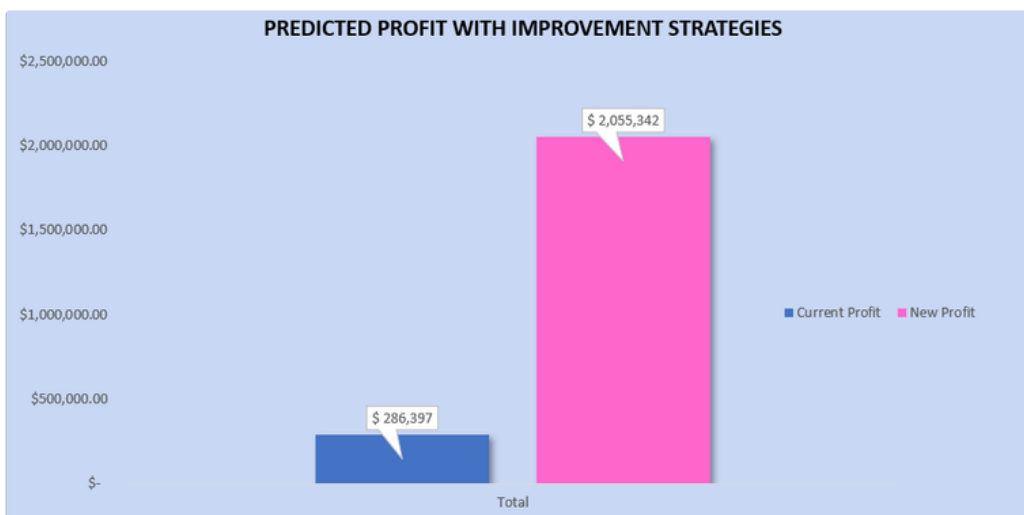
**Discounts and profit**



Office supplies were the most total discounted category yet the most returned

The company lost $37,873 in discounted items.

Furniture has the 2nd most discounts.

- It may be best to apply a discount of up to 10-30% to have a better profit margin.

**Improvement strategies and predicted profit: Three main improvements**



1. **Discount reduction and performance reviews.**

- Implementing a limit on discounts ranging from 10% to 30%.
- If Q3 and Q4 discounts were to be up to 50% it would not massively affect the overall profit.
- Also reviewing best and least-performing products every quarter. Enhancing marketing and promotion for boosting least performing categories e.g Furniture.

2. **Shipping methods and introduce an optimised shipping policy.**

3. **Q1 and Q2 profit increase plans.**

Predicted profit (using Excel for analysis):

- Potential profit could go from $286,397 to $2 million.

- Implementing these three improvement strategies will enable the company to increase its overall profit, allowing it to allocate these additional funds to various areas.

- Moreover, it provides the company with the flexibility to introduce additional strategies and initiatives.