# Zara product performance

## Introduction

This analysis aimed to evaluate product performance by examining key metrics and identifying trends within the dataset. A total of five product categories (193 products) were analyzed to understand factors influencing sales and overall product success.

## Preparing the dataset

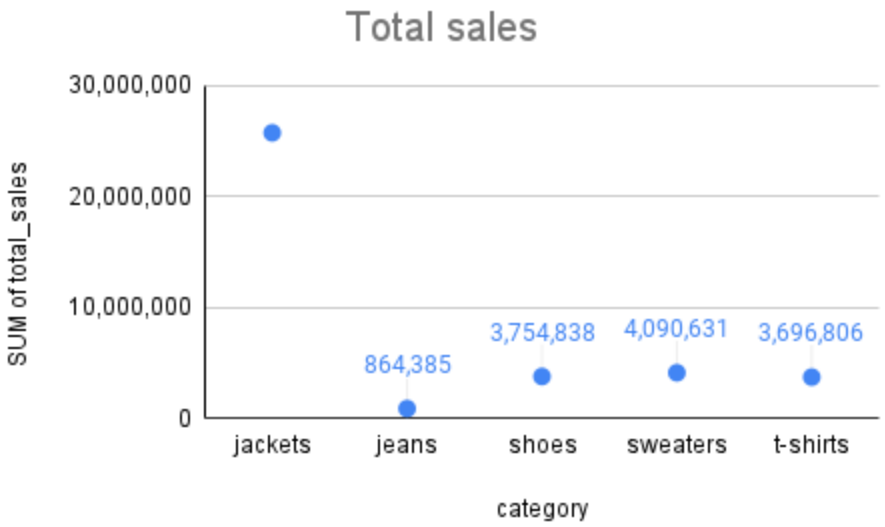
The dataset used for this analysis is a wide data stored in a csv file. The dataset seems to less of women products. Out of the five different categories, women were represented in one of them which is the Sweater category. Because of this bias, comparing product performances between men and women products will not be possible.

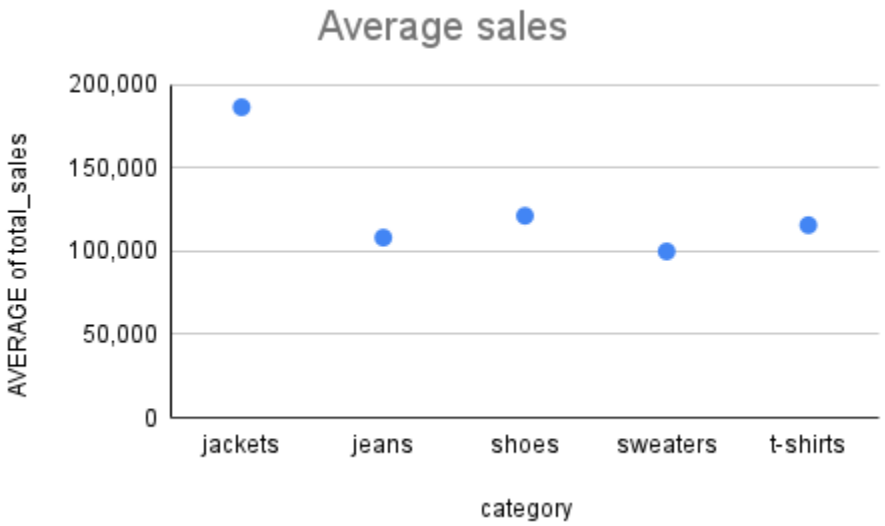
## Process

The entire analysis process was carried out using Google sheets, bigquery was also used to run simple sql queries. To get this dataset ready for analysis, i have checked for duplicates, filtered the dataset to check for null values, changed the format of some columns so it is appropriate for analysis, removed unimportant columns to make the dataset less chunky and created columns to derive new metrics. The use of pivot tables were essential in deriving key metrics to gain insights and uncover trends. Key metrics including sales volume and total sales were calculated to assess product performance. To understand the relationship between price and sales volume, a correlation analysis was conducted using the CORREL function in Google Sheets.

## Findings

Before we dive into the insights uncovered I would like to point out areas where this analysis is lacking due to the limitation of the dataset. The data used does not have dates the sales occurred so it will be impossible to analyze sales trends over time and there seems to be a bias toward men products as women were only represented in the sweater category so comparing sales between men and women products  will be impossible. Cost of production wasn't included in the dataset as well, without the cost we cannot determine profit margins. With that out of the way, let's get to the findings.

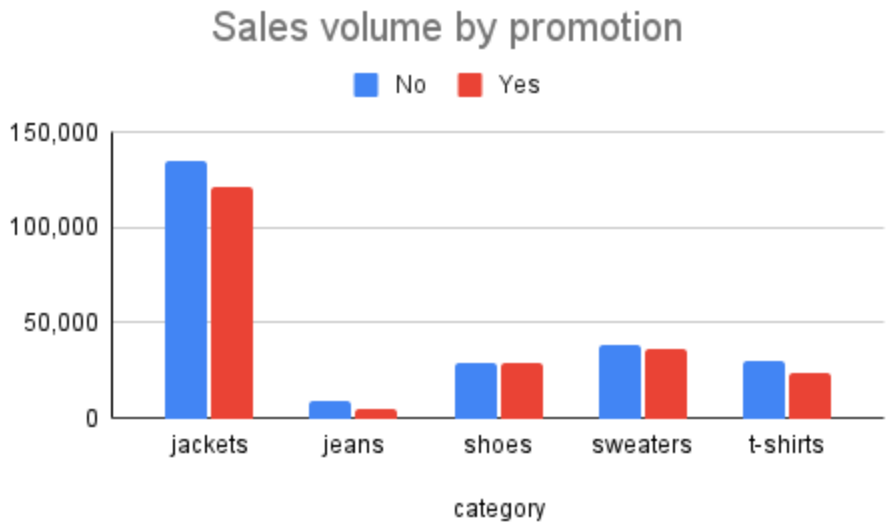


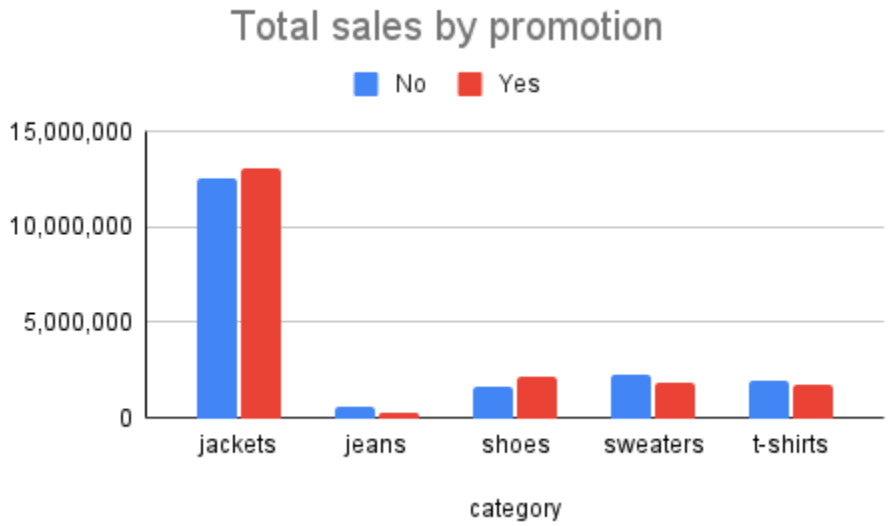




Starting off with total sales, the above chart shows that jackets are the best performing product by a mile. We have shoes, sweaters and t-shirts contributing around the same amount of total sales then jeans being the worst performer of all the categories.
On average, the other products seem to have performed not so bad when compared against the jackets category but this is due to the difference between their sales volume(SV). Jackets SV represents a whooping 56% of total SV

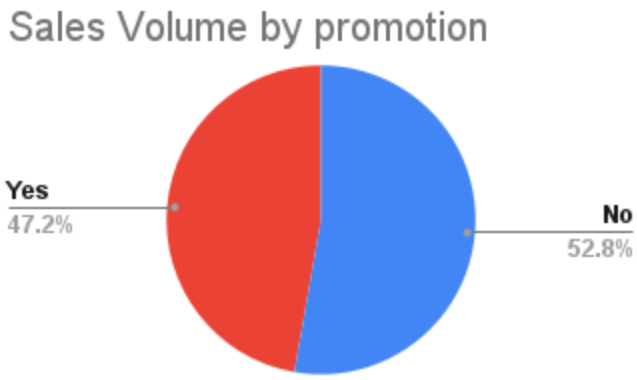
Going forward we will be exploring how factors like promotions, product position and seasonal collection has affected the sales volume and total sales of all product category

Starting with **promotion**. This indicates whether the products were on promotion at the time of sale or not



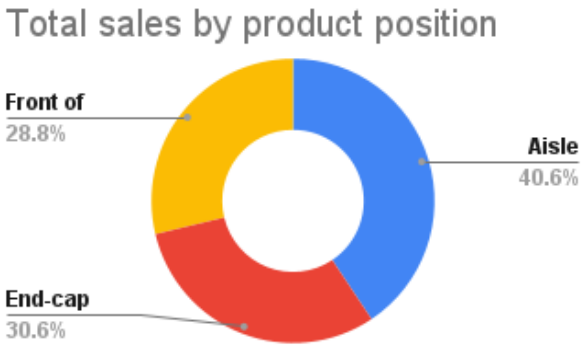



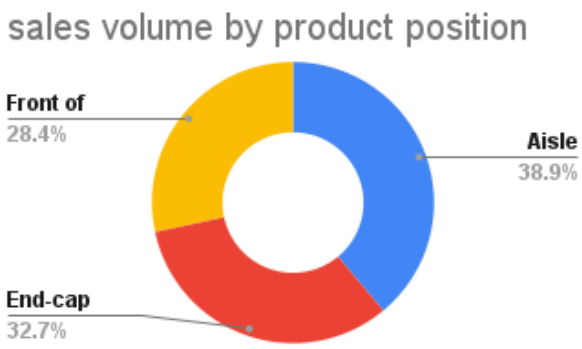

The charts above show that promotions did improve the total sales of some categories, like jackets and shoes, a bit, but overall, promotions did not have a large effect on total sales. In fact, products without promotions recorded more sales volume than products with promotions. Below is a pie chart that displays the share between both products.





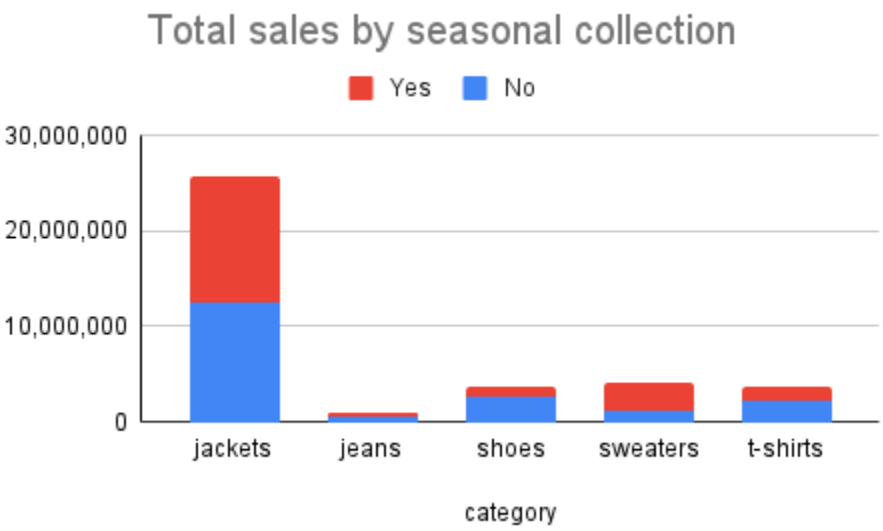
Moving on to **product position**. This refers to what part in the store these products were arranged. One would think placing products in front will improve it sale but this data says otherwise



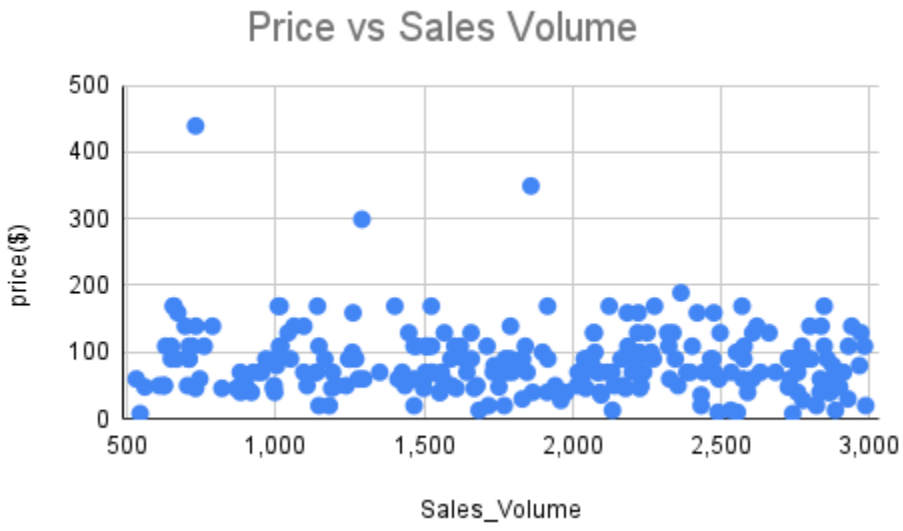

The charts above shows that the aisle takes up the largest portion of the sales happening in the store, followed by the end cap and then the front of the store. More analysis will be required to find out why that is. Whether it is a common habit to shop on the aisle or in the back end of the store.

Next we will be exploring sales of products that were part of a seasonal collection or not.




Here it shows most of the sweater sales were part of a seasonal collection, it is quite the opposite for the shoes category. Everything seems equal across the remaining categories.

Finally, analysis revealed a negative correlation(-0.08) between product price and sales volume, suggesting that as product prices increased, sales tended to decrease. This indicates a price sensitivity among customers. Below is a visual representation

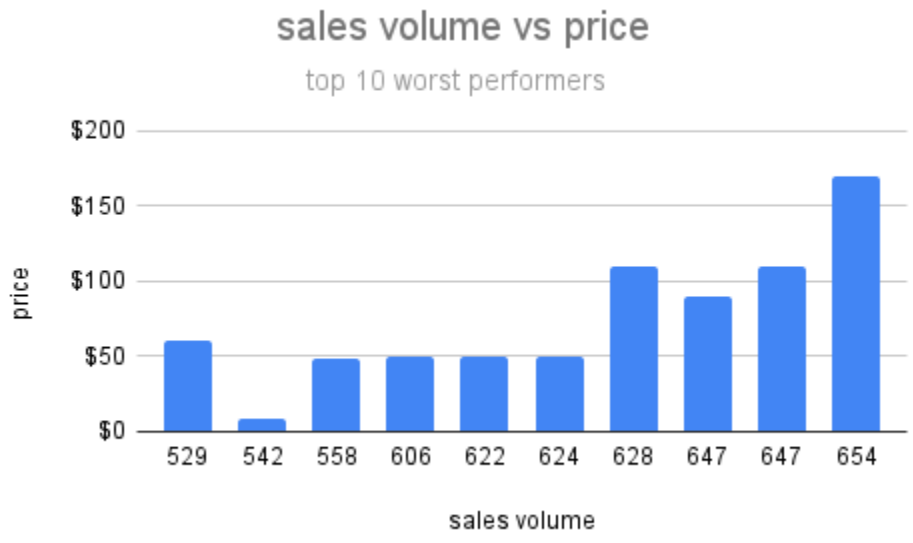



These are the three most expensive product and how they have performed

| product_name | category | price | sales_volume | total_sales |
|---|---|---|---|---|
| suede jacket | jackets | $349 | 1860 | $649,140 |
| leather jacket | jackets | $299 | 1290 | $385,710 |
| cropped leather jacket | jackets | $439 | 729 | $320,031 |

The chart below further shows how careful pricing strategy can improve sales


But lower price doesn't necessarily equal higher sales. We can see how products below the average price rank top amongst the worst performing products



## Conclusion

The analysis of product performance revealed a clear negative correlation between price and sales volume, indicating price sensitivity among customers. This finding emphasizes the importance of careful pricing strategies to optimize revenue. Additionally, the analysis highlighted jackets as the top-performing category, outselling other product segments by a significant margin. In contrast, jeans demonstrated the lowest sales performance. Interestingly, products on promotion did not exhibit significantly higher sales compared to those without promotions, suggesting a need to reassess promotional strategies. Furthermore, the analysis indicated that product placement within the store significantly impacts sales, with products on the aisle generally outperforming those at the front of the store and end caps. To maximize sales potential, a detailed study of product placement and its correlation with sales is recommended. These insights provide valuable information for product assortment, pricing, promotional planning, and store layout optimization.

## Recommendationts

### Pricing and Sales

- **Focus on pricing optimization:** Given the negative correlation between price and sales volume, exploring dynamic pricing strategies or conducting price elasticity studies could be beneficial.

### Product Assortment

- Increase the assortment of products similar to the high-performing jacket category.
- Analyze the performance of different product subcategories within the jeans category to identify opportunities for improvement.
- Consider discontinuing or repositioning low-performing products.

### Promotions

- Re-evaluate the effectiveness of current promotional strategies and explore alternative marketing tactics.
- Test different promotional offers and measure their impact on sales and profitability.

### Store Layout

- Conduct a thorough analysis of product placement and its impact on sales.
- Experiment with different product arrangements to optimize sales performance.
- Prioritize high-selling products in high-visibility areas such as store aisles.

### Additional Analysis

- Explore customer segmentation to identify target customer groups and tailor product offerings and marketing efforts accordingly.

- Analyze seasonal trends and adjust product assortment and pricing strategies accordingly.
- Conduct competitor analysis to identify opportunities for differentiation and improvement.