

**UNIVERSITY OF LONDON**

BUSINESS ANALYSIS REPORT

**Tableau Visualisation**

**Prepared for**

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# Executive Summary

Using data visualisation techniques, the following report provides a complete study of the superstore’s performance. The objective is to give senior management insights and recommendations to boost sales and profitability.

Despite the general success of the superstore, with $12,642,502 in revenue and $1,467,457 in profit, there are still places for development. The shipping costs are higher than intended, particularly in the central region, and nations like Turkey and Nigeria need to perform better.

A comprehensive time-series analysis of variables, including sales, profitability, delivery duration, discounts, and quantity sold, was done to address these challenges. A geographic perspective was also employed to identify the highest-performing regions and nations and to provide a more comprehensive understanding of their performance. Product categories and subcategories were drilled down to identify the most profitable products and provide a foundation for future inventory management decisions. A study was done to examine the elements influencing transportation costs to find solutions to lower them.

The analysis reveals that the company's performance and sales are projected to increase in the following years. However, the corporation must continue to analyse and address improvement opportunities, such as cutting shipping costs and boosting performance in underperforming nations. The report finishes with a list of suggestions to assist the organisation in achieving its objectives.

This study concludes with a complete review of the superstore's performance and recommendations for increasing sales and profitability. The organisation should continue to evaluate and address improvement areas and follow the procedures to attain its objectives.

# Introduction

Data provides company executives with real-time data, allowing them to make more accurate market estimates for their industry. From this research, trends and business analysis can be derived from the 51,290 transaction records spanning four years of data on superstore sales from 1 January 2018 to 31 December 2021 contained in this report.

This research aims to find trends, patterns, and relationships that impact an organisation's profitability. This data can be used as a starting point for data-driven decisions and as a gap analysis measurement to analyse the business's current health and find improvement opportunities.

# Analysis

## Chart, bar chart Description automatically generatedGraphical user interface, application Description automatically generatedOverview

Chart, bar chart

Description automatically generated

Observations:

1. In summary, the superstore generated $12,642,502 in sales while still making $1,467,457 in profit. The store has sold approximately 178 thousand items, and the cost of shipment is $1,352,816 while still offering customers an average 14.29% discount.
2. Annual sales by segment - The consumer segment has contributed the most sales of the three parts. Sales in all three segments increased yearly, reaching a peak in 2021.
3. Sales (Yearly) – Based on annual sales, it has gradually increased from 2018 to 2021.
4. Sales (Quarterly) – We can see from quarterly data that the fourth quarter is always the highest of the year. It can be seen that it is increasing from the first to fourth quarters.
5. Sales (Monthly) – Sales fluctuate over the months, with an increase from January to June, followed by a drop to its lowest point in July and a peak in December.

## Graphical user interface, application Description automatically generatedRegion Analysis

United States

Turkey &  
Nigeria

Nigeria

Turkey

Observations:

1. Demographic Analysis – Profitable countries include the United States, China, and India. This is evident in the areas highlighted with a darker shade of blue. On the other end of the spectrum, countries highlighted in yellow and dark red, such as Turkey and Nigeria, suffer losses.
2. Sales and Profit Analysis – The United States has the highest sales of extreme values, followed by Australia. The United States and China generate the most revenue. The United States contributes the most in terms of both sales and profit. Turkey and Nigeria outperform all other states in the analysis.
3. Region Sales/Profit Distribution – According to the pie chart, the central region accounts for 21.22% of total profit, followed by the north region, which accounts for 13.26% of the profit. And the central region accounts for 22.32% of total sales, with the highest number of sales, followed by the south region, which accounts for 12.66% of total sales.

## Chart, treemap chart Description automatically generatedProduct Drilldown

Observations:

1. Product Sales by Category – The heat maps show the number of sales at that moment. In contrast, the colour gradient shows a profit, with red signifying losses and darker blue suggesting more significant gains. Technology sells most over the four years. Technology sales peaked in November 2021, earning $32,356 profit. Despite average sales, furniture was the least profitable in July 2019.
2. Product Sales by Subcategory – The bar chart's gradient shows subcategory sales in descending order, with darker blue reflecting more sales. Phones, copiers, and bookcases are the most profitable. Despite their large sales volume, only tables lose money.
3. Most Profitable Product – The Tree-map shows profit-leading items by subcategory. Phones are the most profitable. Cisco, Motorola, and Nokia smartphones are examples. Canon ImageCLASS 220 Advanced copiers are the most beneficial.

## Chart, pie chart Description automatically generatedShipping Cost

Observations:

1. Shipping Cost by Region – The central region has the highest shipping cost of any region, as indicated by the darker blue highlight. Compared to the central region, the east region is the polar opposite because it is more cost-effective.
2. Order Priority – Most orders are medium or high priority (57.39% and 30.22%, respectively). The pie chart above shows that few buyers ordered low-priority items.
3. Shipping Cost Over the Years – Shipping expenses peaked in 2020, with standard shipping costs the most. The standing class is the only shipping method where clients specify their order priority to low and none to critical. Same-day shipping was the weakest in all categories. Technology accounts for the most significant shipping expenses in all three areas.

## Graphical user interface, chart Description automatically generatedSales Forecast

Observations:

1. Forecast by Category Next 3 Years – Using the three category forecasts. Office supplies and furniture follow technology in potential. Office supply forecasts are unpredictable because of the unknown area where they may move, while furniture forecasts are the most stable.
2. Forecast by Segment Next 3 Years – Sales are likely to dip in all segments at the start of 2021 as the most significant number of sales ends. However, estimates show that the consumer segment's slope will grow the highest, suggesting that its sales will rise more in the future. Due to the unknown forecast area, the home office is the most fragile state, but knowing this makes us more careful.
3. Sales Forecast Next 3 Years – Despite an improving tendency, sales fluctuate. Sales always dip in the new year. A prediction is needed to sustain sales at an all-time high in the fourth quarter of 2021. According to the estimate, sales would dip in the first quarter of 2022, then rise and peak in the fourth quarter.

# Conclusion

The first dashboard illustrates that the consumer sector and technology significantly impact sales and profits. According to the second dashboard, most regional sales are generated in the central and southern regions. This highlights the significance of the corporation focusing more on these powerhouses and considering whether it is essential to cease operations in Nigeria and Turkey due to substantial losses.

In terms of product sales, most of the revenue and profit are generated by technology, primarily in the form of copiers, telephones, and bookcases. This dashboard explains the most profitable source of income and the elements, in this example table, that are causing more harm than good. The shipping dashboard is utilised to identify which location or category incurs the most shipping costs. The core region has the highest costs, so the business must find ways to lower them.

The forecast anticipates that the company's performance and revenues will improve in the following years. However, numerous unknown circumstances may cause the projection to be inaccurate. Therefore, the organisation must continue to maintain and enhance its operations.

In summary, the company has fared brilliantly over the years, with sales and profits rising.

# Recommendation

To reduce other potential risks, we recommend learning:

1. Why do sales always plummet in January and June?
2. How come countries like Turkey and Nigeria suffer such significant losses while the market performs well elsewhere?
3. Why do tables lose money even when they have a good number of sales?
4. Why are shipping costs rising year after year?
5. What actions did we take to increase sales over the year?

Suppose a company can determine the root cause of its financial woes. In that case, it can take steps to reverse its downward economic spiral while maintaining the profitable parts of its business model. For instance, specific changes are implemented between January and June to prevent a drop in sales, while the other months continue to function normally. Along with the likes of Turkey and Nigeria, and even more mundane things like tables. Consider using a different delivery service if you have problems reducing your shipping costs. Alternatively, companies might set up a regional partnership program with a delivery provider to track and manage the costs of each delivery. This allows them to improve while also preventing any decline.

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