

Flip-Mart Retail Sales Analytics & Profitability Study

Business Intelligence Case Analysis

Executive Summary

- ❖ This Project analyzes Flip-Marts retail performance using 50K + transactions records
- ❖ Power BI was used to build an interactive dashboard focusing on profitability , customer segments, product performance and Regional insights.
- ❖ The Analysis identifies key growth regions and their countries, loss-making products, profit-driving categories, best performing Sub-category and flow of Profit & Sales.
- ❖ Findings are used to provide strategic business recommendations to improve profit and optimize operations.

Business Problem / Objective

❖ Business Questions

- ❖ Which categories, sub-categories, and products generate the most sales and profit, and which are underperforming?
- ❖ How have sales and profit changed over time, and which years and regions perform best or worst?
- ❖ What is the overall profit margin, and how does quantity sold relate to profitability?

❖ Objectives

- ❖ Identify top and bottom performing products and regions.
- ❖ Analyze growth trends to support strategic decisions.
- ❖ Detect loss-making areas to optimize profit and business efficiency.

Methodology / Data Source

❖ Methodology

- ❖ Data Cleaning and preparation in Power Query (handled missing values/rows/columns, duplicates, irrelevant columns & data types)
- ❖ Built interactive Power BI Dashboard with different charts (bar, line, pie, area), maps, cards slicer & tables
- ❖ Applied analytical thinking to explore trends, compare profitability and identify insights.
- ❖ Focused on product performance, regional trends, yearly growth, and profit analysis.

❖ Data Source

- ❖ Flip-Mart sales dataset excel sheet(50,000+ records) containing order details, products info, sales, profit, and many more.

Key Performance Indicators (KPIs)

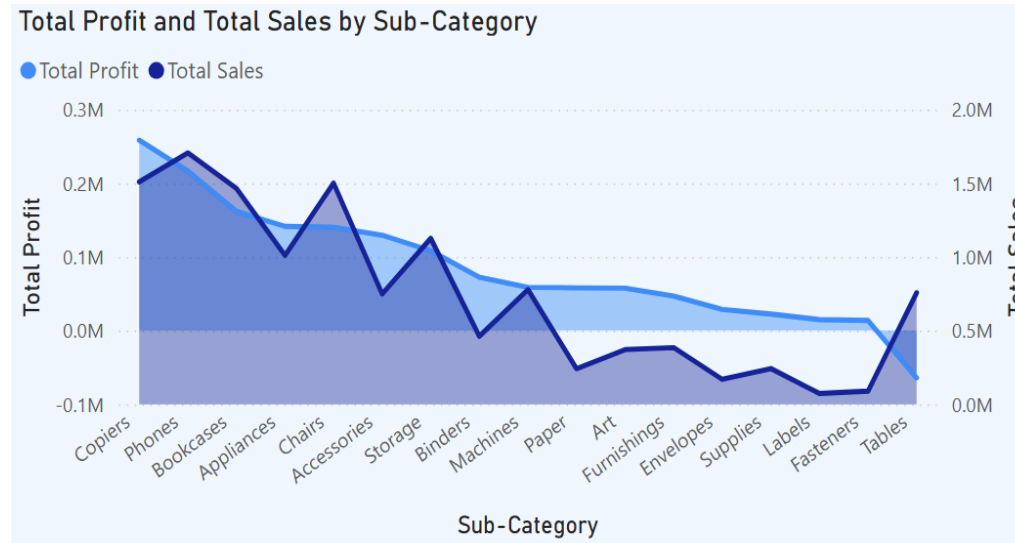
❖ KPIs Story

- ❖ **Total Sales:** Flip-Mart generated **\$12.64M** in revenue from 51,290 orders.
- ❖ **Total Profit:** The Business earned **\$1.47M**, resulting in a profit margin of **11.63%**.
- ❖ **Total Quantity Sold:** Customers purchased **178K items**, averaging 3-4 items per order.
- ❖ **Average Order:** Each order brought in roughly \$246 in sales and \$28.66 in profit.

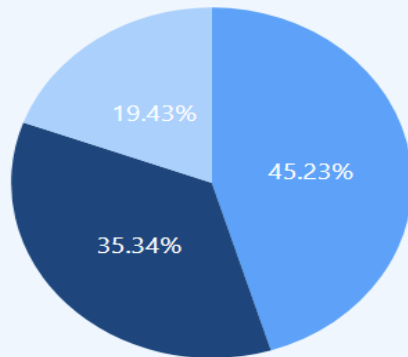
1.47M	51.29K	12.64M	178.31K
<u>Total Profit</u>	<u>Count of Row ID</u>	<u>Total Sales</u>	<u>Total Quantity</u>

Sales & Profit Distribution by Category & Sub-Category

- ❖ Phones generates high sales & their profit trend follows the same growth (high-profit : high-sales).
- ❖ Copiers have the high profit among all sub-categories.
- ❖ Chairs & Storage shows consistent profitability
- ❖ Tables are the biggest loss-maker (high sales volume but -64K profit)



Category ● Technology ● Office Supplies ● Furniture



- ❖ Technology is out main profit driver – almost half of total profits came from this category
- ❖ Furniture contributes the least – making it a low priority category for growth focus
- ❖ Office-Supplies performs as a stable middle-tier category

Europe

218

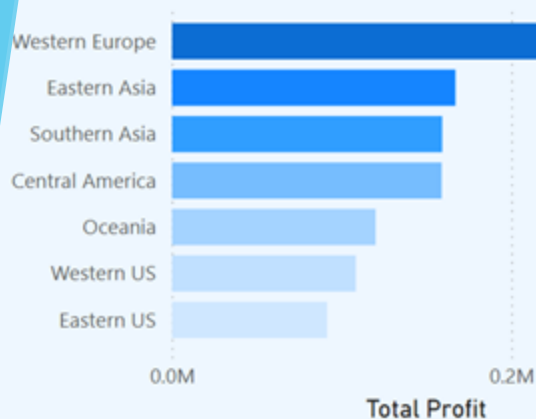
Regional Profit Performance

Western Europe leads the company with \$218k in profit, while Southern Asia is close behind with 159k – both are high priority growth regions.

Western Africa and Western Asia are loss-making markets (-50k to -54k) these region require pricing and strategy correction.

Southern Europe, Sothern US & Western US generates moderate returns – stable regions that can be optimized further to incremental growth.

Profit by Region



les ● Total Profit

Sales & Profit Trend Over Time

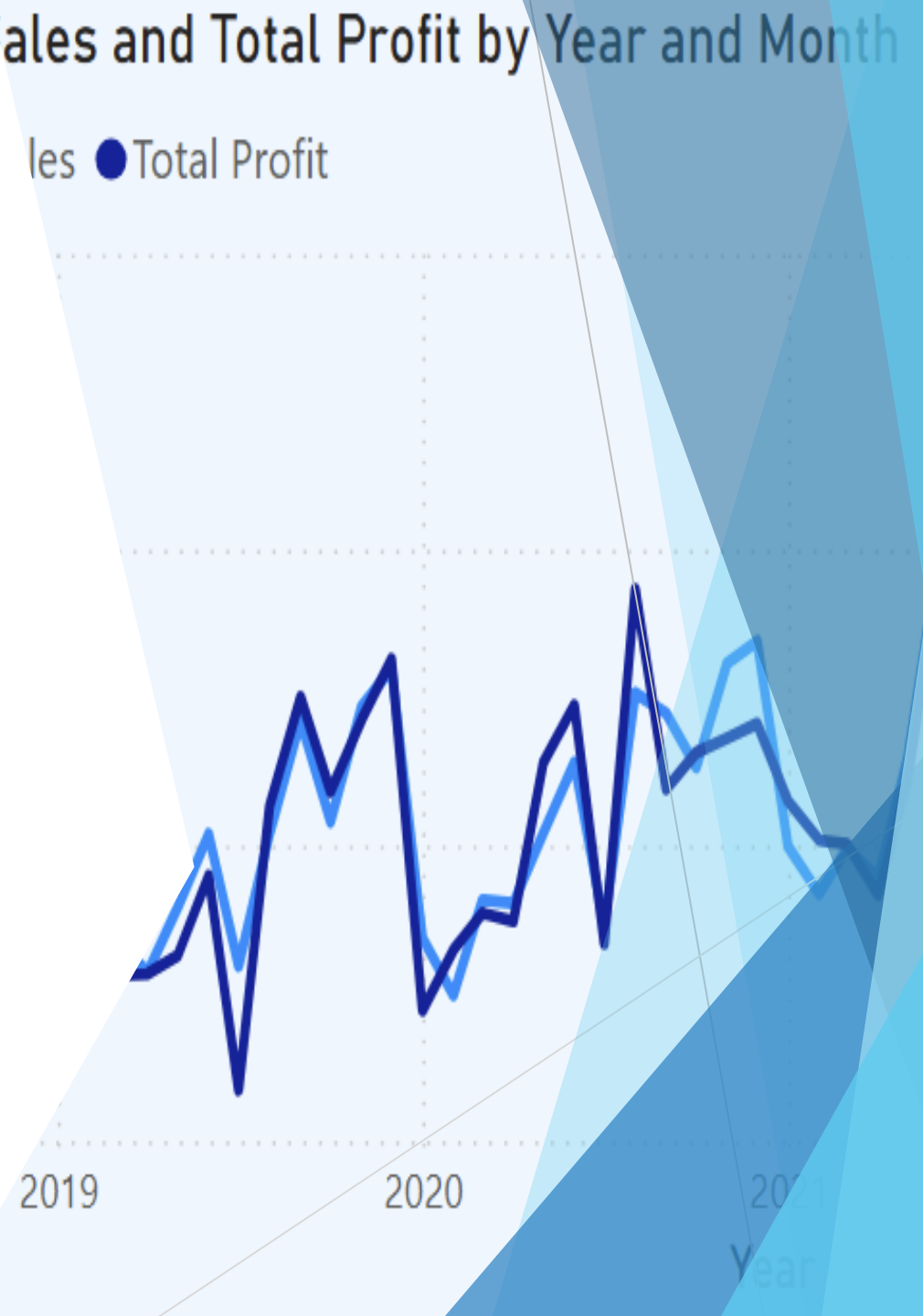
- ❖ From Jan-2019 to Dec-2019 (pre-pandemic period) sales showed a strong expansion curve – with an average Monthly Growth Rate of ~14.8%. This early ramp-up built a very strong baseline before COVID disruption hit.
- ❖ Sales & profit declined during the core pandemic period (Jan-2020 to Mar-2021), with only two temporary rebounds in June-2020 and Aug-2020.
- ❖ A strong recovery and momentum phase is visible from May-2021 to Dec-2021, driven by consumer demand normalization.
- ❖ 2022 begins with a contraction (Jan-2022 to Aug-2022), likely due to inflation effects & delayed purchasing behavior.
- ❖ Profit peaks in September 2022 (~68K) – strongest monthly profitability across the entire timeline.
- ❖ Highest sales volume occurs in November 2022 (~555K+), aligned with seasonal peak buying period (per-holiday cycle).

2019

2020

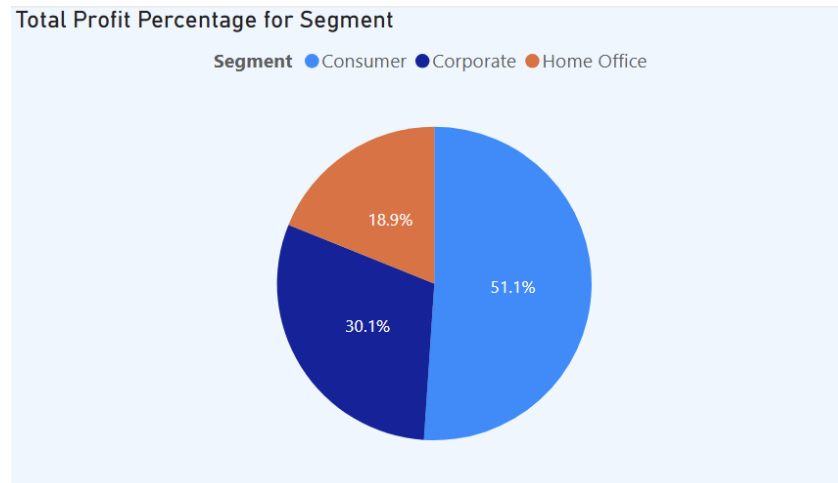
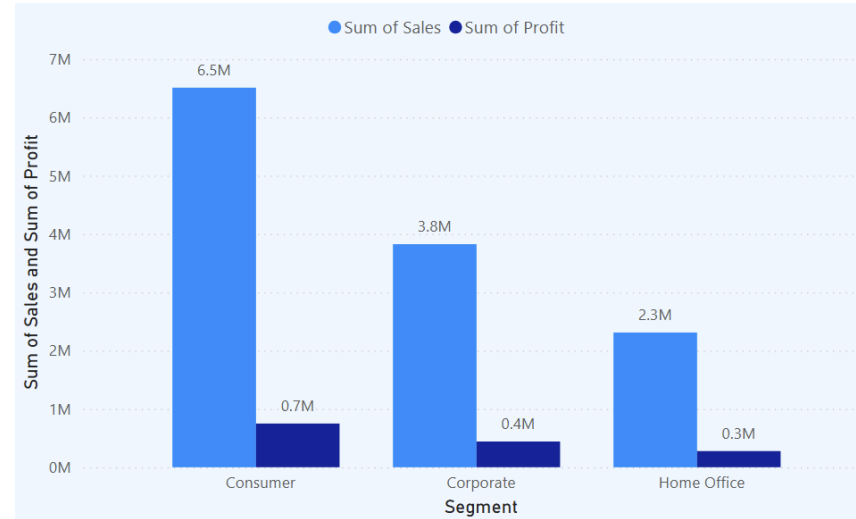
2021

Year

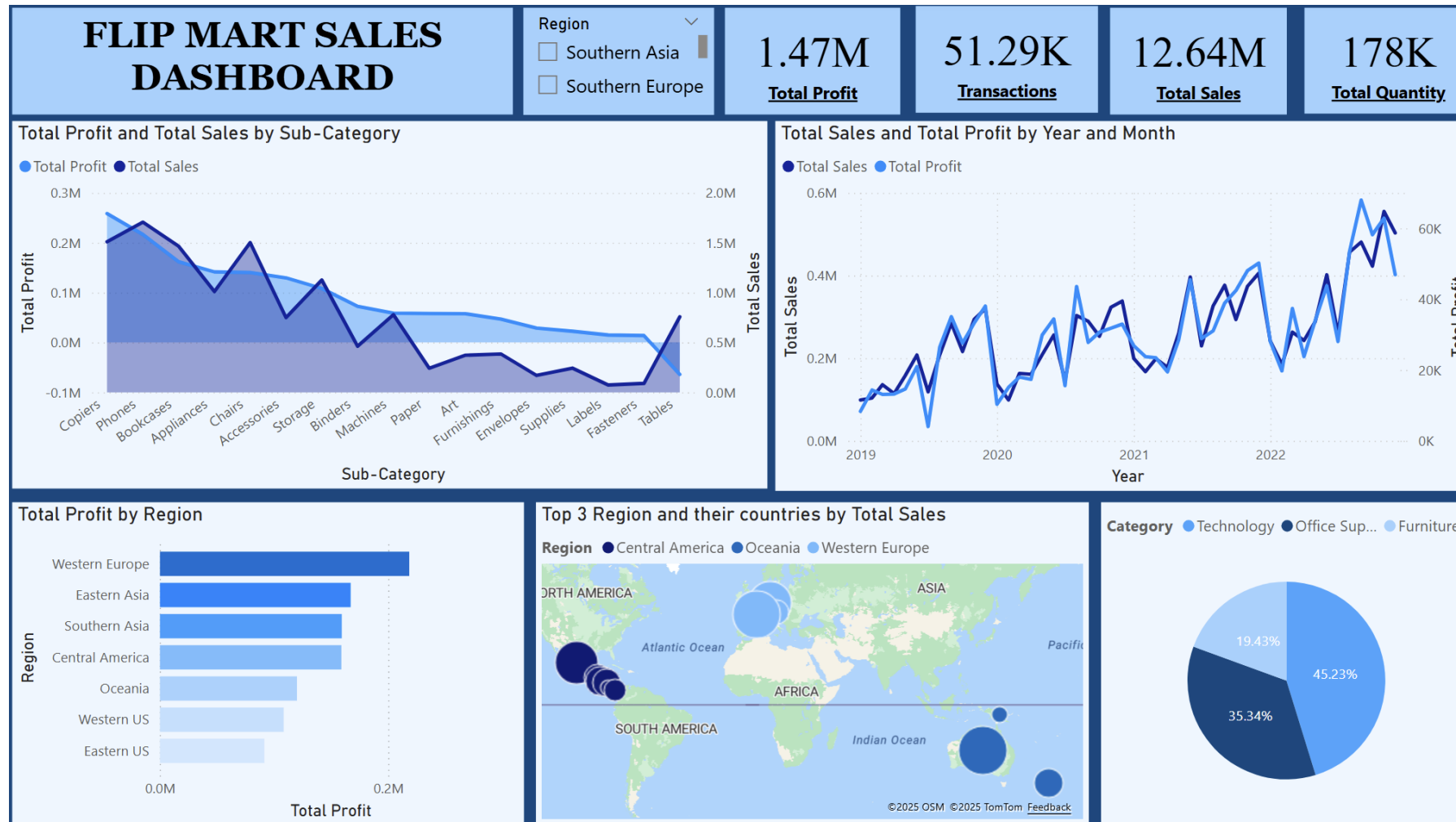


Customer Segment Insight

- ❖ Customer segment is the primary revenue driver, contributing 51% of total profit (\$0.75M) and 51% of total sales (\$6.5M) – strongest customer base
- ❖ Corporate segment delivers stable profitability at 30% share (\$0.40M profit) on ~\$3.8M sales, showing strong business-to-business demand.
- ❖ Home Office is the smallest segment, generating 19% of profit (\$0.30M) from \$2.3M sales – presents moderate opportunity, but not a core driver.

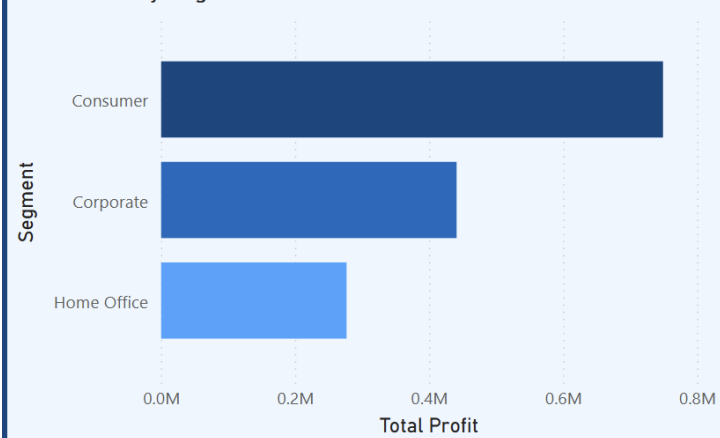


Overall Region, Category & Time-based Performance Dashboard

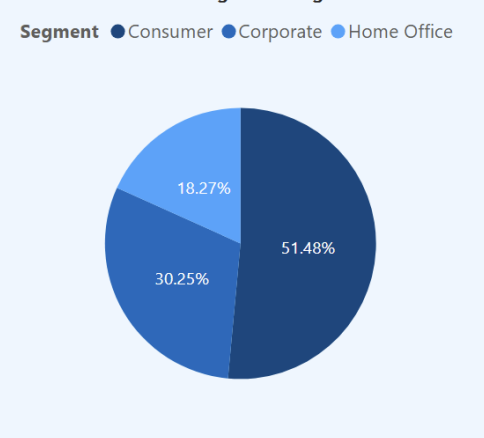


Customer Segment & Shipping Mode Profitability Dashboard

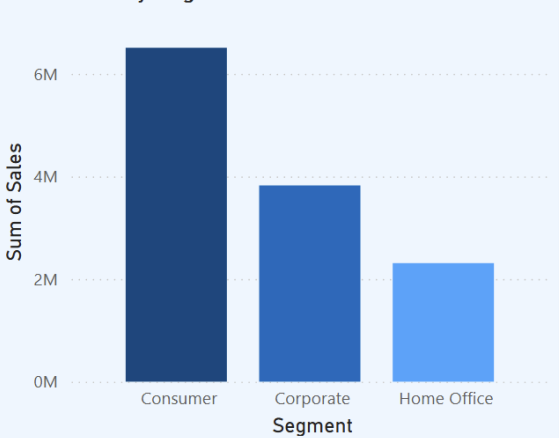
Total Profit by Segment



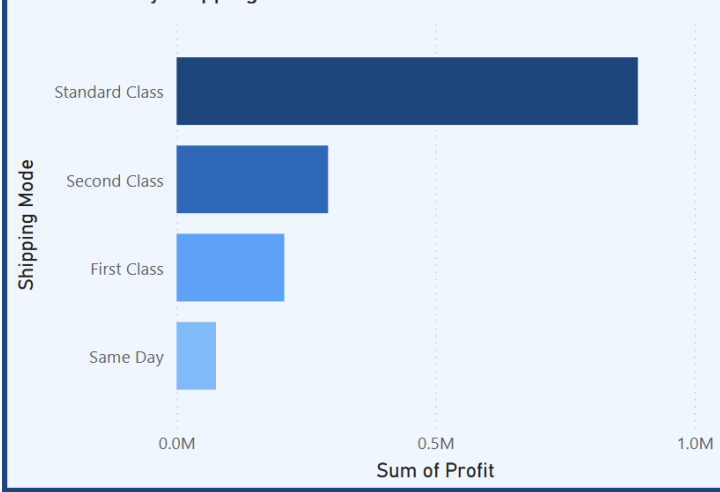
Total Profit Percentage for Segment



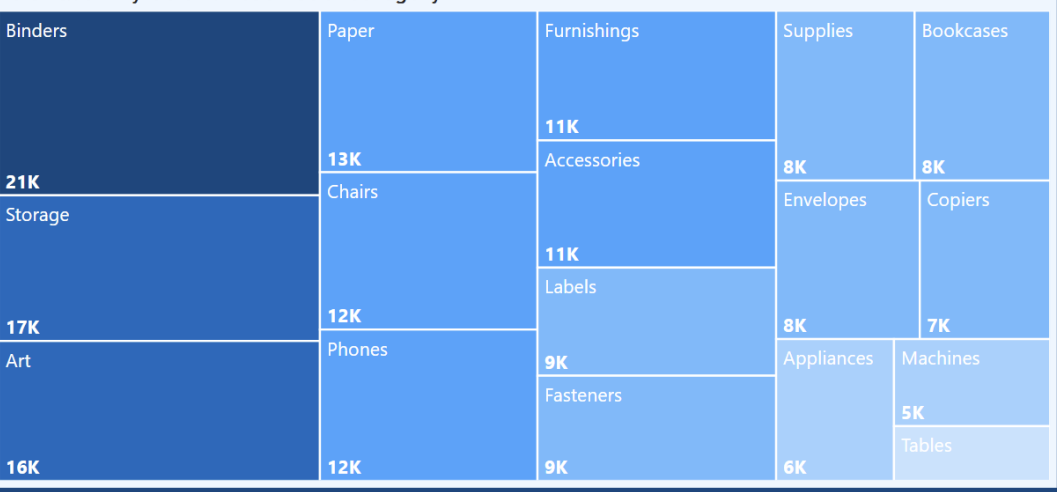
Total Sales by Segment



Total Profit by Shipping Mode



Total Quantity Sold for each Sub-Category



Key Findings & Strategic Recommendations

- ❖ Focus regionally action > especially Western Africa + Western Asia. Use bundling + cross selling: phones + appliances Or phones + binder deal > example: “Buy Phone > get 30% off Binder Or “Buy Phone > Storage free for first month (max limit)”. Start small – track margin > scale only if profit turns positive.
- ❖ Standard class holds the highest volume but does not give best profitability. First class + second class shows better profit ratio per shipment. Strategy – run a limited time upgrade scheme: “Pay Standard – Auto upgrade to first class for next 3 orders”. This increase the habit of using better margin shipping – without dropping base price.
- ❖ Customer segment contributes the highest – both profit & sales – so keep standard strategy same here. But home office is underperforming – very low participation. Best approach is to connect home office with corporate bundles: “Corporate annual contract – include 1 home office user plan free for 90 days”. This increase home office activation – without major marketing spend.
- ❖ Western Europe & Eastern US are the only 2 region where tables are deep negative. Stop Table-focused promotion in these 2 regions temporarily & only taking pre orders or on demand with little over prices to maintain the profit will be best practice with this strategy of making them like “Buy 2 get 1 free”.
- ❖ Final Thought: Instead of pushing all products everywhere, we should reduce stock for negative-margin products in loss-making regions and redirect those same products toward regions where the product already preforms positively. Using this we can protect profit while keeping sales moving.

Conclusion

- ❖ Profitability is uneven across regions – Western Europe & southern Asia are the strongest levers
- ❖ Phones & Copiers are proven margin-drivers -> focus future promotion here
- ❖ Tables & western Africa are bleeding money -> immediate cost control needed

- ❖ Skills

- Analytical thinking & Problem-solving
- Data interpretation & insight generation
- Trend analysis & performance evaluation
- Visualization best practice

- ❖ Tools

- Power BI – Dashboard creation
- Power Query Editor – Data Preparation, shaping, Data Cleaning and Transformation