

Project

Sales Analysis

Product Analysis

Customer Analysis

Geographical Analysis

Insights of Retail Dynamics:

About Project

Insights into Retail Dynamics is a comprehensive analysis project designed to unlock valuable insights from a detailed retail dataset. This project delves into various facets of the retail company's operations, encompassing sales trends, product dynamics, customer behavior, and geographical influences. By employing advanced analytical techniques and visualization tools, This project aims to provide actionable insights to enhance decision-making processes and optimize the overall performance of the retail business.

The project has progressed through four phases of analysis, covering sales, products, customers, and geographical factors. Employing advanced analytical techniques.

01

SALES ANALYSIS

02

PRODUCT ANALYSIS

03

CUSTOMER ANALYSIS

04

GEOGRAPHICAL ANALYSIS

Year

2011

2012

2013

2014

Project

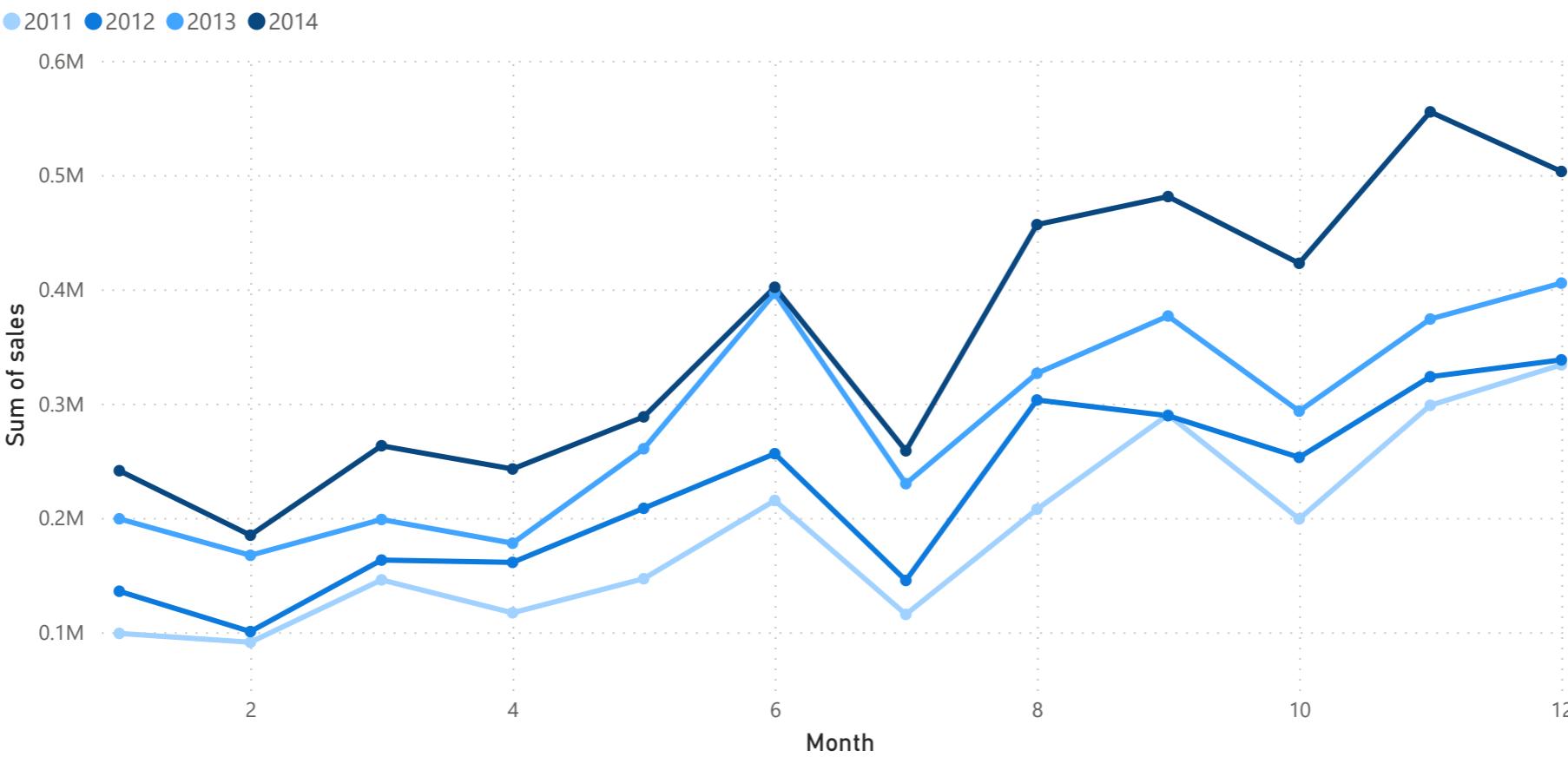
Sales Analysis

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Sales Trends Over the Months



Total of Sales

12.64M

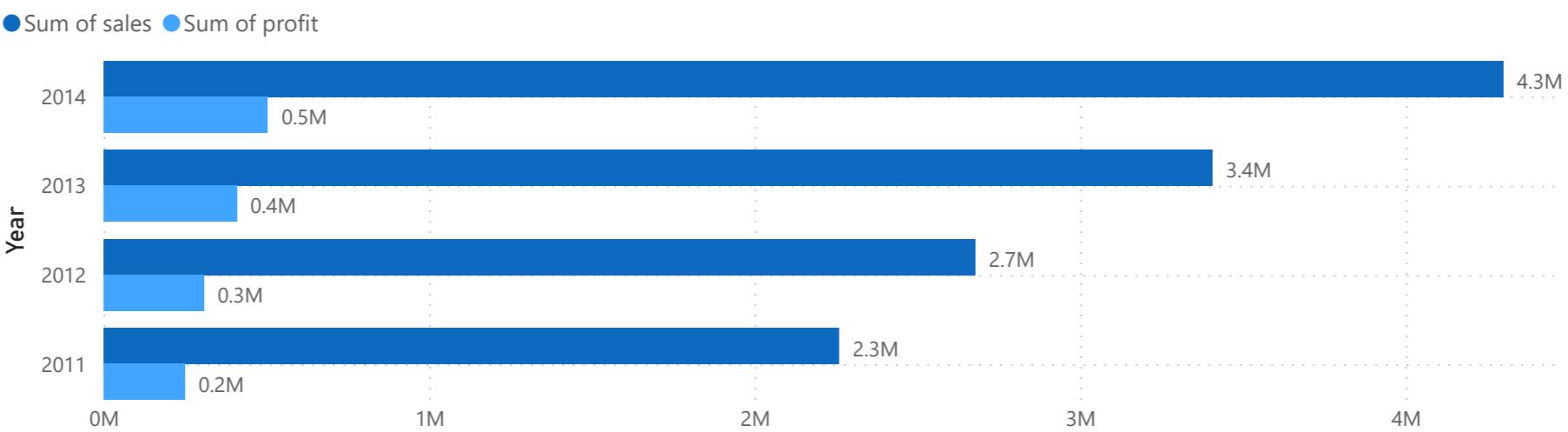
Number of Quantities

178K

Total of Profit

1.47M

Sales and Profit Trends Over the Years



Total Cost of Shipping

1.35M

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Sales Insights:

1. Overall Sales Trends Over the Months and Years:

2011-2014 Overview:

The sales data demonstrates a consistent upward trend from 2011 to 2014, reflecting substantial revenue growth. Starting at \$98,898.49 in January 2011, sales increased annually, reaching \$503,143.69 in December 2014. Here's a breakdown of the trends observed for each year:

2011:

- Starting at \$98,898.49 in January, sales steadily increased throughout the year, peaking at \$333,925.73 in December.

2012:

- Beginning at \$135,780.72 in January, sales showed noticeable growth, reaching \$338,256.97 in December.

2013:

- Starting at \$199,185.91 in January, sales continued to rise steadily, with December sales reaching \$405,454.38.

2014:

- Beginning at \$241,268.56 in January, sales maintained an upward trend, reaching the highest point of \$503,143.69 in December.

Each year saw consistent sales growth, with December consistently leading in sales. Overall, sales increased from \$2.26 million in 2011 to \$4.30 million in 2014, indicating effective strategies and market expansion. This positive trend underscores the company's successful revenue growth over the four-year period.

2. Analyze variations in sales, quantity, and profit by Year and Month:

Sales Variation:

- Sales exhibited consistent monthly growth, culminating in a peak of \$503,143.69 in December 2014, which consistently marked the highest sales month annually.

Profit Variation:

- Profits mirrored sales trends, steadily increasing with December consistently yielding the highest profits, reaching \$67,979.45 in 2014.

Quantity Variation:

- Quantity sold exhibited continuous growth, with December 2014 selling the highest quantity of 7,513 units.

The analysis demonstrates consistent growth in sales, profit, and quantity, suggesting a robust business model. December's strong performance hints at seasonal or promotional factors. These insights inform strategic decisions like inventory and marketing. Overall, the findings show sustained growth, with December as a key month.

3. Identify seasonal patterns or trends in order priority:

The data reveals seasonal trends in order priorities over the years 2011 to 2014. Notably, there is a consistent increase in orders during mid-year, particularly from June to August. Both "Critical" and "High" priority orders peak during these summer months, while "Low" and "Medium" priorities remain relatively stable with occasional fluctuations. Additionally, there is a consistent rise in order quantities across all priorities during the year-end months, particularly in November and December. This suggests a cyclic pattern in ordering behavior, emphasizing the importance of adapting inventory and operational strategies to these seasonal fluctuations.

Product Category

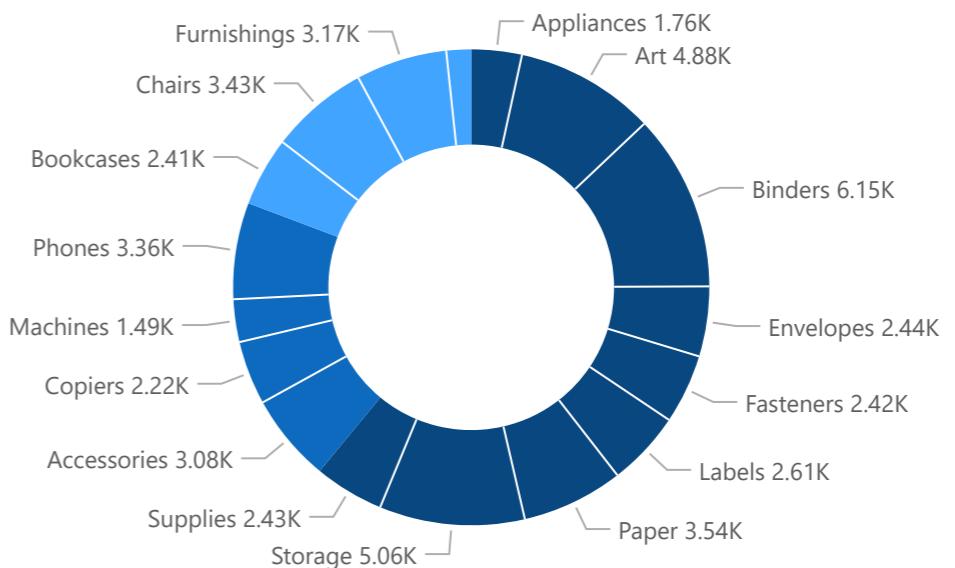
Furniture

Product Name	Sum of Sales
Apple Smart Phone, Full Size	86,935.78
Cisco Smart Phone, Full Size	76,441.53
Motorola Smart Phone, Full Size	73,156.30
Nokia Smart Phone, Full Size	71,904.56
Canon imageCLASS 2200 Advanced Copier	61,599.82
Hon Executive Leather Armchair, Adjustable	58,193.48
Office Star Executive Leather Armchair, Adjustable	50,661.68
Harbour Creations Executive Leather Armchair, Adjustable	50,121.52
Samsung Smart Phone, Cordless	48,653.46
Nokia Smart Phone, with Caller ID	47,877.79
Samsung Smart Phone, VoIP	45,406.33
Cisco Smart Phone, with Caller ID	43,127.50
SAFCO Executive Leather Armchair, Black	41,923.53
Cisco Smart Phone, Cordless	41,021.52
Novimex Executive Leather Armchair, Adjustable	40,585.13
Sauder Classic Bookcase, Traditional	39,108.30
Motorola Smart Phone, Cordless	38,931.04
Novimex Executive Leather Armchair, Red	38,814.80
Eldon File Cart, Single Width	34,387.73
Hoover Stove, White	32,842.60
Harbour Creations Executive Leather Armchair, Black	32,230.74
Total	12,642,501.91

Office Supplies

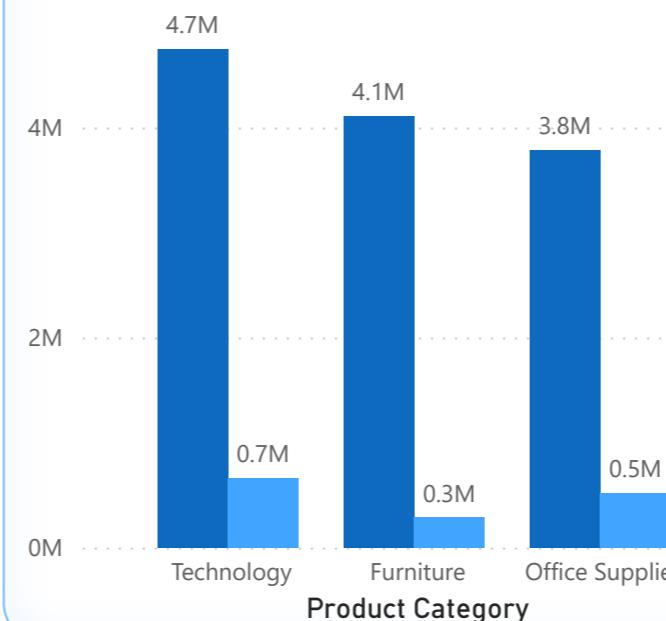
Product Distribution Across Categories and Subcategories

category ● Office Supplies ● Technology ● Furniture

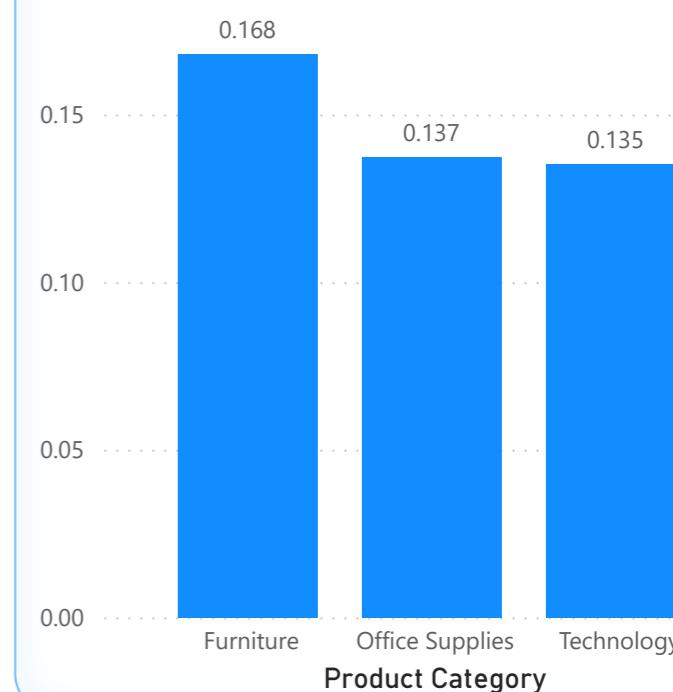


Product Category by Sales and Profit

● Sum of sales ● Sum of profit



Average Discount Sensitivity by Category



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Product Insights:

1. Products with the Highest Sales:

- The top-selling products include various smart phones, executive leather armchairs, and a Canon copier, with Apple Smart Phone leading in sales at \$86,935.78.

2. Product Distribution Across Categories and Subcategories:

1. Furniture category:

- Chairs and Furnishings stand out with 3,434 and 3,170 pieces respectively, followed by Bookcases.

2. Office Supplies category:

- Binders and Storage surpass 5,000 pieces each, indicating high demand for organizational products.

3. Technology category:

- Accessories and Phones lead with 3,075 and 3,357 pieces respectively.

This distribution analysis provides valuable insights into the popularity of different products, aiding in inventory management and strategic decision-making.

3. Investigate Product Category Contribution to Average Profit:

- Upon investigating the product category contribution to average profit, it is evident that Technology products lead with an average profit of \$65.45, significantly outperforming Furniture with \$29.04 and Office Supplies with \$16.58. This suggests that the Technology category plays a substantial role in driving higher average profits compared to the other categories.

4. Sensitivity of Certain Products or Categories to Discounts:

- The analysis reveals the sensitivity of product categories to discounts, with Furniture exhibiting an average discount of 0.17, indicating a relatively higher sensitivity to discounts. Meanwhile, both Office Supplies and Technology show similar average discount values of 0.14, suggesting comparable levels of discount influence across these categories.

Overall, these insights provide valuable information for understanding product performance, profitability, and sensitivity to discounts, facilitating strategic decision-making in inventory management and pricing strategies.

Customer Segment

Consumer

Corporate

Home Office

Product Category

Furniture

Office Supplies

Technology

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Sales Analysis

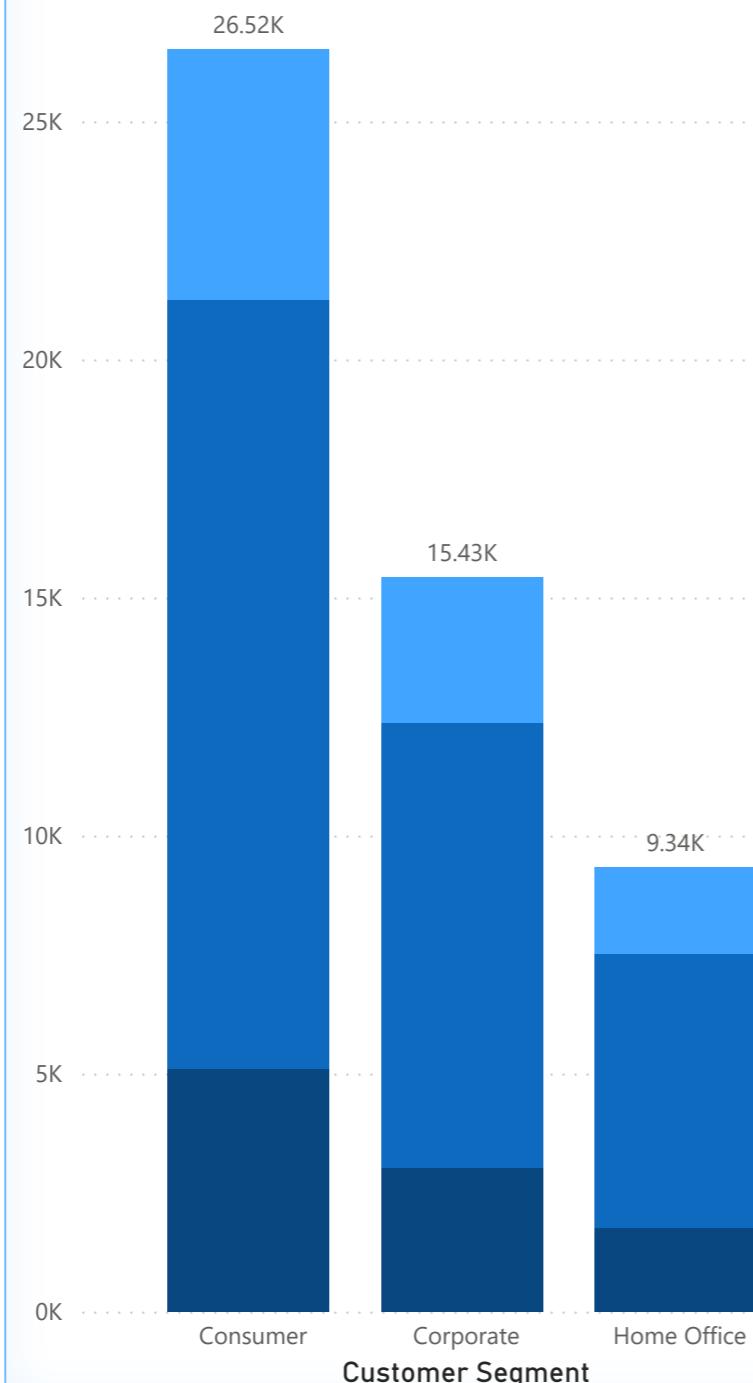
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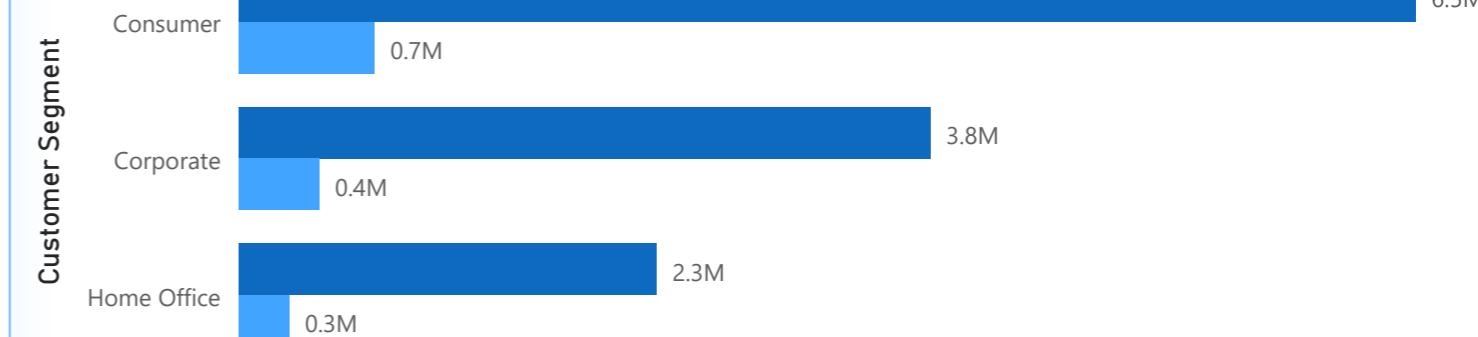
Category Preference by Customer Segment

category ● Furniture ● Office Supplies ● Technology

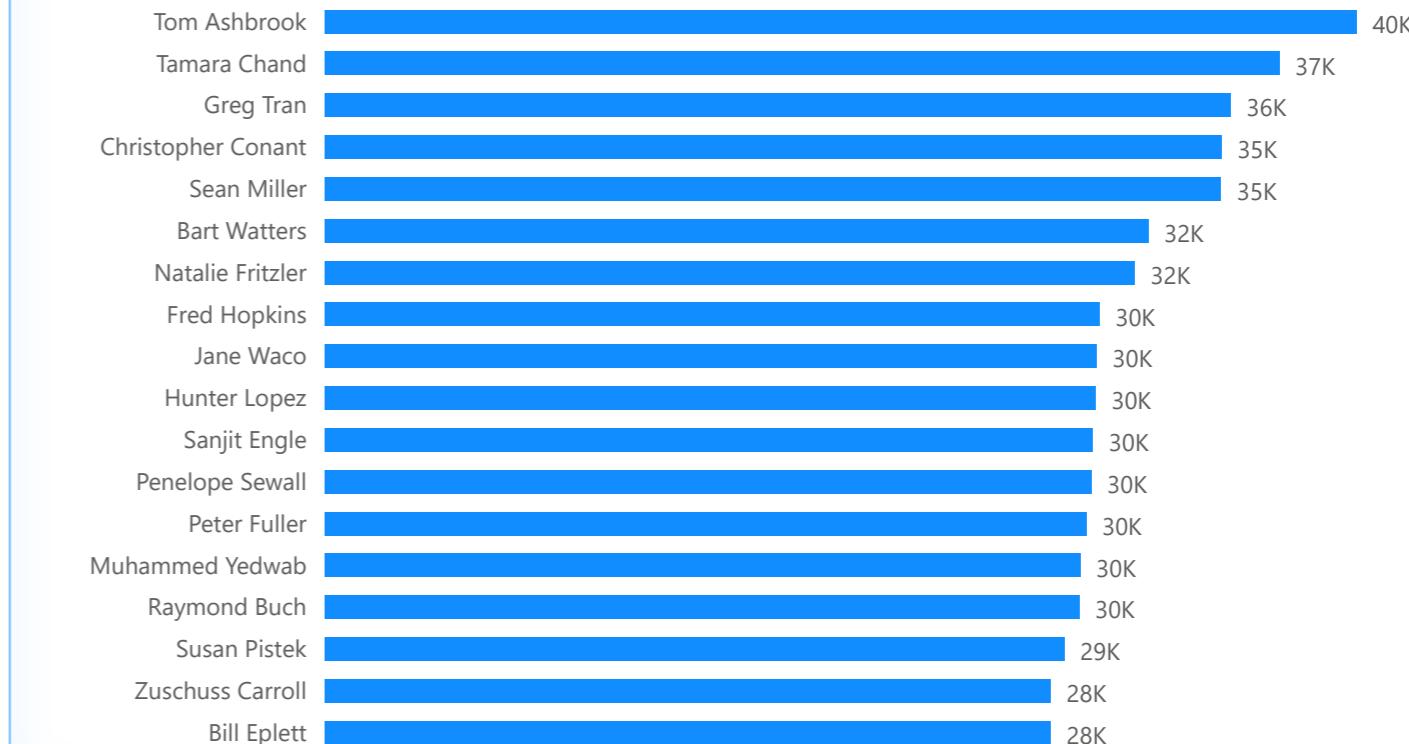


Sales and Profit by Customer Segment

● Sum of sales ● Sum of profit



Contribution of Customers to Total Sales



Customer Insights:

1. Repeat Customers and Their Contribution to Sales:

- Recognized repeat customers include Muhammed Yedwab, Steven Ward, Gary Hwang, and others.
- Tom Ashbrook and Tamara Chand lead in contribution to total sales, each around 32% and 30%, respectively.
- Customers like Greg Tran, Christopher Conant, and Sean Miller contribute approximately 28% each, indicating their significant impact on overall sales.

2. Contribution of Different Customer Segments to Sales and Profit:

- The Consumer segment leads with sales totaling \$6,507,949.42 and profits of \$749,239.78.
- Corporate segment contributes \$3,824,697.52 in sales and \$442,785.86 in profits.
- Home Office segment adds to the overall performance with sales of \$2,309,854.97 and profits of \$277,009.18.

Understanding and catering to diverse customer segments are crucial for a well-rounded business strategy.

3. Preference of Specific Products or Categories by Customer Segments:

- Consumer segment shows a preference for Office Supplies (16,151 units), followed by Technology (5,272 units) and Furniture (5,095 units).
- Corporate customers also prefer Office Supplies (9,364 units), followed by Technology (3,051 units) and Furniture (3,014 units).
- Home Office segment exhibits a similar pattern of preference, with a preference for Office Supplies (5,758 units), followed by Technology (1,818 units) and Furniture (1,767 units).

4. Calculate the average order quantity and profit per customer:

- Average Order Quantity per Customer: 3
- Average Profit per Customer: \$28.64

These insights provide valuable information for understanding customer behavior, segment preferences, and their contribution to sales and profits, enabling businesses to tailor strategies effectively to enhance customer relationships and overall performance.

Region

Africa

Canada

Caribbean

Central

Central Asia

East

EMEA

Project

North

North Asia

Oceania

South

Southeast Asia

West

Sales Analysis

Sales and Profit by Market

● Sum of sales ● Sum of profit

4M

3M

2M

1M

0M

Africa

APAC

Canada

EMEA

EU

LATAM

US

Market

Product Analysis

Sales and Profit by Country

● Sum of sales ● Sum of profit

United States

Australia

France

China

Germany

Mexico

India

United Kingdom

Indonesia

Brazil

Italy

Spain

0M

1M

2M

Customer Analysis

Sales and Profit by Region

● Sum of sales ● Sum of profit

2.8M

0.3M

1.6M

0.1M

1.2M

0.2M

1.1M

0.1M

0.9M

0.0M

0.8M

0.2M

0.8M

0.0M

0.8M

0.1M

0.8M

0.1M

0.7M

0.1M

0.7M

0.1M

0.3M

0.0M

0.1M

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Geographical Insights:

1. Countries and States Contributing the Most to Sales:

- Top countries contributing to sales include the United States, Australia, France, China, and Germany.
- Leading states by sales are England, California, Ile-de-France, New York, and New South Wales.
- Notable contributors include United Kingdom, United States, France, Australia, and Germany.

2. Market and Region Contributions to Sales:

- Major markets/regions contributing to sales include EU Central, APAC Oceania, Southeast Asia, North Asia, and EMEA.
- These regions demonstrate significant sales and profits, with EU, APAC, and LATAM playing crucial roles.

3. Influence of Market and Region Characteristics on Sales and Profit:

- EU and APAC regions show strong market performance, with significant sales and profits.
- US market displays substantial sales but comparatively lower profits.
- EU, APAC, and LATAM regions drive overall sales and profit, showcasing diverse market dynamics.

4. Regional Variations in Order Priority and Shipping Mode:

- Order priority distribution across regions mainly emphasizes "Medium" priority, with significant representation of "High" and "Critical" priorities, indicating efficient order handling.
- Shipping mode distribution favors "Standard Class" as the preferred option across regions, suggesting a common preference for reliable and standard delivery methods.

These insights provide valuable information on the geographical distribution of sales, market dynamics, and regional variations in order processing and shipping preferences. Understanding these factors is essential for strategic decision-making and optimizing operations in different regions.