Solo Project:

Name :

Sales Analysis

**Executive Summary:**

An essential part of managing a profitable company is conducting sales analysis. Sales analytics may help you choose which products to concentrate on, where to market, and how to get in touch with customers. Numerous methods for sales analysis are available to help small businesses expand and enhance their operations. This For the purpose of tracking all KPIs and evaluating the effectiveness of the present process in order to develop strategies for process improvement, the firm does a global sales analysis.

**Data Source:**

The source of this dataset is Kaggle.com. Despite the fact that there are other datasets, this appeared to be quite intriguing for the customized analysis. This dataset has been selected as a result. This is the dataset's link. <https://www.kaggle.com/datasets/shekpaul/global-superstore>

All of the project instructions' criteria are met by this dataset.

**Dataset:**

There are three csv files in this dataset. The values of client orders and transactional data are recorded in one database; customer information is recorded in another; and product details are captured in a third table.

Orders.csv

Returns.csv

People.csv

**Rows & Columns in Dataset:**

|  |  |  |  |
| --- | --- | --- | --- |
| **File Name** | **Columns** | **Rows** | **Description** |
| Orders.csv | 24 | 51000 | This is a relational file that has all order-related information in it. |
| Returns.csv | 3 | 1080 | Data about an order and the area it belongs to are contained in this file. |
| People.csv | 2 | 25 | All of the people's data, along with the actual region they belong to, are contained in this file. |

**Columns In Dataset:**

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Column Type** | **Description** |
| Order Date | Date | The order's placement date. This information spans the years 2012-01-01 through 2016-12-31. |
| Ship Date | Date | The order's shipment date. This information spans the years 2012-01-01 through 2016-12-31. |
| Postal Code | Ratio | Post Code for the region |
| Sales | Ratio | Purchase Price of the Item. The values in this currency column varies from $0.90 to $9999.99. |
| Quantity | Ratio | How many goods are in this order? The range of data is 1 to 14. |
| Discount | Ratio | Loyal clients receive a discount; this is a portion of the total. This has a range of 0 to 0.85. |
| Profit | Ratio | Loyal clients receive a discount; this is a portion of the total. This has a range of 0 to 0.85. |
| Shipping cost | Ratio | The price paid to ship the order to the client. The data set spans $1 to $999. |

**Top 10 Columns in this Dataset:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Table Name** | **Column Name** | **Data Type** | **Description** | **Range of Data** |
| Orders | Order Date | Date | The order's placement date. This information spans the years 2012-01-01 through 2016-12-31. | 01/01/ 2012 to 31/12/2016 |
| Orders | Ship Date | Date | The order's shipment date. This information spans the years 2012-01-01 through 2016-12-31. | 01/01/ 2012 to 1/12/2016 |
| Orders | Postal Code | Number | Post Code for the region | Natural |
| Orders | Sales | Number | Purchase Price of the Item. The values in this currency column varies from $0.90 to $9999.99. | $0.90 to $9999.99 |
| Orders | Quantity | Number | How many goods are in this order? The range of data is 1 to 14. | Natural |
| Orders | Discount | Number | Loyal clients receive a discount; this is a portion of the total. This has a range of 0 to 0.85. | 0 to 0.85 |
| Orders | Profit | Number | Loyal clients receive a discount; this is a portion of the total. This has a range of 0 to 0.85. | $0 till $799 |
| Orders | Shipping cost | Number | The price paid to ship the order to the client. The data set spans $1 to $999. | $1 till $999 |
| Orders | Order ID | Number | Customer’s Order ID | Natural |
| Orders | Customer ID | Alpha Numerical | Orders Placed by Customer | Natural |
| Orders | Market | Text | Region Sales | Natural |

**Study from the Sales Analysis:**

* What is the sales growth?
* How well does each product perform?
* How do the Buy and Sell Rates compare?
* How Much Are Sold Through Each Channel?
* How Much Are Sold in Each Segment?
* How much is sold of each product?
* How much is sold in each region?

Numerous pages that solve the aforementioned issues and offer a thorough perspective of the business make up a Power BI Dashboard.

**Insights:**

**Sales by Year and Month:**

According to the Sales Trend Analysis, sales increased by 270% between January 2013 and December 2015. During this time, the trend was consistently upward, most notably in the first five months of 2015, when it increased by a remarkable 94.48%. The greatest increase occurred between July and December 2015, resulting in a significant increase in sales from $258,000 to $503,000.

Given the significant efforts that contributed to this business surge, it is emphasized that a similar focus and dedication should be maintained in subsequent years to sustain and further enhance business growth. The analysis emphasizes the importance of replicating the strategies and efforts that were successful during the highlighted period in order to ensure future success.

**Total Sales, Profit and Profit Ratio:**

Total Sales are $10 million, as determined by adding all individual order sales values using the SUM function. Concurrently, the Total Profit has been calculated to be $1.2 million, yielding a profit ratio of 12%. This means that the company made a profit equal to 12% of total sales revenue, indicating a positive financial performance. The profit ratio is an important metric for evaluating the efficiency and profitability of business operations in relation to total sales.

**State Wise Sales:**

In the State Wise Sales analysis, a comparison was made between each state's sales and the resulting profit ratio. Each state's profit ratios and sales are broken down in the table view. Notably, the United States and Australia have healthy profit margins, indicating strong financial performance in these countries. However, it is critical to remember that increased sales volume does not always equate to increased profits. The observation that some regions have higher sales but lower profit margins emphasize the importance of understanding the impact of sales and profit margins together. This insight emphasizes the importance of a nuanced approach to business strategy that considers both sales growth and profit optimization for long-term and balanced financial success.

**Sales By Category:**

Technology sales were 25.89% higher than office supplies, which had the lowest sales at 3.1 million. Technology had the highest sales at 3.9 million, followed by furniture at 3.3 million and office supplies at 3.1 million, accounting for 37.72% of total sales. Office Supplies had 3.1 million in sales, Furniture had 3.3 million, and Technology had 3.9 million. The most sales are in technology.

**Sales by City:**

In a comparison of five cities—New York, Los Angeles, Manila, Seattle, and Philadelphia—New York had the highest recorded sales at $212,000, surpassing Philadelphia's lowest sales by 133.45%, which totaled $90,000. New York City accounted for a sizable 33% of total sales across all cities. Los Angeles came in second with $147,000 in sales, while Manila, Seattle, and Philadelphia ranked lower in the sales hierarchy. The overall sales ranged from $90,000 to $212,000 per city, highlighting the significant variation in performance across cities.

**Subcategory Sales & Profit:**

Category white cells is also put in a graph where we have used the table view to understand the subcategory total sales versus total profit and sales versus profit. All the sales which are above 1000 k are highlighted in the green color and the rest are in the red color so when we look at the highest profit ratio the paper and the labels and necessary sections are at the highest profit operating margins. With the paper is giving the profit ratio of 24% labels is giving 20% of profit ratio and accessories is giving the profit ratio of 18%. Now if you look at the bottom three, Chairs, Machines and Tables are at the lower lows with their 8% and 9% of profit ratios.

**Sales by Market Regions:**

Examining at the local voice market analysis, the EMEA region has done very well, accounting for 3.79 million of total sales, which is at an all-time high. For this period, APAC contributed 2.95 million sales. The USCA contributed 1.87 million, and the LATAM region contributed 1.78 million, accounting for roughly 48.7% of total sales. As a result, there is a need for improvement in the USCA and LATAM regions.

**Profit by Year:**

When we compare the 3 years 2013-2014 and 2015 2013 has recorded the total sales of 307k dollars and the $200 2014 has recorded the total profit of $406 k dollars and 2015 has recorded 504 which is the highest among the 3 years so the total profit has been increasing from all the years so if the same is the same strategy is continuous then there are high chances at the business succeeds. This demographic has been generated in this Bar graph and is visualized to show the difference among all the years.

**Sales by Category:**

The total sales have been understood by a pie chart which has recorded the total office supplies technology and furniture while the total office supplies have contributed 29.97%, technology has contributed 37.72% and furniture being the second highest contributor having 32.31%.

It is understood that technology and furniture have decent contributions while the office supplies have a little less sale when compared to the other two so efforts are required on the office supplies category to improve the sales when compared to technology and Furniture

**Profit Ratio and Profit:**

When the performance of the top three sellers—Technology, Office Supplies, and Furniture—is examined, it is discovered that Technology contributes the most profit, approximately $6.6 million, followed by Office Supplies at $5.18 million and Furniture at $2.85 million. Furthermore, the profit ratio is compared across these categories, which represents the proportion of profit relative to sales. The profit ratio in Technology is 14%, indicating a relatively strong profitability. Office Supplies has a comparable profit ratio, while Furniture has a lower profit ratio of 7%. The significant drop in the profit ratio for Furniture suggests that it is less profitable than Technology and Office Supplies. This knowledge can help guide strategic decisions and efforts to increase profitability, particularly in the Furniture industry.

**Recommendations and Insights:**

It is recommended if growth in some categories is limited. This dataset necessitates Marketing Analysis. According to the analysis, furniture and office supplies require additional attention. Furthermore, sales growth is required in California, Manila, and Philadelphia. If there is some marketing support, these three regions can help generate more revenue. Chairs, machines, and tables have profit ratios of 8% and 9%, respectively, and more work needs to be done to understand and improve sales in these categories. When compared to office supplies and technologies, the profit ratio in furniture is very low, so some changes are required.