**Title: Insights from ACMEs Super Store Dataset Analysis**

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**Role: Data Analyst**

**DBMS – Microsoft SQL Server Management Studio**

**Introduction:**

In conducting this analysis, we aimed to extract meaningful insights from the data of ACMESs Super. Store in making informed decisions. Through comprehensive examination, we have identified several key findings that warrant attention and consideration.

**Objectives:**

1. To analyse the ACMEs super store sales dataset.
2. To uncover important trends and comprehend consumer behaviours.
3. To provide valuable insights to inform strategic decision-making processes.

**TASK**

**ANALYSIS STEPS**

**Data exploration** - To explore the structure and contents of the dataset to gain a comprehensive understanding of the available information.

**Sales Metrics** - To understand the top performing products by total sales.

**Customer Analysis** - To identify top ten customers and average order for the customer segment.

**Temporal Analysis** - To uncover the monthly sales trend.

**Product Performance** - To provide insights on the five best selling products and product profit margin.

**Discount Analysis** - To evaluate the impact of discounts on sales and profit.

**Customer Segmentation** - To divide customers into three groups on the basis of their purchasing power.

**Query Results**

Basic Queries

Table 1: Result of Data Basic Queries

|  |  |  |
| --- | --- | --- |
| Total Orders | Total Unique Customers | Total Product Category |
| 1952 | 1130 | 3 |

Sales Metrics

Table 2: Sales Metrics of ACMEs Super Store

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Product Category | Total Sales | Average Discount | Total Profit | Average Profit |
| Technology | 712264.95 | 0.0478 | 75303.16 | 156.56 |
| Furniture | 660704.31 | 0.0498 | 59249.45 | 148.12 |
| Office Supplies | 551368.62 | 0.0492 | 89525.01 | 83.59 |

Customer Analysis

Table 3:Top Ten Customers of ACMEs Super Store

|  |  |  |
| --- | --- | --- |
| Customer ID | Customer Name | Total Sales |
| 553 | Kristine Connolly | 50475.31 |
| 1733 | Nina Horne Kelly | 48295.12 |
| 491 | Toni Swanson | 32194.12 |
| 2571 | Rosemary O'Brien | 29916.01 |
| 2670 | Yvonne Mann | 28779.13 |
| 1185 | Lee Xu | 20640.35 |
| 1044 | Erin Ballard | 20565.99 |
| 3011 | Tammy Raynor | 18642.71 |
| 640 | Neal Wolfe | 17390.24 |
| 3079 | Andrew Levine | 16792.21 |

Table 4: Average Order for Customer Segment

|  |  |  |
| --- | --- | --- |
| Customer Segment | Total Sales | Average Sales |
| Small Business | 400293.94 | 1031.69 |
| Consumer | 401778.37 | 979.95 |
| Home Office | 464481.04 | 988.26 |
| Corporate | 657784.53 | 961.67 |

Temporal Analysis

Table 5: Trend for Monthly Sales

|  |  |  |
| --- | --- | --- |
| Month Number | Order Month | Monthly Sales |
| 4 | April | 389831.95 |
| 6 | June | 355368.8 |
| 2 | February | 326101.47 |
| 5 | May | 306572.07 |
| 1 | January | 274766.92 |
| 3 | March | 271696.67 |

Product Performance

Table 6: Five Best Selling Products

|  |  |
| --- | --- |
| Product Sub-Category | Total Quantity Sold |
| Paper | 3481 |
| Pens & Art Supplies | 2744 |
| Binders and Binder Accessories | 2554 |
| Computer Peripherals | 2481 |
| Telephones and Communication | 2358 |

Table 7: Product Profit Margin

|  |  |  |
| --- | --- | --- |
| Product Sub-Category | Total Quantity | Profit Margin |
| Labels | 903 | 143 |
| Binders and Binder Accessories | 2554 | 31.89 |
| Copiers and Fax | 181 | 24.22 |
| Telephones and Communication | 2358 | 20.52 |
| Office Furnishings | 2356 | 19.09 |
| Chairs & Chairmats | 1227 | 18.65 |
| Appliances | 1187 | 15.32 |
| Paper | 3481 | 13.92 |
| Storage & Organization | 1904 | 4.02 |
| Office Machines | 898 | 2.77 |
| Computer Peripherals | 2481 | 1.76 |
| Bookcases | 536 | -0.86 |
| Pens & Art Supplies | 2744 | -0.99 |
| Tables | 944 | -3.74 |
| Envelopes | 590 | -11.4 |
| Scissors, Rulers and Trimmers | 423 | -19.12 |
| Rubber Bands | 501 | -86.33 |

Discount Analysis

Table 8: Impact of Discount on Sales and Profit

|  |  |  |  |
| --- | --- | --- | --- |
| Product Category | Average Discount | Average Sales | Average Profit |
| Furniture | 0.0498 | 1651.76 | 148.12 |
| Office Supplies | 0.0492 | 514.82 | 83.59 |
| Technology | 0.0478 | 1480.8 | 156.56 |

Table 9: Average Discount for Product Category

|  |  |
| --- | --- |
| Product Sub-Category | Average Discount |
| Tables | 0.0569 |
| Pens & Art Supplies | 0.0547 |
| Labels | 0.0545 |
| Rubber Bands | 0.0532 |
| Chairs & Chairmats | 0.0529 |
| Appliances | 0.0508 |
| Computer Peripherals | 0.0495 |
| Copiers and Fax | 0.0494 |
| Office Machines | 0.0489 |
| Scissors, Rulers and Trimmers | 0.0489 |
| Binders and Binder Accessories | 0.0482 |
| Envelopes | 0.0471 |
| Bookcases | 0.047 |
| Storage & Organization | 0.0467 |
| Paper | 0.046 |
| Office Furnishings | 0.0458 |
| Telephones and Communication | 0.0455 |

Customer Segmentation

Table 10: Customer Segmentation by Purchase

|  |  |
| --- | --- |
| Customer Segment | Segment Count |
| MEDIUM PURCHASERS | 144 |
| HIGHER PURCHASERS | 384 |
| LOW PURCHASERS | 602 |

**Valuable Insights**

1. Sales Performance:

The analysis of sales performance revealed notable trends and patterns. It is observed that Technology has the highest sales with a revenue of 712264.95. April was found as the month with highest sales. This growth might be attributed to targeted marketing campaigns and product promotions during these periods. However, there was a slight decline in sales during January and March, indicating potential areas for improvement in periodic marketing strategies.

2. Customer Segmentation:

Segmenting customers based on their purchasing behaviour provided valuable insights into their preferences and needs. We identified three distinct customer segments:

- High-Value Customers (Higher Purchaser): These customers exhibit consistent high-value purchases and should be prioritized for personalized marketing and retention efforts.

- Occasional Buyers (Medium Purchaser): This segment comprises customers who make sporadic purchases. Targeted promotions and incentives could encourage repeat purchases and increase their lifetime value.

- Budget Shoppers (Lower Purchaser): These customers prioritize affordability and often purchase discounted or lower-priced items. Tailoring marketing strategies to highlight cost-effective options can help capture this segment's interest.

3. Product Analysis:

Analysing product performance allowed us to identify top-performing products and areas for improvement. We found that paper, pen and art supplies and binders and binders accessories outperformed other item in terms of total quantity sold. Conversely, these product sub-categories belong to office supplies that has the lowest product total sales average sales and average Profit. Thus, there is potential to optimize the pricing and marketing strategies for office supplies to enhance its profitability.

4. Seasonal Trends:

Our analysis of seasonal trends highlighted fluctuations in sales and customer behaviour during certain months. This could be attributed to increased demand for certain product categories at different period. Leveraging these seasonal trends through in-depth monthly analysis can inform inventory management and marketing campaigns to capitalize on peak demand periods.

**Conclusion:**

Our analysis has provided valuable insights that can guide strategic decision-making and drive business growth. By understanding sales performance, customer behaviour, and product dynamics, stakeholders can implement targeted initiatives to enhance customer satisfaction, optimize product offerings, and maximize profitability. Moving forward, we recommend continued monitoring and analysis to adapt strategies in response to changing market dynamics and consumer preferences.