

Far Assignment.

1) Sales and Profitability analysis.

(a) { City State CustomerName Overdate OrderID
 { Cat quantity Profit Amount OrderID Sub-Cat.
 { Calculate total sales X category.
 (amount)

→ List of Orders + Order Details (~~Right Join~~
~~Left~~

Order ID	
1	a
2	b
4	c
5	d

List of orders.	
1	aa
2	bb
3	cc
4	dd

~~Left~~ Join.
 right.

1	a	aa
2	b	bb
4	c	NULL
5	d	dd

Furniture
 Clothing
 Elec

Avg. Profit/order

Total profit margin

$$\rightarrow \text{Avg. profit} = \frac{\text{Sum of profit (Total Prof)}}{\text{Count of orders. (distinct)}}$$

$$\rightarrow \text{Profit Margin} = \left(\frac{\text{Total Profit}}{\text{Total Sales (amt)}} \right) \times 100.$$

Sales,
 Avg Profit
 Profit Marg

Top performing Cat -

Under Performing Cat -

Top Performing - Sales - Electronics
Avg. Profit - Electronics.
Profit Margin - Clothing.

Total Profit (Clothing) > Total Profit (Electronics)

Avg Prof (Clothing) < Avg Prof (Electronics)

This states that count of orders in clothing category is more, thus customer base is more in clothing and it is the highest profit margin bracket category. Therefore clothing has a good potential in luxury sales/high ticket sales.

The data states that the Electronics Category generates greater greater profits and sales by supplying lesser number of orders which makes it "Top Performing Category", but thinking about ground level, Electronics category may include difficulties like logistics, maintenance, consumer support or procurement itself.

Thus clothing is more expandable and holds the most potential I feel.

Underperforming - Lowest Sales - Furniture
— Average Profit - Furniture
— Profit Margin - Furniture.

Again maybe costs like logistics, production, competitive pricing could be the possible reason of lower profits and lower sales in furniture category.

Conclusion

Top Performer ① By Total Sales and Profitability Per Order - Electronics
② By Total Profit and Customer base acquired - Clothing

Underperforming - Furniture

PS- furniture is still not exactly underperforming as its profits and margins are in positive (ie. no losses as such)

2) Target Achievement Analysis. (Only for Furniture Category)

percentage change in
Target sales month-o-month =

$$\left(\frac{\text{Tgt Sales (current month)} - \text{Tgt Sales (previous month)}}{\text{Tgt Sales (prev. month)}} \right) \%$$

Used quick measure Time Intelligence to calculate month-over-month change in Target sales

⊛ Lets move further and calculate how actually we have achieved our Target of sales in per month by joining all 3 tables. (Furniture Category).

Joining List of Orders & Sales Tgt ON Month Name

→ From the results, we get to know:

- 1) Change in Target Sales MoM ~~are~~ vary/increase significantly in the months July 2018, Nov 2018, March 2019.
- 2) Average target increment is 1.16% Monthly.
- 3) In the initial months, the sales team took time to match with the Targeted Sales, infact got the first big dip in Sales when the targets (MoM) were increased significantly MoM (i.e. July 2018).
- 4) After some period sales continued to grow cummulativey.

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5) I feel these escalations in Target Sales are important for keeping the Sales team on track and established a continuous growth.

Conclusion:

① Months with significant Tgt fluctuations.

→ July 2018

→ November 2018

→ March 2019.

② I Feel there should be mis-alignment in the targeted sales and actual sales.

REASON - Satisfaction of overachieving the targeted sales and Pressure of not fulfilling the targeted sales keeps the Sales team fueled and motivated.

Apart from ~~that~~ Sales team performance, factors like,

→ Region of sales / Customer insights

→ Period (Month) of sales / Market Trends

→ Sub-Category ~~etc~~

also matter in fluctuation of sales, thus Target sales should also consider these factors.

Using given datasets, as we don't have data of sales in more than 1 year, we cannot identify the above trends, but target sales could be decided every month by forecasting using above parameters.

3) Regional Performance Insights.

1) Disparities in Sales / profitability.

① Punjab : Have good sales amount, order count is in top 5, but average profit = -24.36%

↳ avg. Profit = -24.36%

Total profit = -609

Even if we have a very large customer base in Punjab with good sales, we are not able to make profits out of this region. This may be because,

① Very less premium customer base, therefore products with low margins are only sold.

② Solution (to increase Profitability):

- As we have good customer base, we should aggressively increase it further by organizing sales which would definitely attract similar customers and decrease the manufacturing and logistics cost by Bulk Supplying these items.
- Doing competitor analysis and basis, gradually increasing prices would also work.
- Discontinue negative (-ve) margin's products.
- We have no data about return orders, but if number of return orders is high it may also contribute into losses.

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2) Cities prioritized for improvement.

① Loss making cities:



Tamil Nadu → -2216

Punjab → -609

Andhra Pradesh → -496

Bihar → -321

↑ Total Profit.

By following the strategies previously mentioned, we could decrease the losses and increase profitability in these cities.

② Potential Cities (Descent Sales + Good Margins).

Uttar Pradesh → 3rd by Total profits,

one of highest profit margin sales.

Increasing sales and customer base here could result in very significant profits as people are interested in ~~low~~ high profit margin (luxury) items.

Delhi → similar case to Uttar Pradesh.

→ { Strategies like Upselling, Combos, premium services or experience centers would attract more customers and profits.