REPORT

**General Analysis**

This report is made with respect to the results found after performing ‘Exploratory Data Analysis’ on the provided data set ‘Sample Superstore’. The store mainly deals in three major categories of items which are Office Supplies, Furniture and Technology. These categories have many subcategories inside them. The ‘Office supplies’ category has appliances, arts, binder, envelopes, fasteners, papers, labels, storage and supplies sub-category inside it. The ‘Technology’ category has accessories, copiers, machines and phones sub-category inside it. The ‘Furniture’ category has bookcases, furnishing, tables and chairs sub-category inside it. This store supplies in 531 different cities across the United States of America. The store made 2,297,220.86 (~2.30 million) dollars worth of sales and resulted in 286,397.02 dollars of profit. Most sales were made by items which to ‘Technology’ category which is 836,150.03 dollars which resulted into 145,454.95 dollars worth of profit. During the ‘Exploratory Data Analysis’ it was found that sales increases when the store sells items which fall under technology category. The state of California is where the store made huge sales and profits while the ‘Littleton’ city made the least profits. It was found out that items which fell under the category of ‘Office supplies’ made huge number of sales which is 719,047.03 dollars of sale but was only able to gain 122,490.80 dollars worth of profit. The least amount of profit among the three categories was made by items which fell under the category of ‘Furniture’ which is 18,451.27 dollars even after having sales worth of 741,999.80 dollars.

**Required Changes**

It’s observed that even after having a sale figure of 719,047.03 dollars, items which fall under office supplies category only results in 122,490.80 dollars worth of profit. It can be solved by reducing the amount of discount on the office supplies. Surely it can affect the total no of sales by a small margin but it can definitely spike the profit margin provided by the items that fall under the category of office supplies. The current system provides high discounts to low quantity orders while low discounts to high quantity orders. If this is reversed profit margins can be increased.

Furniture category has the lowest profit among all the categories. Furniture has a humungous amount of sale which is approximate to 0.75 million but only returns 0.018 million profit. Half of the items that fall under furniture category results in loss. Of the 18,451.27 profit made by furniture category, chairs sub-category has a contribution of 26,590.17 dollars while furnishing made a profit of 13,059.14 dollars. Tables returned a loss of 17,725.48 and bookcases returned a loss of 3,472.56 dollars. To resolve this issue, special attention needs to be given towards tables and bookcases sub-category. Increment of selling price can help resolve this issue to an extent. The other solution is to stop the sales of tables and bookcases in the superstore.

It’s observed that the ‘home office’ segment offers the least sales. This is the segment that superstore needs to target more to boost their sales. If this segment is targeted naturally the sales of all three categories will rise up. This is a must required change. The visualization includes a table tells us about the cities that requires more focus. More focus means more customers and in a way increase in sales and profits. The visualization also includes a list of sub-category which do not provide huge amount of profits. A little change to the selling price can help change that.