Hi Mr./Mrs. CEO,

After analyzing the data file consisting of historical operating data for all locations, I have found 3 factors which can maximize profit margin at each location. The average annual profit margin for a location, after imputing rental costs for owned locations, was 24.81%. The first factor to consider is the state that the store operates in. I found that Texas and California had the highest average profit margins with 27.86% and 25.90% respectively, while New Jersey and Georgia had the lowest average profit margins with 19.47% and 20.55% respectively. The second factor to consider is whether the location is owned or rented. Even after imputing rental costs for owned locations, I found that owned locations had an average profit margin of 28.17% while rented locations had an average profit margin of only 24.41%. The third factor that affects profit margin is the number of products for a specific location. By looking at the “Profit Margins vs Number of Products” scatter plot, we can see a positive correlation between the number of products and the profit margin at a given location. This correlation was quantified as having a .8 Pearson Coefficient which signifies a significant level of correlation.

Please let me know if there is anything I can further clarify or expand on.

Best,
Kento
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