A1: Data-Driven Strategic Recommendations and Business Report

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Targeting the products from the storage subcategory in the Illinois states will increase the profit with high sales by deriving precise marketing strategy to spread the advantages of the discounted rates on those products.

Superstore, a prominent big-box chain, boasts an extensive presence throughout the United States with numerous retail stores. The wide array of products available at these stores can be categorized into three main divisions: technology, office appliances, and furniture. These categories, in turn, comprise a total of seventeen subcategories, ensuring a diverse range of offerings to cater to the needs of consumers, corporate clients, and home offices alike. With over 1800 unique products on offer, the Superstore has established a substantial customer base.

To gain insights into the sales and profitability trends, an analysis was conducted on the data collected from December 2017 to December 2019. This analysis focused on evaluating the performance of different states and product categories. Since the objective is to allocate additional budget towards the marketing of the stores not performing successfully in specific states, it is crucial to analyze the trends and patterns of successful stores. The comparison can then be utilized to understand the trajectory of the underperforming stores in states which will help in developing specific marketing strategies to increase the profits.

Among all the states in the United States, California emerged as the most profitable, followed by New York. However, the operations in New York stores were sold to the competitors recently.

These states not only achieved higher sales figures but also recorded impressive profit margins. On the other hand, states such as Wisconsin, Washington, and Minnesota exhibited moderate sales and profits, indicating a relatively stable performance without incurring losses.

The technology category emerged as the most lucrative segment across most states, contributing significantly to their overall profits. Conversely, the furniture category yielded the lowest profits in comparison. Moreover, the states with the highest sales predominantly relied on the standard class mode of shipment to fulfill customer orders efficiently.

However, it is worth noting that some states demonstrated high sales figures but comparatively lower profits. Illinois, Pennsylvania, and Texas fell into this category, as they experienced an increase in sales compared to the previous year but witnessed a significant decline in profits. Particularly concerning is the fact that these three states reported negative profits consistently for each month over the last 24 months. Illinois reported a profit of -$5000, Pennsylvania reported -$4000, and Texas topped the list reporting a profit of almost -$10000. Since operations in Texas stores were sold to the competitors, Illinois becomes the states with the least profits.

The office supplies category, encompassing subcategories like binders, labels, fasteners, and envelopes, emerged as the least profitable segment overall. This trend of diminished profitability extended to all three states, indicating their struggle to generate profits from this particular category. Interestingly, the shipment method differed for the least profitable states compared to the more successful ones. While the profitable states relied heavily on the standard class shipment method to maximize their profits, Illinois, Pennsylvania, and Texas reported the least profits through this mode of shipment. This deviation in trends further contributes to the disparities observed in the profitability of these states.

The office supplies category has nine subcategories which include appliances, art, binders, envelopes, fasteners, labels, papers, storage, and supplies. According to the analysis, paper is the most profitable subcategory in the office supplies for the least profitable states throughout the 24 months. Arts, envelopes, labels, and fasteners do not have high sales, but their profitability is higher. The low profit collecting subcategories are appliances, binders, storage, and supplies. The data also shows that products in these subcategories are sold at high discounts. High discounts can be a major reason for low profits.

The trends in the Illinois stores suggest that the stores have been making high sales and earning low profits. The high discounts would attract more customers to buy products from the office supplies category resulting in higher sales, taking advantage of the low cost. However, if the discounts appear to be disproportionate affecting the profit margin and thereby resulting in low profits. The highest discount is on binders followed by paper. It appears that a discount on papers' category is likely driving up the sales and profits of the paper products whereas on the contrary decreasing the profits for binders and appliances. From the top four of least profitable subcategories, storage appears to have a moderate discount and not significantly low profitability ratio. It is highly possible that customers might not be aware of the discounts on the products from the storage subcategory.

Since it has been established based on the data analysis that Illinois is the least profitable state, it is necessary to dilute the trends and patterns observed in those stores by analyzing the sales, profits, and shipment methods specifically for stores in Illinois. The focus for analysis in on the office supplies category along with specifically highlighting sales and profits in the appliances, binders, storage, and supplies subcategories. The data suggests that there was no sale or profit recorded for products in binders and supplies subcategories in the year 2017. However, in 2018 and 2019, the products sold in the supplies subcategory made minor profits in the positive direction. However, the profits recorded for binders in 2018 and 2019 are significantly negative. The products in the appliances' subcategory have recorded negative profits in all the 24 months.

The most interesting profits trajectory is displayed by the storage subcategory. The profits recorded in 2017 for the products in the storage subcategory were negative. However, there was not a major but significant increase in the profits recorded in the year 2018. It suggests that customers were buying products from the storage subcategory which were generating more profits for the stores. Despite the high profits, the year 2019 saw a decline in profits for the storage subcategory. The data shows that there was a sudden decrement of sales for the storage subcategory in August 2019 with a small increase in October 2019. However, December 2019 recorded a decrease in sales for the storage subcategory. Assuming this might be the reason discounts would have been introduced to increase the sales of the products thereby increasing the profits, since the discount timeline is not provided in the data. If there was an increase in the price of the products, the customers might have stopped purchasing the products and thereby were not aware of the newly added discounted price.

Based on the data exploration and analysis, the recommendation is to allocate the additional budget for the marketing of the discounted price for the products of the storage subcategory from the office supplies category in the stores located in Illinois. Since, the stores in Illinois have high sales but are not profitable, the targeted marketing campaigns will increase the footfall of customers willing to take advantage of the discount which will in return increase the profits making the stores successful. Additionally, if there is a surplus from the marketing spent, another recommendation is to spend it on the standard class shipment method to boost the profits coming from it since it is one of the most convenient delivery methods.