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INDIVIDUAL RECOMMENDATION REPORT

Goal: Provide a location-based recommendation in support of Natasha's plan to increase profits by 10% in the next year.

To increase profits by 10% in the Art sub-category, I decided to review profit and sales data provided by Office solutions. First, I have found that the Central region has the highest discount rate (21.6%) while accumulating the third most profit (\$1,195.16), sales (\$5,765.34), and product quantities (678). The most effective region is West, which has accumulated the highest in profit (\$2,374.10), sales (\$9,212.07), product quantities (926) with the lowest discount rate (7.8%). This finding leads me to look more closely at the Central region, analyzing the Central states' discounts rate.

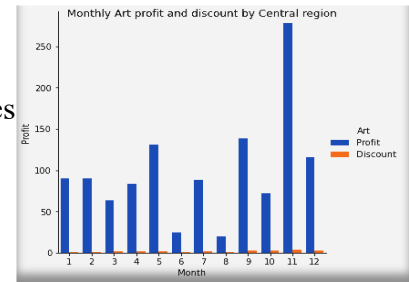


Figure 1: Monthly Art profit and discount by Central region.

I found out the interesting point is that discount rates of the whole region (21.6%) only apply in Texas (14.2%) and Illinois (7.4%). Michigan and Indiana are potential states in the top four profitable states without discounts. Figure 1 shows the discount rates apply on all 12 months. The peak profit is in November with a discount rate of 3.2%, followed by September (2.8%), May (1.6%), and December (2.2%). It can be easy to understand customer demand for the back-to-school, and holiday seasons.

Year	Sales	Profit	Discount
2016	1519.95	261.42	5.4
2017	2291.28	497.83	10.0
2018	821.95	187.84	3.2
2019	1132.16	248.07	3.0

Table 1: Art sales profit and discount rate from 2016-2019

Next, I want to examine the relationship between the discount rate and Art sub-category sales profit from 2016 to 2019. Table 1 shows that the increase in discount rate helps increase sales profit. The most profitable year is 2017 with \$ 497.83 on profit at the discount rate 10%.

Try to understand the profit; I investigate products that make the most profitable in the Art sub-category. Table 2 displays electric pencil sharpeners and color pencil set are the top profitable products.

Product Name	Profit	Quantity
Hunt PowerHouse Electric Pencil Sharpener, Blue	448.16	44
Boston Heavy-Duty Trimline Electric Pencil Sharpeners	310.89	25
Boston 1645 Deluxe Heavier-Duty Electric Pencil Sharpener	206.27	27
Dixon Ticonderoga Core-Lock Colored Pencils, 48-Color Set	165.21	13
Prismacolor Color Pencil Set	155.55	24

Table 2: Top five profitable products in Art sub-category

Recommendation

I recommend OS increase discount rate in the Central region for special seasons to increase the sales volume/ sales profit, focus on electric pencil sharpeners and color pencil sets products, and apply a discount for Michigan and Indiana states.