

Goal: Aim for a 20% increase in sales this year based on the existing sales performance.

I can obtain an overview of the actual changes in profits and sales based on Natasha's data in the TableauSalesData Excel file. As seen in Table 1, the technology category has the highest sales revenue and profit out of all three categories. In particular, the table is sorted by profit, with copiers having the highest profit at \$55,617 among the subcategories listed. However, when I looked at sales, copiers ranked lowest with a total sale of \$149,528. Despite being the most profitable subcategory, copiers have relatively lower sales volumes. Therefore, it motivated me to look at further causes for that by concentrating on a thorough analysis of data for every region.

Category	Sub-Category	Profit	Sales
Technology	Copiers	55617.8249	149528.030
	Phones	44515.7306	330007.054
	Accessories	41936.6357	167380.318
Office Supplies	Paper	34053.5693	78479.206
	Binders	30221.7633	203412.733
Furniture	Chairs	26590.1663	328449.103
Office Supplies	Storage	21278.8264	223843.608
	Appliances	18138.0054	107532.161
Furniture	Furnishings	13059.1436	91705.164
Office Supplies	Envelopes	6964.1767	16476.402

Table 1: The Sales and Profits by Multilevel Grouping Category and Subcategory

For a better understanding of how copiers of sale affect the business in Table 2, I investigated how they both performed in each region. The South Region has the lowest profits and sales of the rest regions. Copiers are very well sold in the East region, with 5.3 times more sales in comparison to the South area. Thus, sales usually increase when profits also increase, which reflects a positive relationship. The South region, however, has very low copier sales, so I wonder if there is a way to boost it up. For that reason, I wanted to examine the average discount rates, to see if they had any big differences among regions of copiers.

Region	Sales	Profit
Central	37259.570	15608.8413
East	53219.462	17022.8418
South	9299.756	3658.9067
West	49749.242	19327.2351

Table 2: The Sales and Profit of Each Region for Copiers

As Table 3 displays, the level of discounts for different regions varies significantly. In contrast to other areas, the East region reaches the highest discount, which is 8.3 times more than the Southern region. As a result, the South receives the lowest discount of 0.6 of the rate from business compared to other regions. West and Central regions have average discounts, but they are still 6 times and 3 times higher than South. To find out why South region discounts are so low, I would evaluate the relationship between sales and discounts regarding copiers of each region to see if average discount rates support sales.

Region	Discount
Central	1.8
East	5.0
South	0.6
West	3.6

Table 3: The Average Discounts of Each Region for Copiers

Based on Table 4, I analyzed whether sales and discounts are inversely proportional to different types of copiers. All products did not have a uniform discount rate. The lowest discount rate is 5%, while the highest is 25%. The Sharp AL-1530CS Digital Copier has the highest discount but results in sales of just \$1599. In contrast, the Canon imageCLASS 2200 Advanced Copier achieves the highest sales but with only a 12% discount. I discovered that there are products with high sales but low discount rates and products with high discount rates but low sales. In my calculations of Pearson R coefficient correlation value, I find that it reaches a weak negative number of -0.20 at a p-value of 0.05. In conclusion, a higher average discount rate will not lead to more sales of copiers. It indicates an opposite correlation when the discount offered increases, the sales tend to decrease.

Product Name	Sales	Discount
Brother DCP1000 Digital 3 in 1 Multifunction Ma...	694.262571	0.142857
Canon Image Class D660 Copier	1979.967000	0.100000
Canon Imageclass D680 Copier / Fax	1791.974400	0.200000
Canon PC-428 Personal Copier	686.632333	0.200000
Canon PC1060 Personal Laser Copier	2904.958500	0.150000
Canon PC1080F Personal Copier	1499.975000	0.050000
Canon PC940 Copier	1889.958000	0.200000
Canon imageCLASS 2200 Advanced Copier	12319.964800	0.120000
Hewlett Packard 310 Color Digital Copier	699.976667	0.133333
Hewlett Packard 610 Color Digital Copier / Printer	1271.403143	0.142857
Hewlett Packard LaserJet 3310 Copier	2354.960750	0.200000
Sharp 1540cs Digital Laser Copier	628.560000	0.171429
Sharp AL-1530CS Digital Copier	1599.968000	0.250000

Table 4: The Average Discount on Sales for Each Copier

Recommendation: High discount rates negatively impact sales, causing lost revenue and ineffective attempts to boost sales. I recommend Office Solution cut down discount rates to optimize pricing strategy and create more favorable conditions for sales growth to help the company build a sustainable and long-term business model.