

Part 1: Profits & losses

1. Among the pairs of dimensions (e.g., subcategory + region, or shipping mode + product ID) which are the two biggest profit centers and two biggest loss-makers? Justify your conclusion with a visualization.
2. Which products should the superstore stop selling? Justify your conclusion with a visualization.
3. Which product subcategories should the store focus on and which should they stop selling? Choose 3 of each.

The two biggest profit centers are Office Supplies and Technology. However, the particular regions that brought in the most profits within those centers are East, West and Central. The bigger the discount, the smaller the profit incurred. Based on the “Profit/Loss” visual, the Superstore should stop selling furniture since it brought in the least amount of profit. The Superstore needs to focus on the following subcategories; Copiers, Phones and Accessories. The Superstore should stop selling Supplies, Bookcases and Tables.

Part 2: Advertising

1. Identify the 3 best combinations of states and month of the year to advertise in. Make a visualization of the average profit for each month of the year for those 3 states and argue how much you would be willing to pay in advertising for those states in those months.

The best states to advertise in are Indiana, Vermont and Rhode Island. The average profit from each state: in April, November and December are well above ROAS of 3. Advertising amount willing to pay out for Indiana in April is about \$7.3k, for November about \$14k, and December about \$20k. Advertising amount willing to pay out for Vermont in April is about \$67k, for November about \$119k, and December about \$13.5k. Advertising amount willing to pay out for Rhode Island in April is about \$2.4k, for November about \$4k, and December about \$50k.

Part 3: Returned items

1. Which products have the highest return rate?
2. Which customers have the highest return rate?

In a separate sheet, make a visualization of the average profit against the average return rate on a dimension of your choice (state, shipping mode, product type, etc.). Present a visual argument why the superstore should do away with or keep doing business on the basis of this dimension.

- Zebra GK420t direct thermal/thermal transfer printer, Okidata B401 Printer, Hewlett – Packard DeskJet F4180 all-in-one color inkjet printer/copier/scanner, Cisco SPA 501G IP Phone, Canon color ImageCLASS MF8580Cdw wireless laser, all-in-one printer, copier, scanner, Bush Saratoga collection 5-shelf bookcase, Hanover Cherry, *special order, Avery 500 and Acco Glide Clips are the products that have the highest return rate.

- Roland Murray and Hilary Holden are the customers that have the highest return rate.
- Based on the visualization, it seems that there is only one sub-category of products that are holding the most weight in pulling profits in for the Superstore. The Superstore may be best done away with the business. Alternatively, they could stay open if they focused on the categories and subcategories for the business that do significantly well, and cut out those that don't. In this way they could stay open for business.