

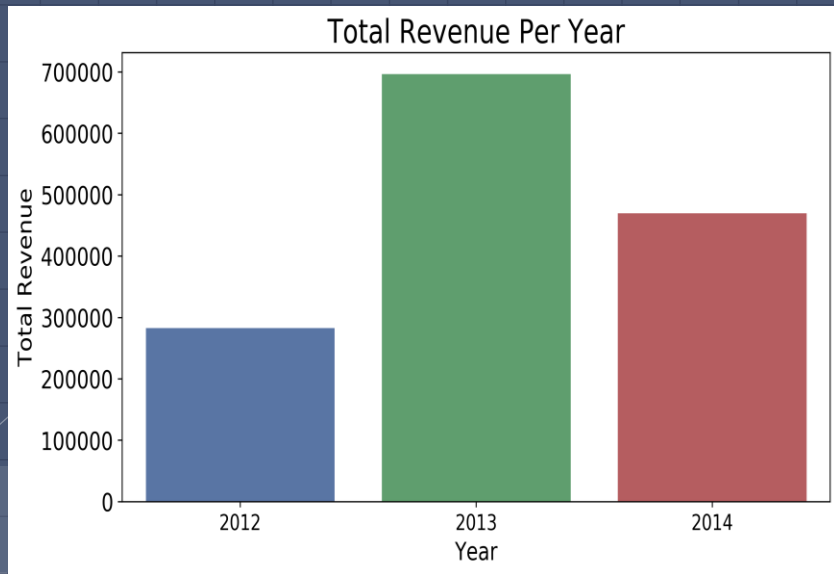
Exploring factors to increase sales

The background features a dark blue grid. Overlaid on the grid are two data visualizations: a line chart with white circular markers and a bar chart with semi-transparent blue bars. The line chart starts at a low point, rises to a peak, falls, and then fluctuates with an overall upward trend. The bar chart consists of numerous vertical bars of varying heights, creating a textured, data-driven background.

09/16/2019
Yeonjoo Smith

Motivation: Total Revenue Change Over Years

- ▣ Finding factors that affect total revenue
 - ▣ Total spending per order
 - ▣ Quantity per order
 - ▣ Customer retention rate
 - ▣ Orders per client in a year
- ▣ Suggestion
 - ▣ Discounts



Total Spending per Order:

Do customers spend more/less per order?

- Average spending per each order

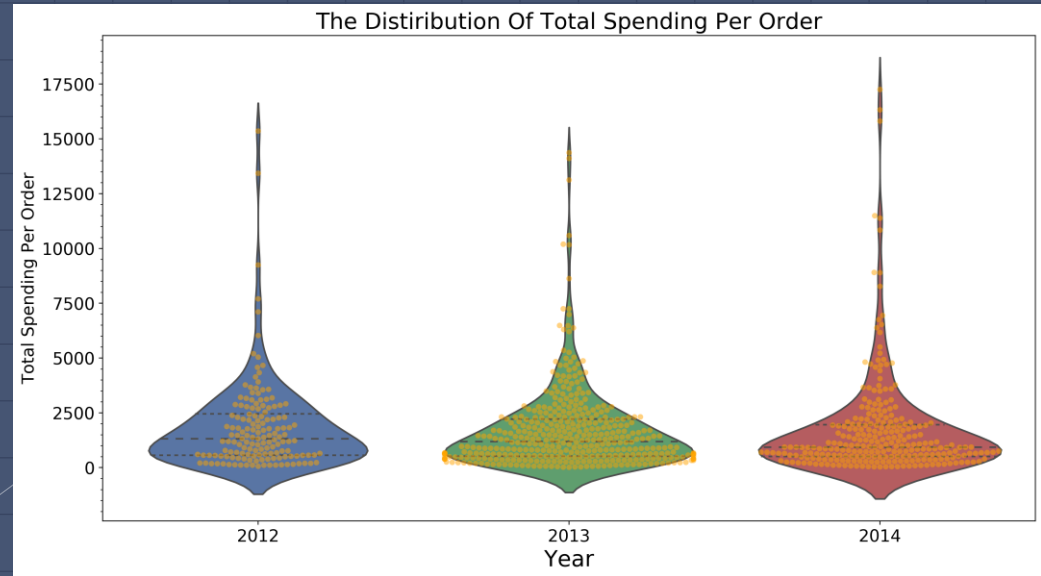
- In 2012:\$1862

- In 2013:\$1707

- In 2014:\$1740

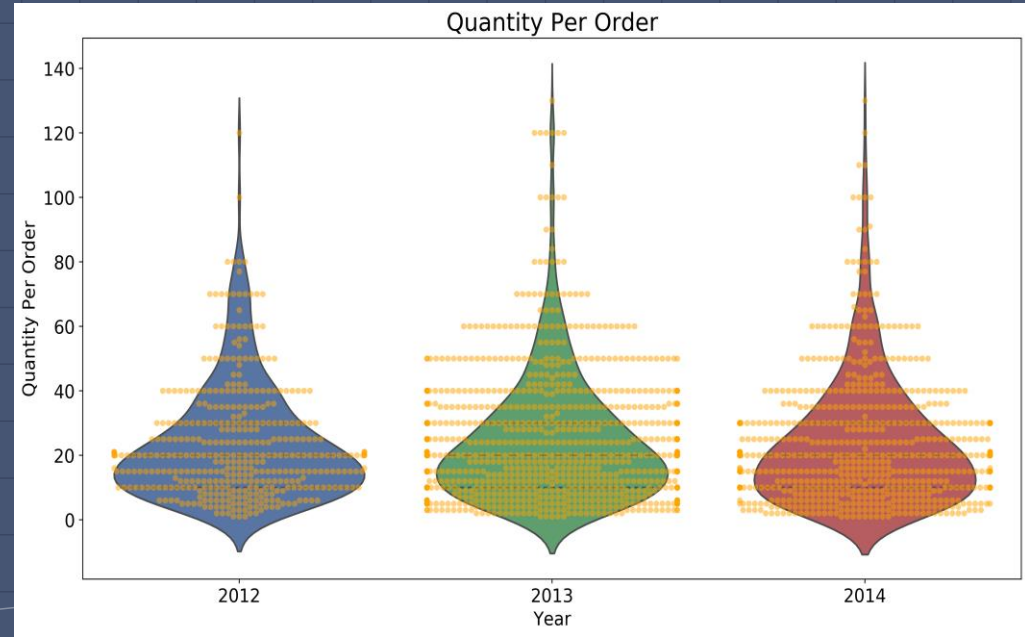
- ANOVA testing result
 - Not significant

Amount of spending per order stayed consistent!




Quantity per Order: Do customers order more/less quantity of a product per order?

- Average quantity per each order
 - In 2012: 23.66 units
 - In 2013: 24.07 units
 - In 2014: 23.5 units
- ANOVA testing result
 - Not significant



Amount of quantity per order stayed consistent!

New Customers and Retention Rate

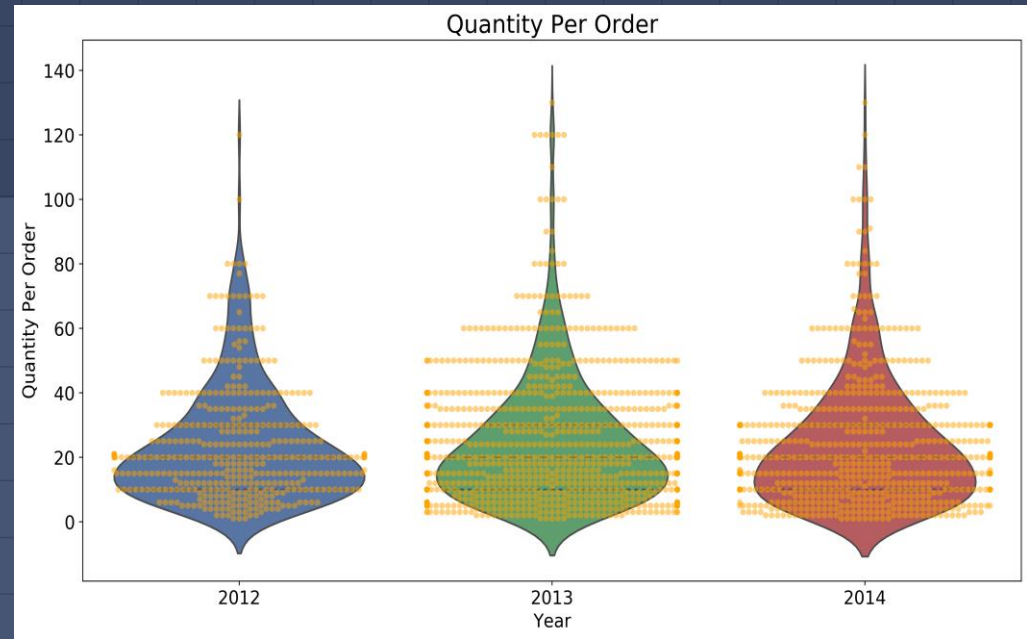
- New customers:
 - In 2013: 19
 - In 2014: 13
 - Retention rate:
 - In 2013: 98%
 - In 2014: 100%
- Answer for rapid revenue increase in 2013!
- AWESOME!
But... What about the decrease in revenue for 2014?
- 

Frequency of Orders

- Average orders per client in a year
 - In 2012: 1.73 times
 - In 2013: 4.69 times
 - In 2014: 3.33 times

- ANOVA test
SIGNIFICANT!!

The order frequency has changed!



- To Check the change from 2013 to 2014:
Welch's t-test
Customers shopped less frequently in 2014!



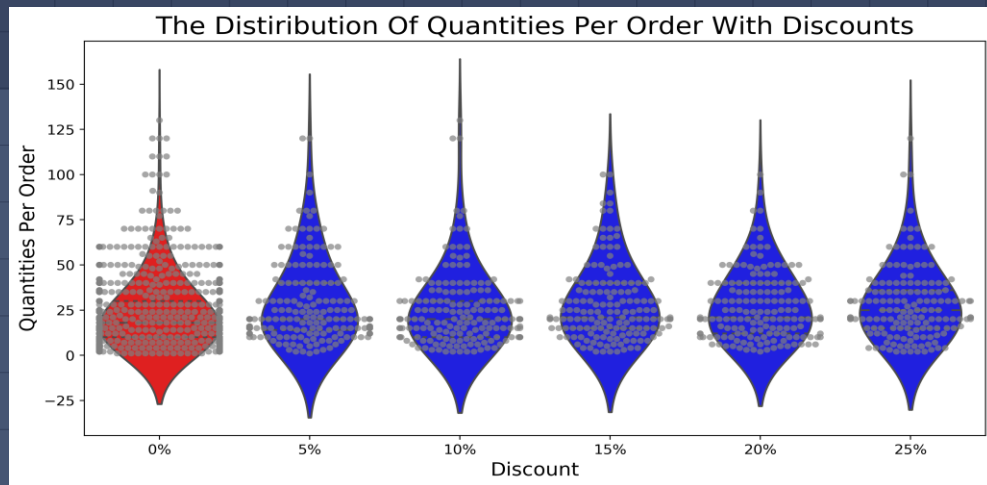
Do discounts make people buy more in general?

□ Average quantity per order:

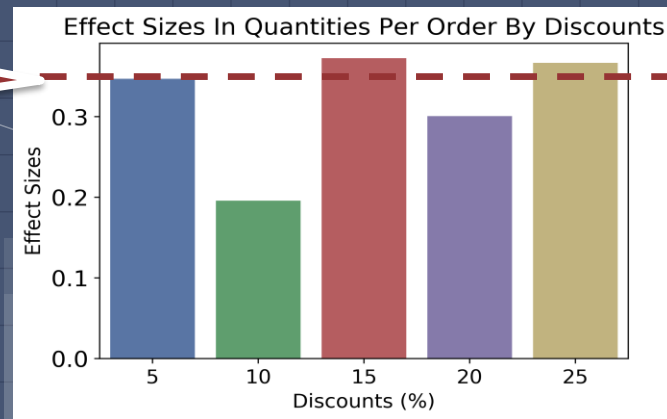
- 0%:21.72 units
- 5% :28 units
- 15%:28.38 units
- 25%28.24 units

- ANOVA test
- SIGNIFICANT !!

The quantity per order increase with ANY discount!!

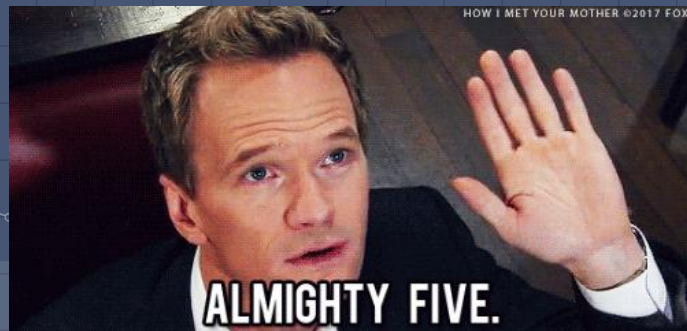


14% would order 6 more!



Summary

- ▣ Total revenue increase in 2013
 - Increase of new customers in 2013 👍
- ▣ Total revenue decrease in 2014
 - Insignificant:
 - ✓ Total spending per order
 - ✓ Quantity per order
 - ✓ 100% retention rate 😊
 - **Significant:**
 - ✓ **Frequency of orders per customer**
- ▣ Suggestion: Discount
 - Quantity in a order increase with discounts
 - Give 5% discount



Suggestions for further investigation

- ▣ Factors that drive new clients in 2013
- ▣ Ideas for increasing frequency of orders such as coupons or events
- ▣ Factors that lower order counts
 - Shipping process time
 - Sales divided into category
 - Sales divided into different regions





Thanks!