

Northwind Product Insight

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Overview & Questions

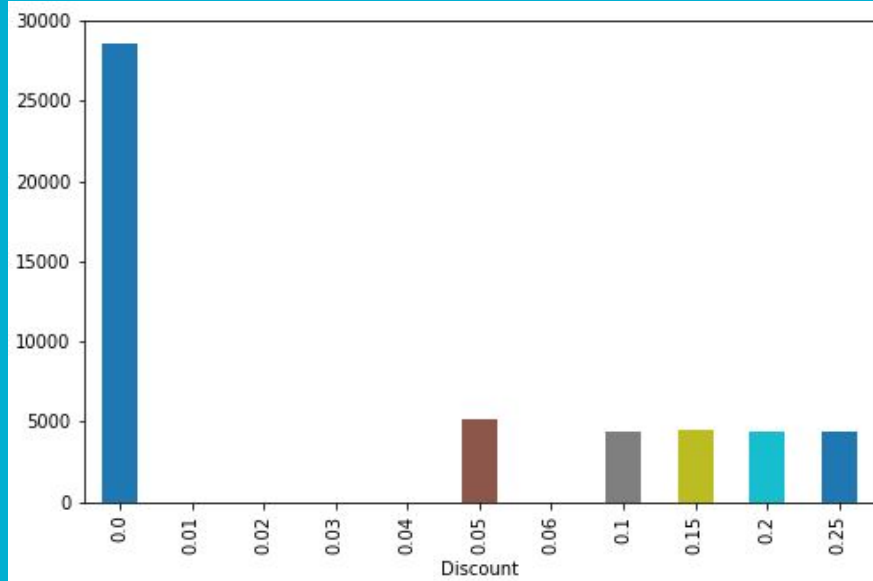
Investigate the following topics using hypothesis testing

- Effect of discounts on products ordered
- Find difference in local vs international sales
- Category types' effect on quantity ordered
- Identify any best sellers in categories

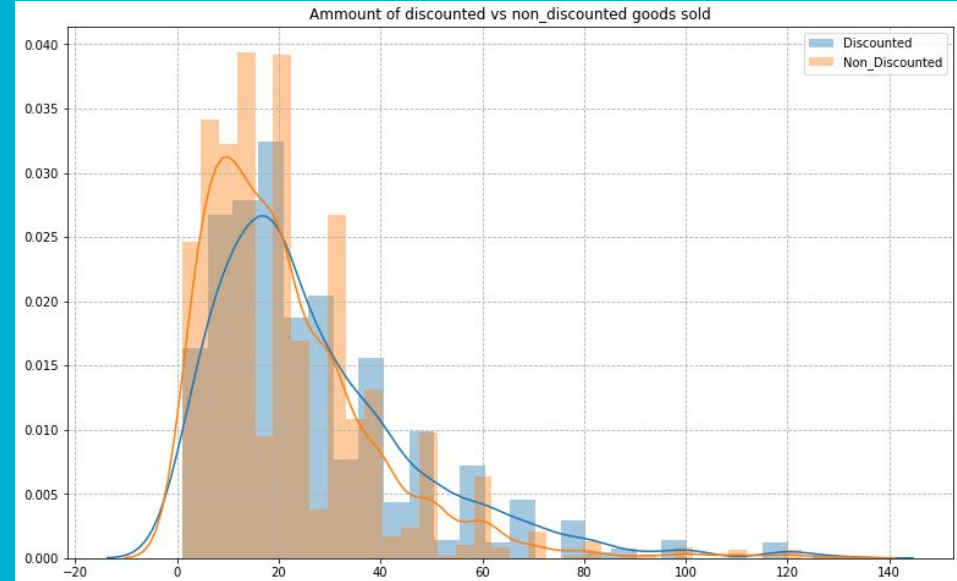


Do discounts have a significant impact on sales?

Sales by Discount

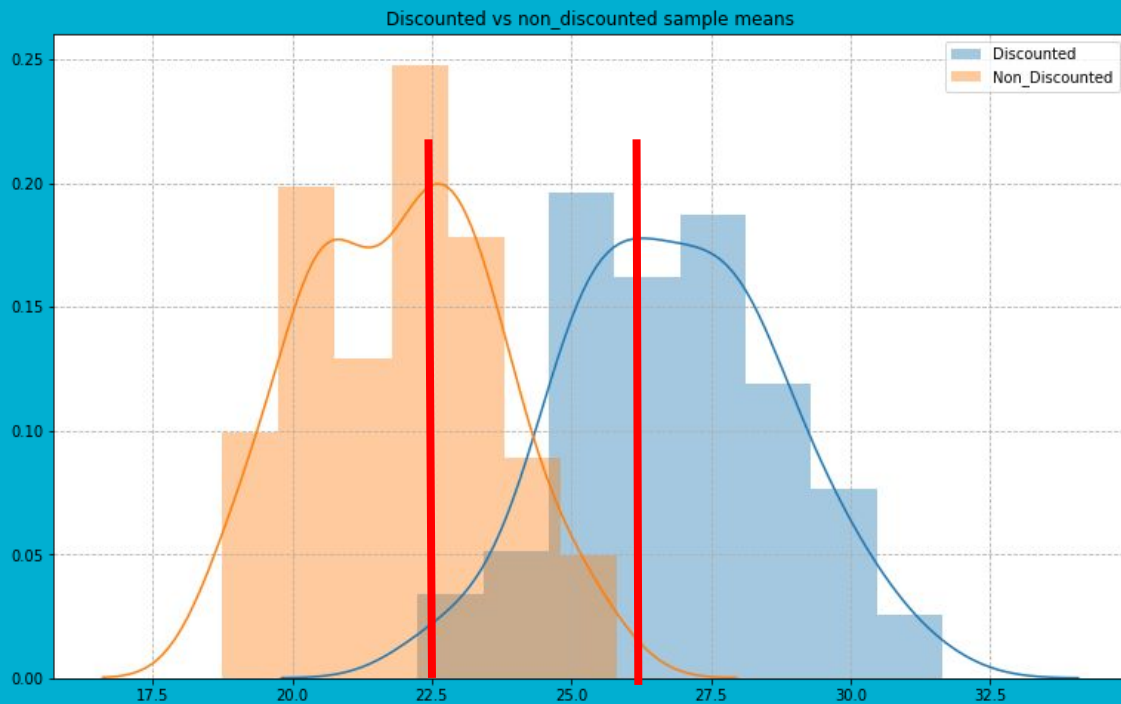


Sales do not vary much among discounted level



Notice how both discount & non-discount have similar pattern

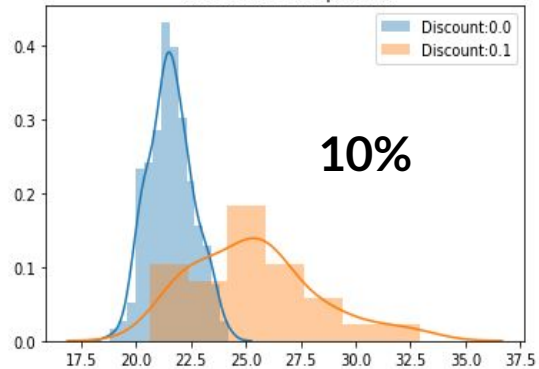
Answer: Yes, collectively & by level



- Discounts do have a significant impact on sales
- Notice small amount of overlap of the shaded areas.

- Shows significant difference

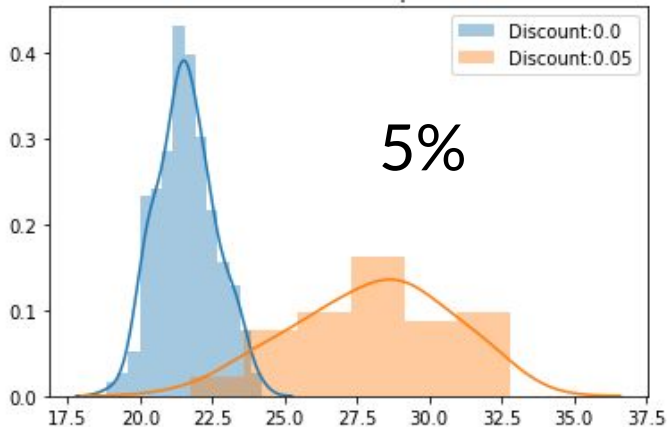
Discounts:0.0 vs 0.1
Sample size:300
Size of each sample:300



10%

Best option

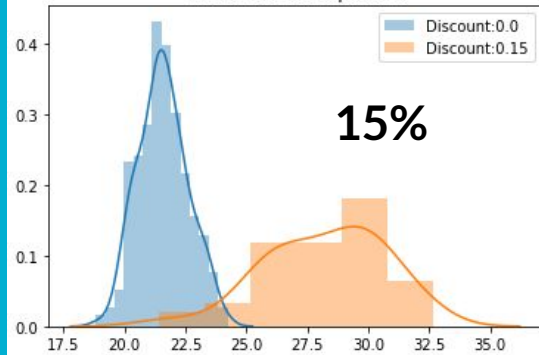
Discounts:0.0 vs 0.05
Sample size:300
Size of each sample:300



5%

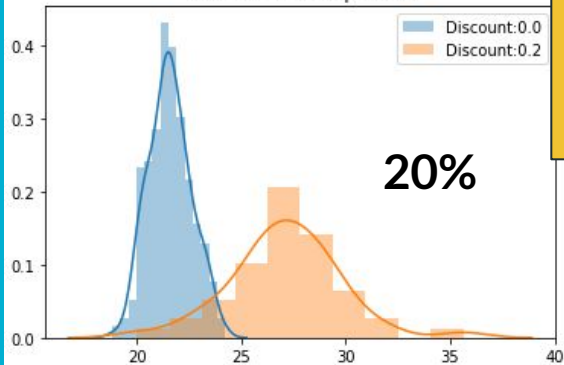
- More revenue
- More products sold

Discounts:0.0 vs 0.15
Sample size:300
Size of each sample:300



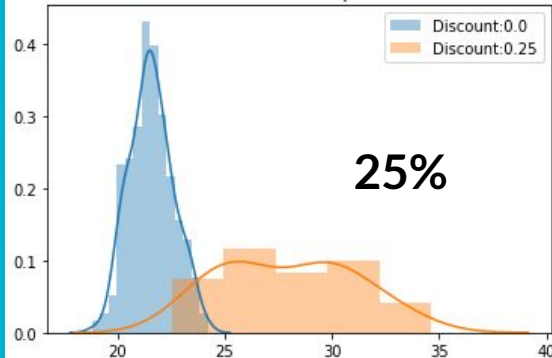
15%

Discounts:0.0 vs 0.2
Sample size:300
Size of each sample:300



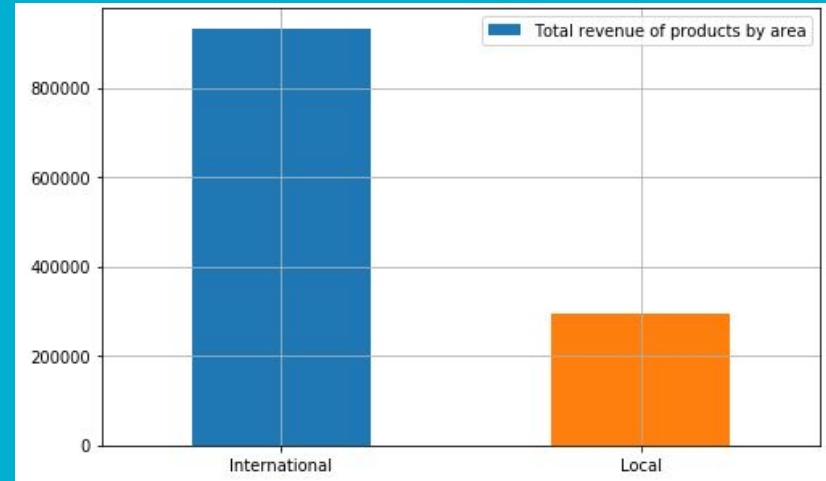
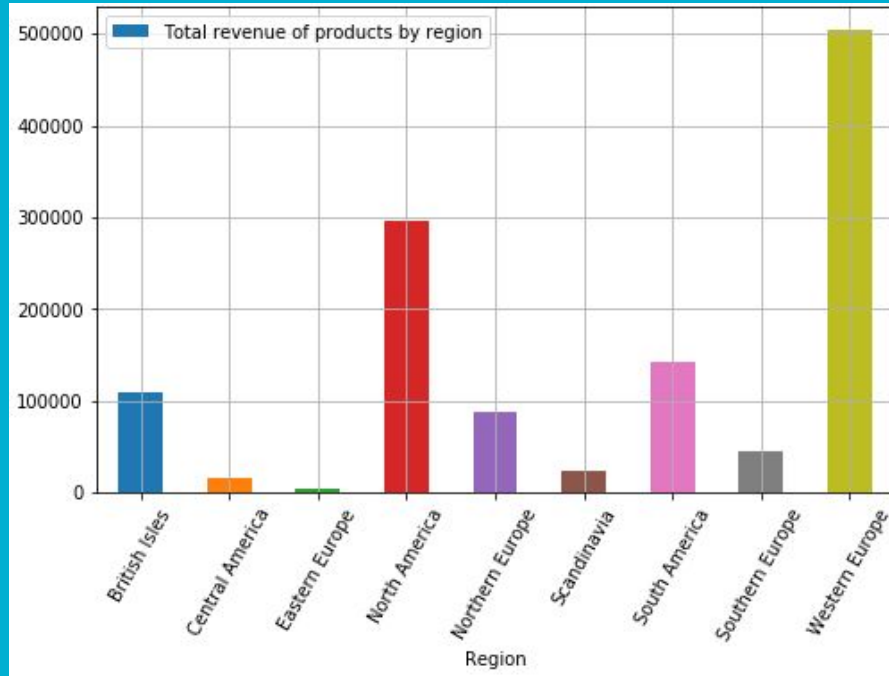
20%

Discounts:0.0 vs 0.25
Sample size:300
Size of each sample:300



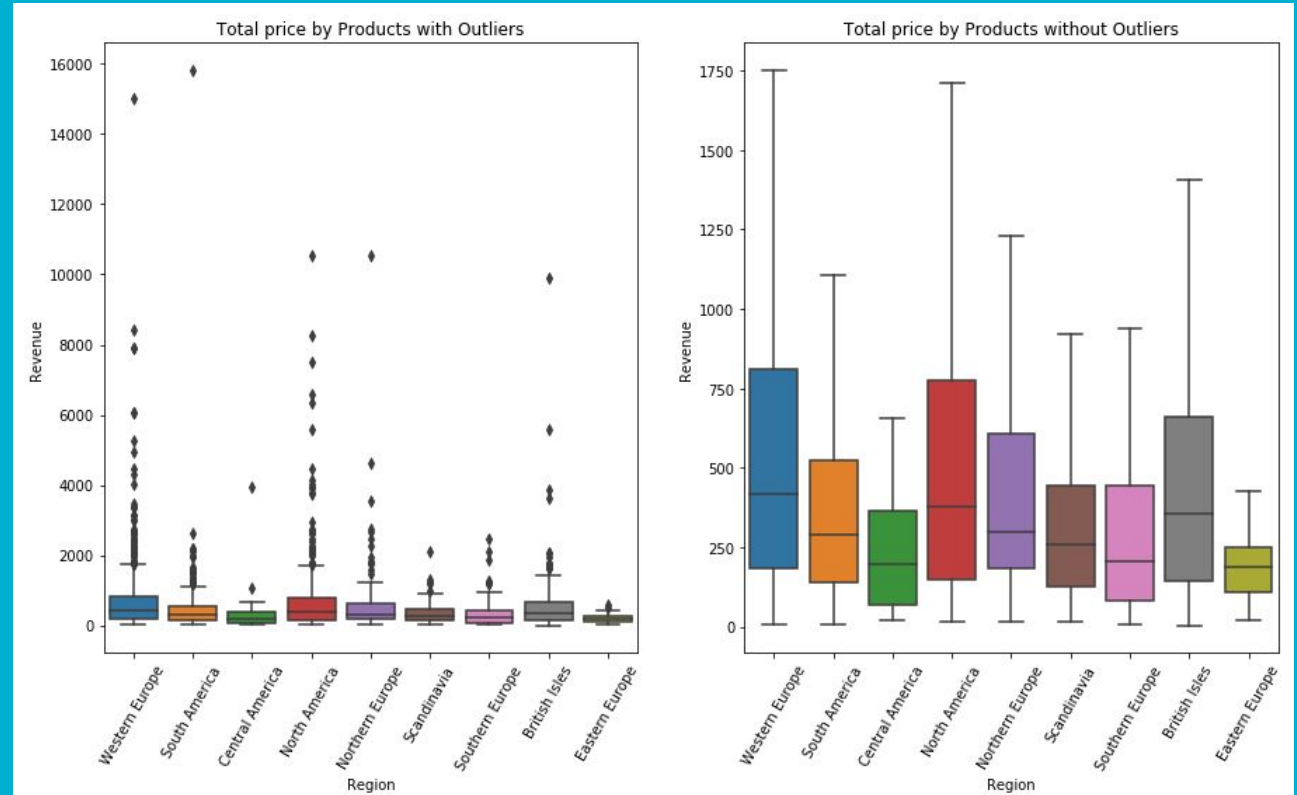
25%

Is there a significant difference between local and international sales?

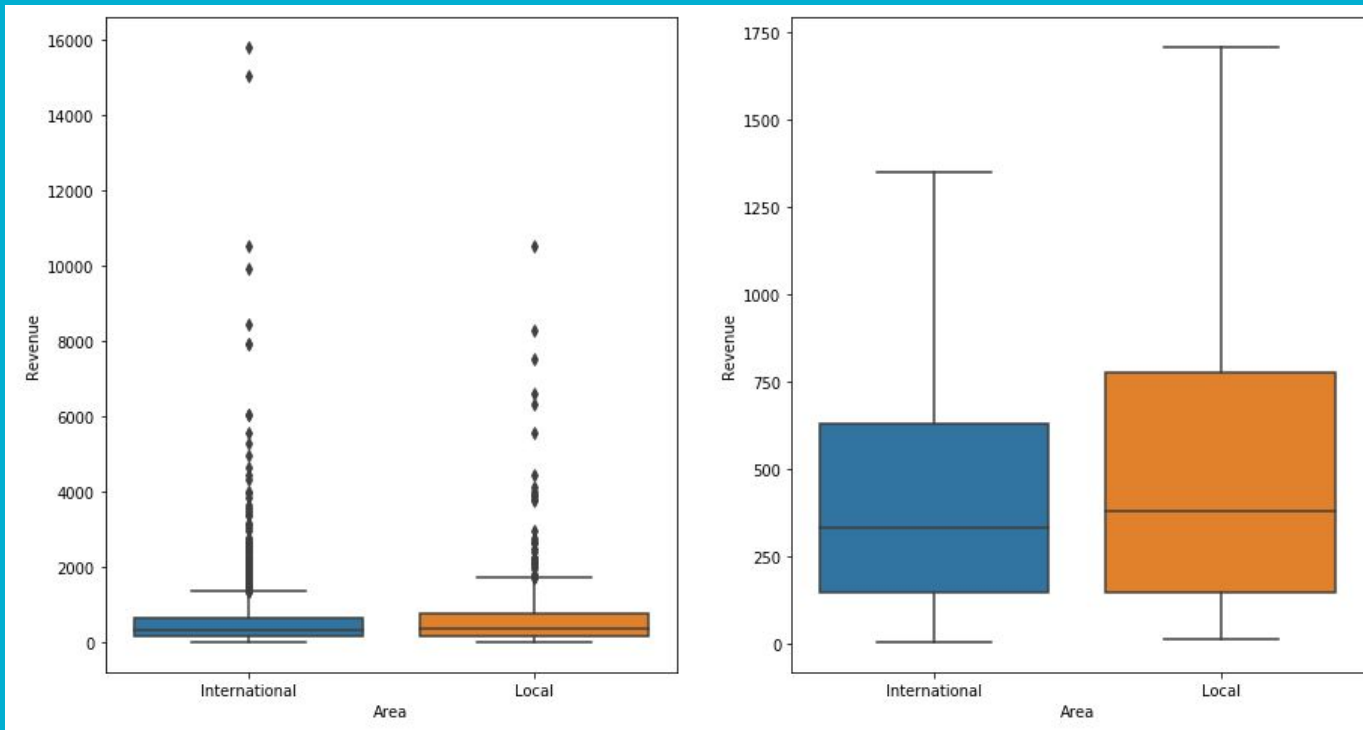


Based on totals, international sales dwarf North American sales.

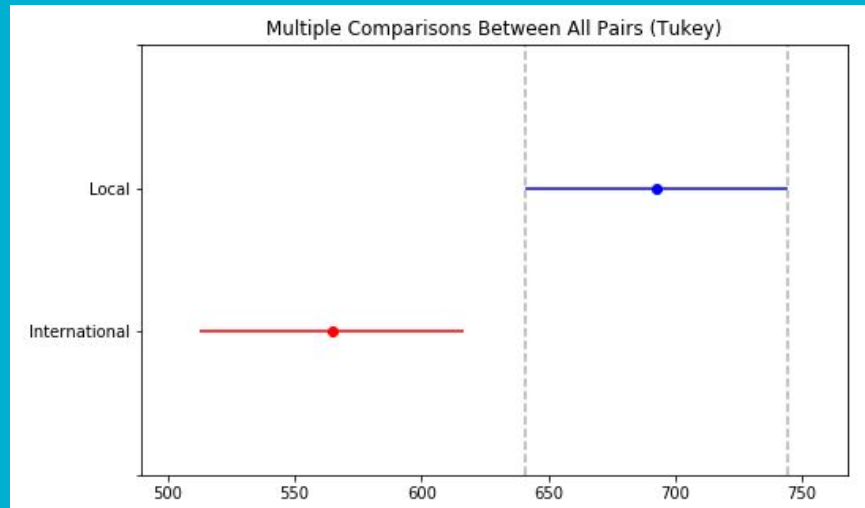
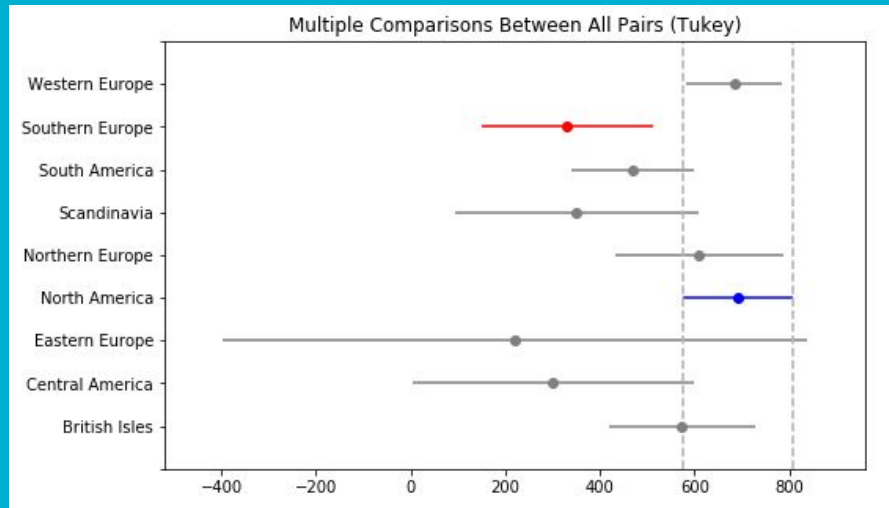
Based on averages,
North American
sales has an
advantage over
other regions,
except Western
Europe



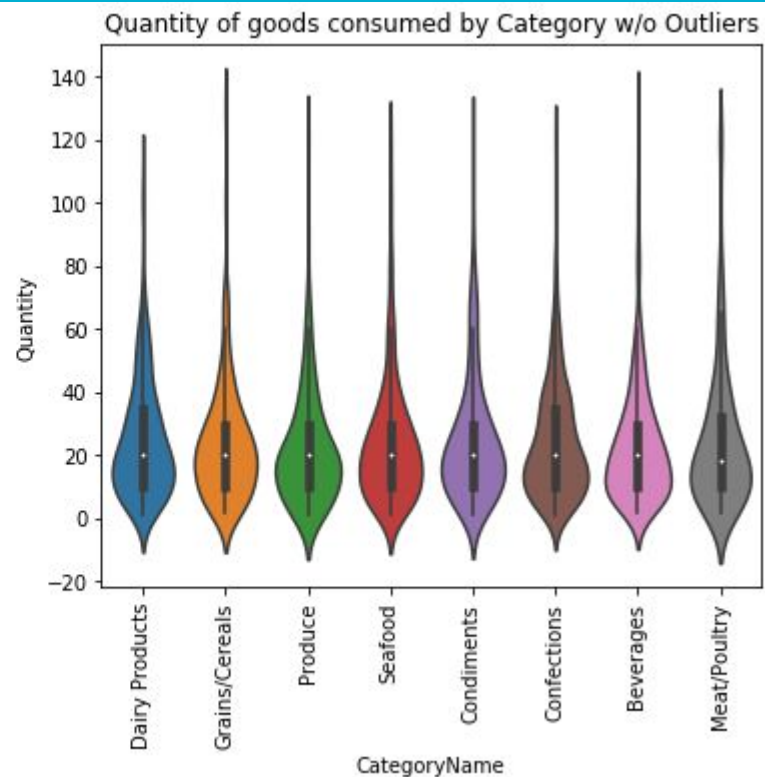
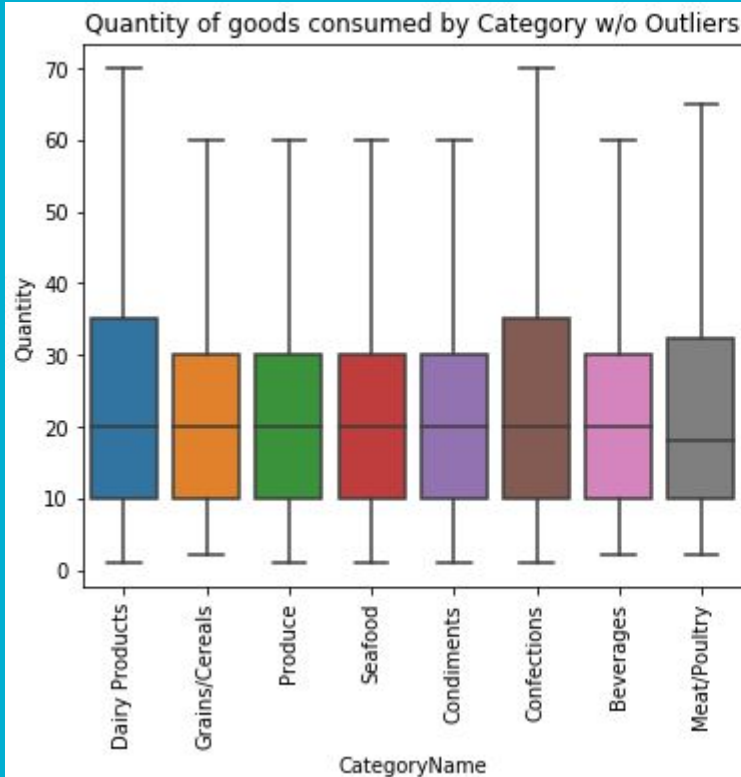
Overall, North American sales are noticeably higher.



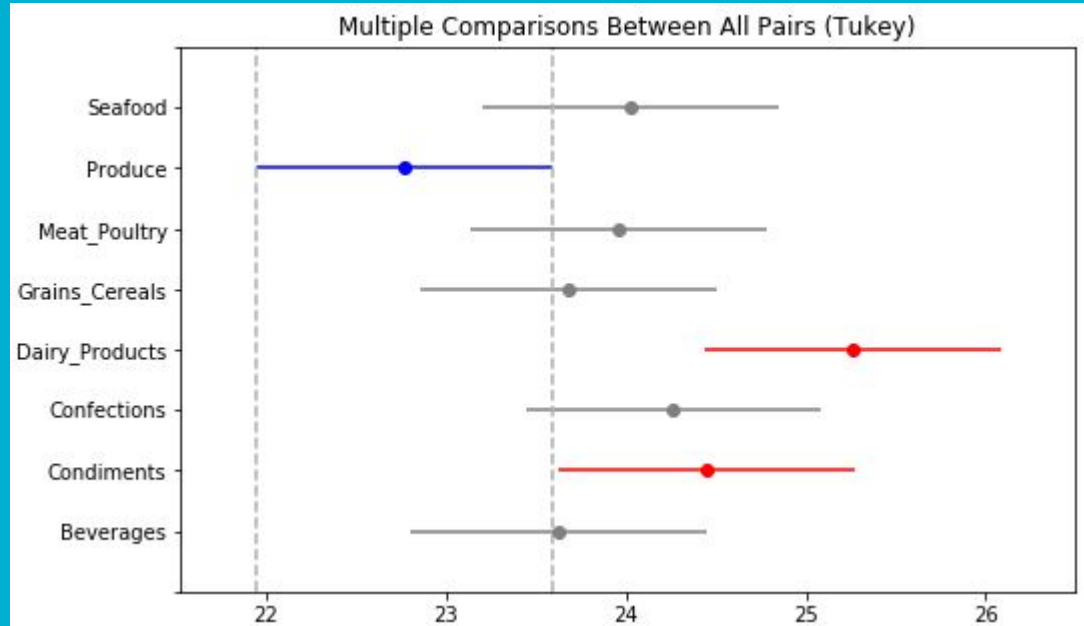
Yes, There is a significant difference in local vs international sales



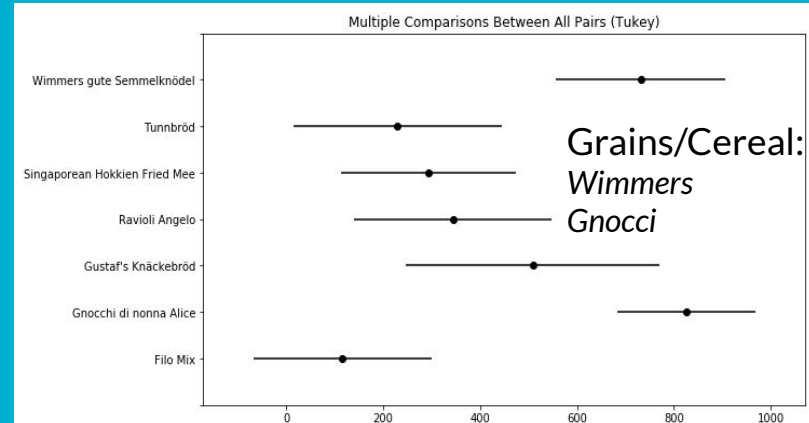
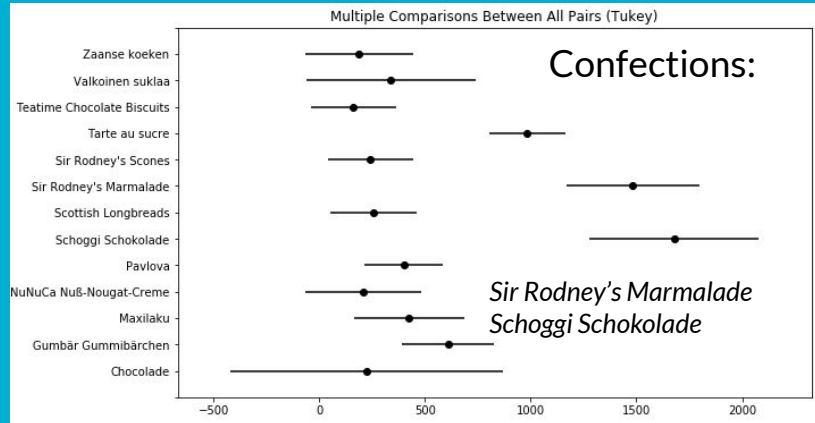
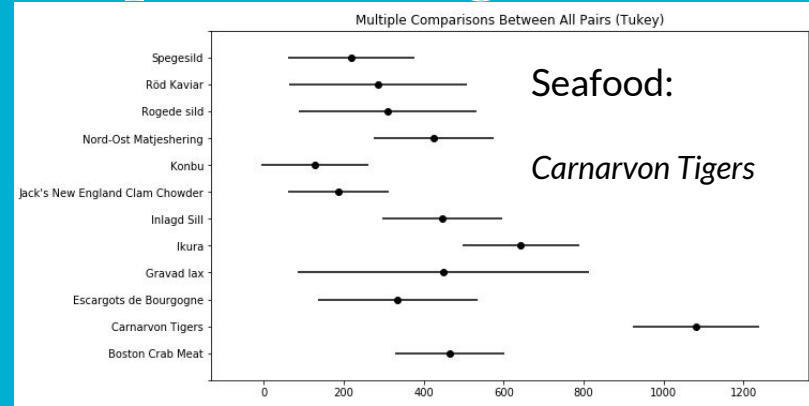
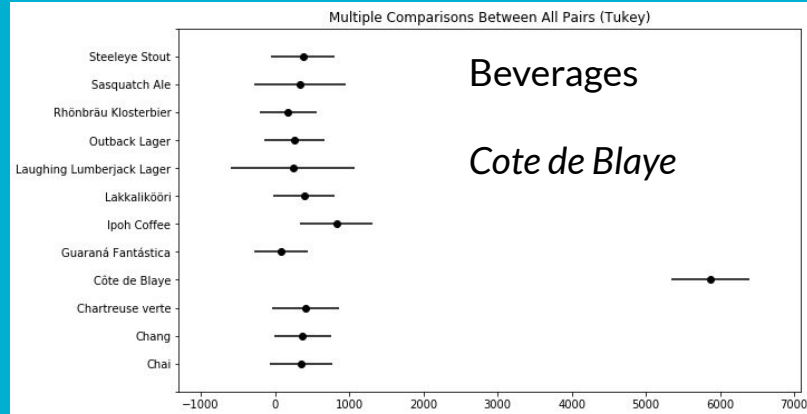
Do the category/type of goods have a significant impact on the quantity ordered?



Answer: No. There is no overall difference



Are there certain products that have a significant difference on revenue generated within their respective categories?

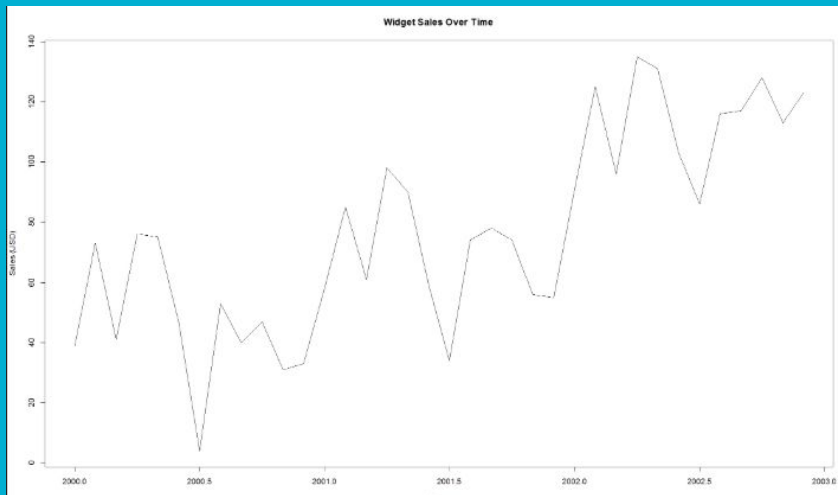
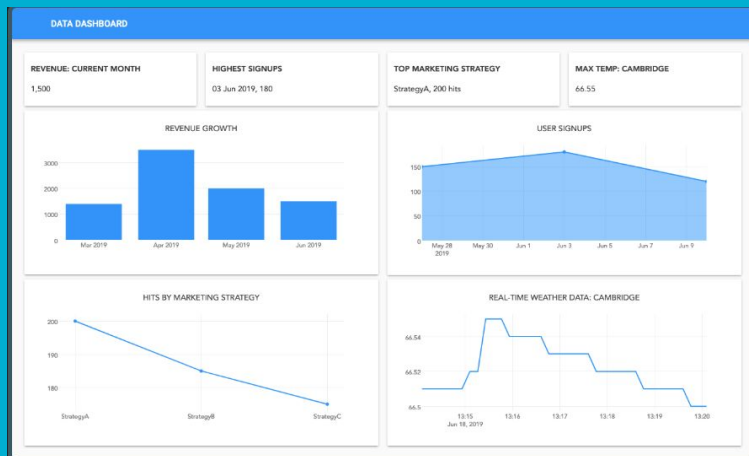


Summary:

- Effect of discounts on products ordered
 - Yes
 - Sell more at 0.05 & use discount above 0.10 as incentive
- Find difference in local vs international sales
 - North America > International
- Category types' effect on quantity ordered
 - Not significant enough
- Identify any best sellers in categories
 - Only visible in *Grains/Cereal, Confections, Beverages, & Seafood*

Future works

Interactive dashboard



THANK YOU FOR



**LISTENING TO MY
PRESENTATION**