



Northwind Traders

Presented by Jon Tyler



Data

Highlights

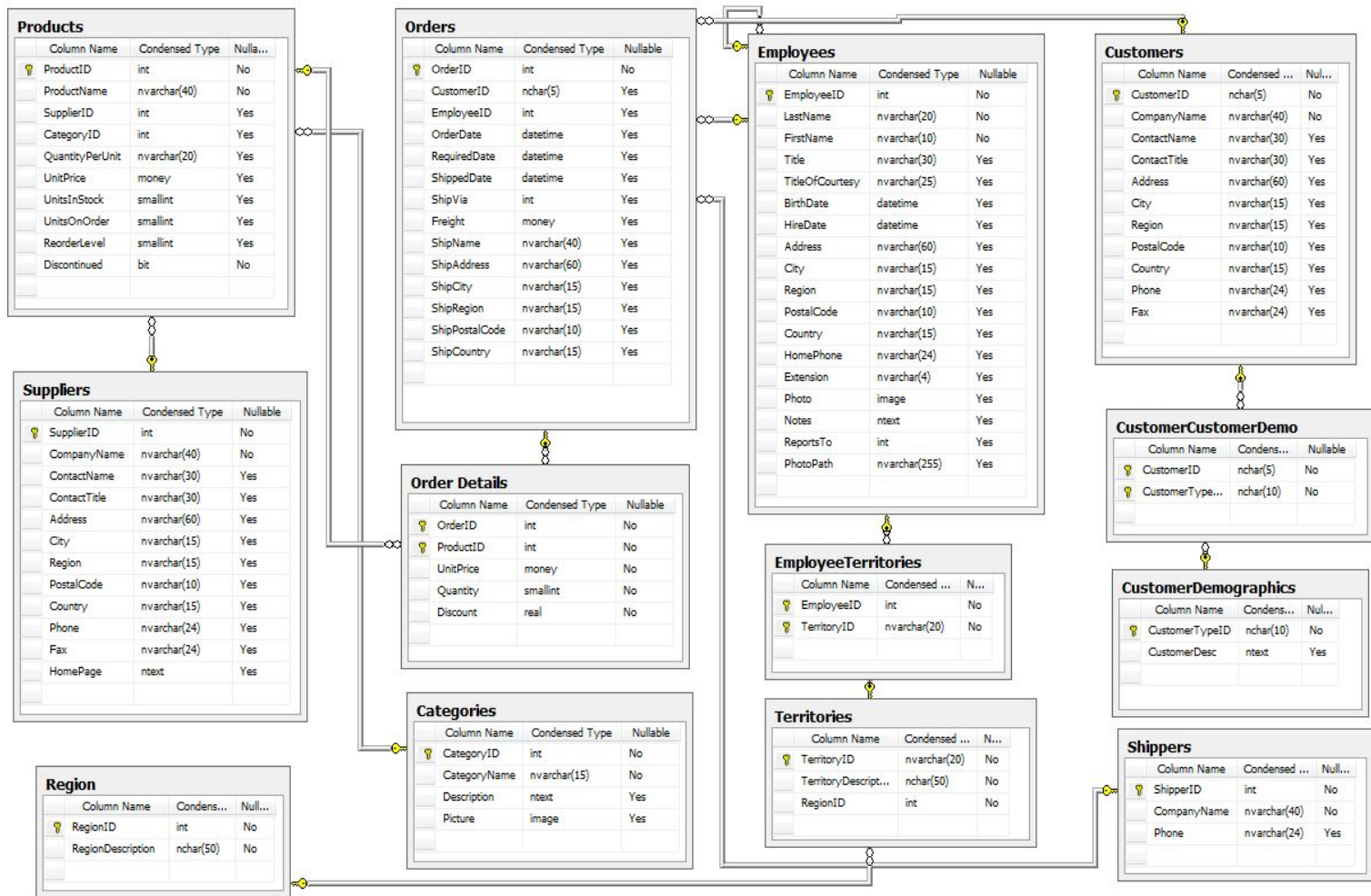
830 orders

2155 products
orders

9 employees

77 unique
products

91 customers



Objective

Gain insight into the following questions:

- 1) Do discounts have a statistically significant effect on the number of products customers order? If so, at what level(s) of discount?
- 2) Is there a difference in the money generated from sales between the North America office and the British Island office?
- 3) Does having 'manager' in your title effect the amount a customer orders?
- 4) Is there a difference in quantity of products given their average shelf life?




95%

Confidence Level

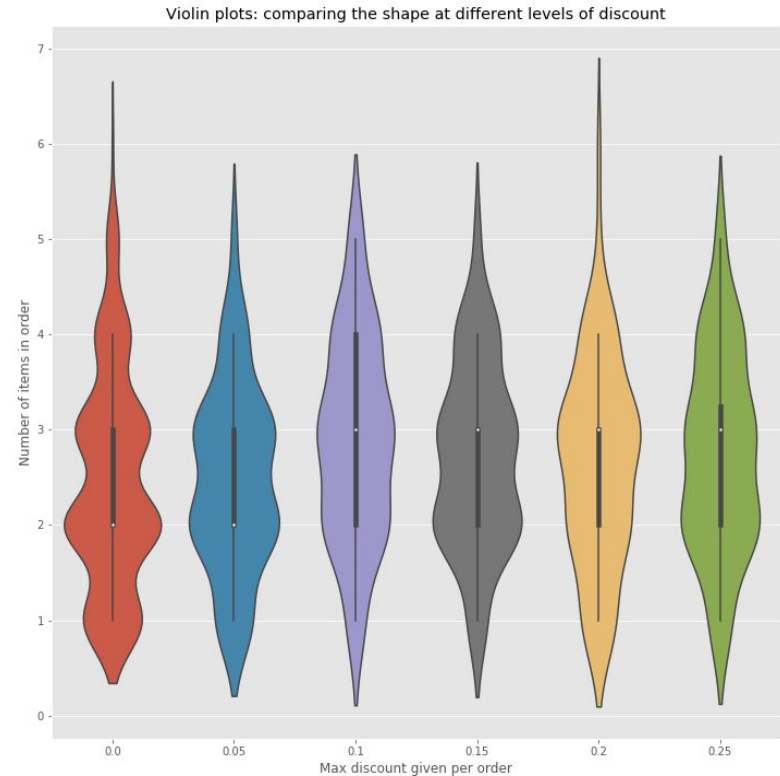
Confidence Level: The difference we observed probably **not** due to chance

Equivalent to an alpha level of 0.05



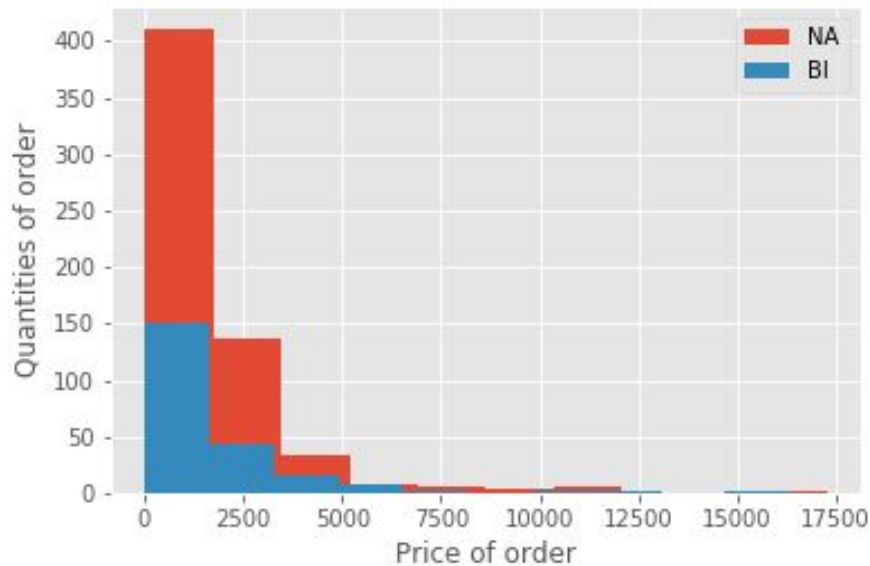
Do discounts have a statistically significant effect on the number of products customers order? If so, at what level(s) of discount?

- -We can reject our null hypothesis that concludes that there is **significant difference between discount and no discount**
- Comparing between the different levels of discount, the greatest effect is seen at no discount to a **10% discount**.
- Further testing needs to account for orders with different discount levels within the same order



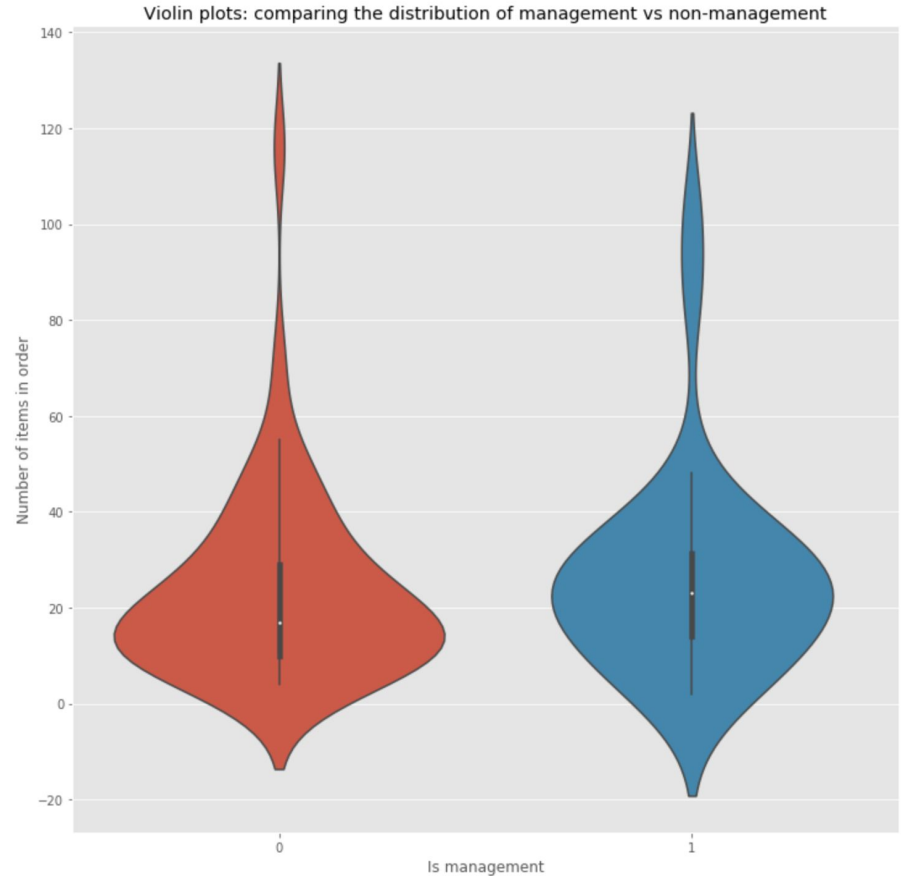
Is there a difference in the money generated from sales between the North America office and the British Island office?

- Failed to reject the null hypothesis. There is **no statistical difference** between the median revenues generated by the North American office and the British Island office
- Further testing: testing out “sales representative” titles to sales “manager titles”, etc



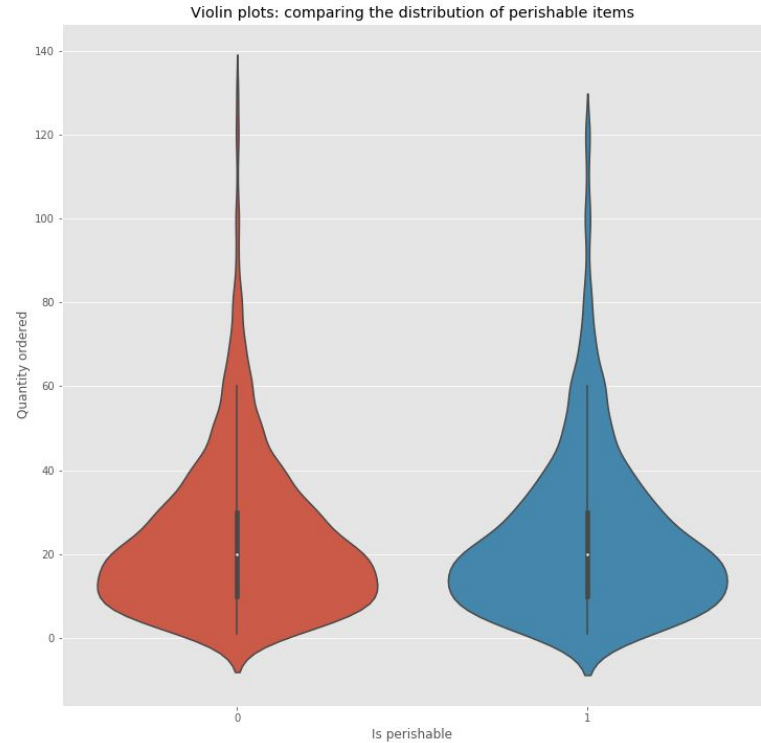
Does having 'manager' in your title effect the amount a customer orders?

- Failed to reject the null hypothesis. As a customer having manager in your title, the quantity ordered **doesn't significantly change** compared to customers without that title
- Further testing: change the criteria in which the customers are grouped. Include 'owner' title with the 'manager' title and compare results.



Is there a difference in quantity of products given their average shelf life?

- Failed to reject the null hypothesis. The quantity ordered of perishable items **doesn't significantly change** the quantity ordered of non-perishable items
- Further testing: Reach out to the data engineers and obtain 'good until' dates and use that as a metric



Take-aways

Discounts at 10% increases the number of products in orders

Perishable items are purchased as frequently as non-perishable items

Customer title of manager doesn't effect the number of orders

The sales numbers between offices don't indicate a need for organizational change