

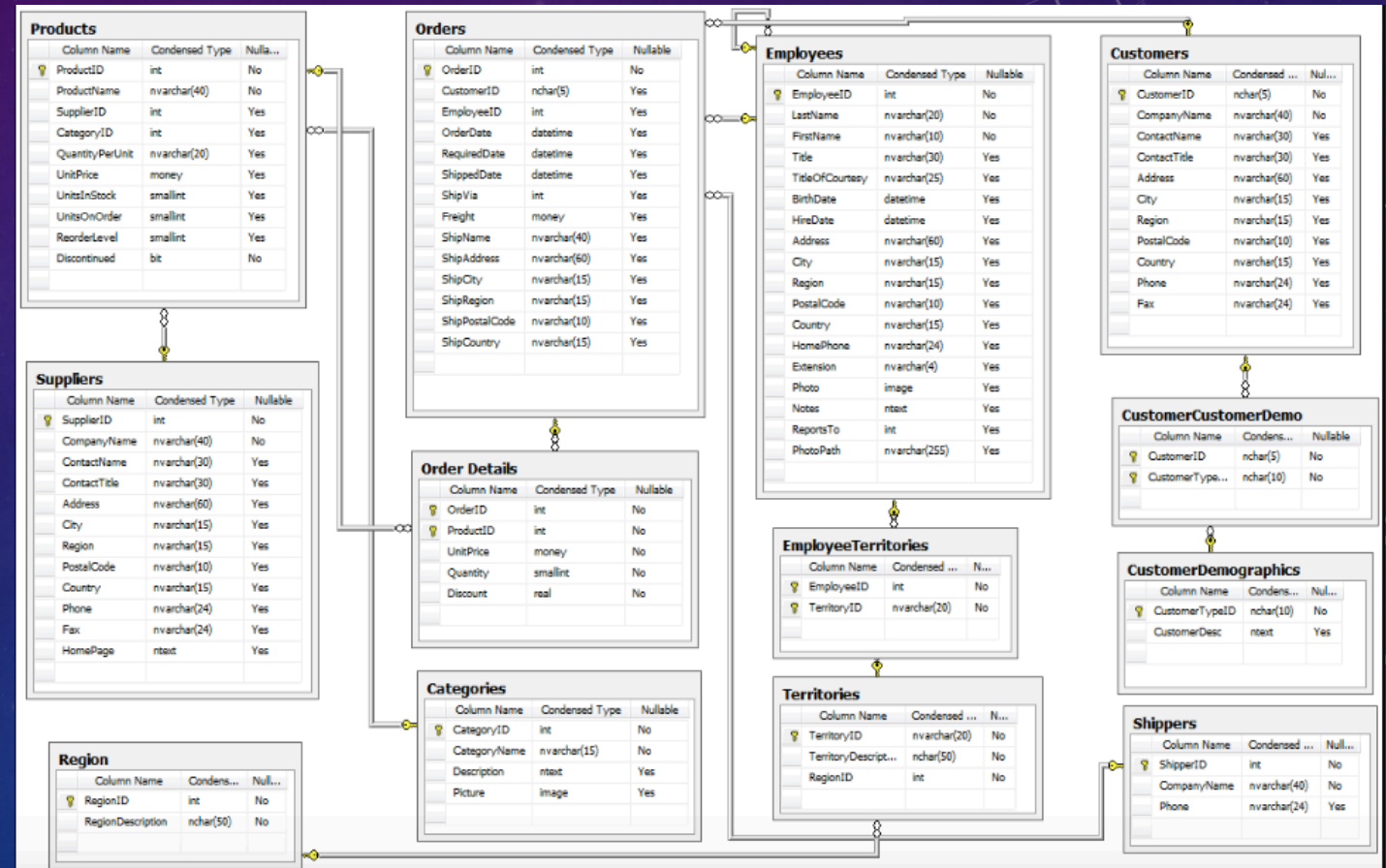


NORTHWIND DATABASE ANALYSIS

PREPARED BY: BARRETT YERETZIAN

THE DATABASE AND THE METHODOLOGY

- Microsoft's fictional model of a food exporter
 - employees, customers, suppliers, and orders
- Analytical Process:
 - Retrieve using SQL
 - Define questions
 - Choose appropriate tests
 - Use Python libraries and write functions to get answers
 - Visualize results

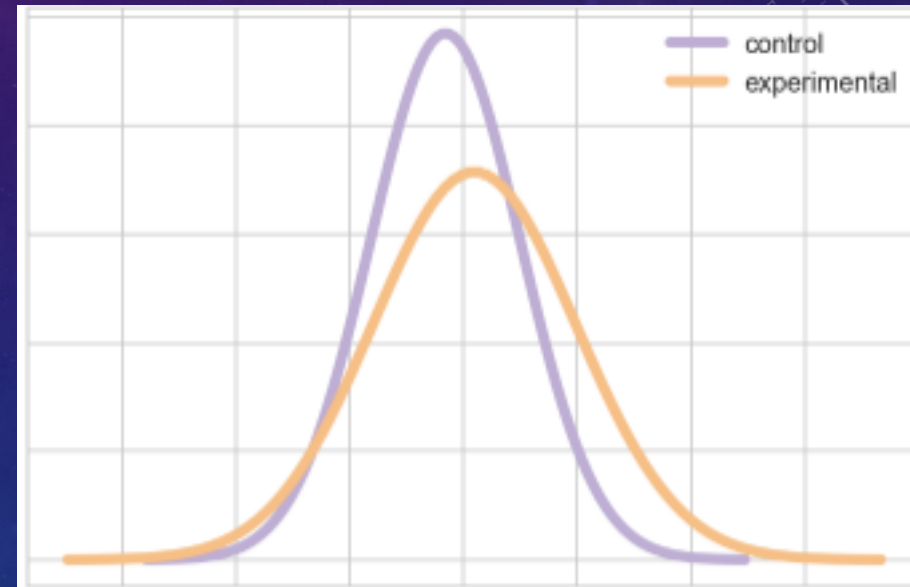


PROBLEM STATEMENT

- What problems can we solve with this data?
 - Discount - Does it affect the quantity of a product ordered? Does it affect a product's reorder level?
 - Seafood vs Meat/Poultry – Which products generally cost more? Can this increase revenue?
 - North America vs Europe – Which continent places orders that cost more?

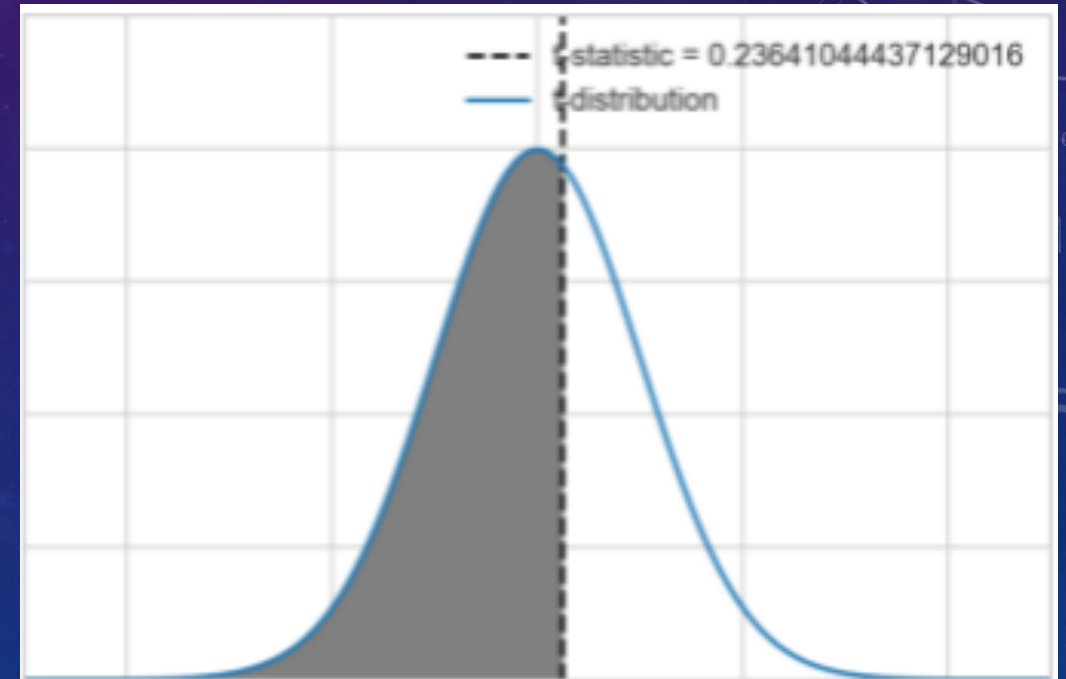
QUESTION 1: DOES DISCOUNT AFFECT ORDER QUANTITY?

- Value of interest:
 - average quantity ordered
- Result:
 - The difference is statistically significant
 - The size of the effect is small – medium
- Business Recommendation:
 - Need to get rid of a product or simply sell more of it? Offer a discount!



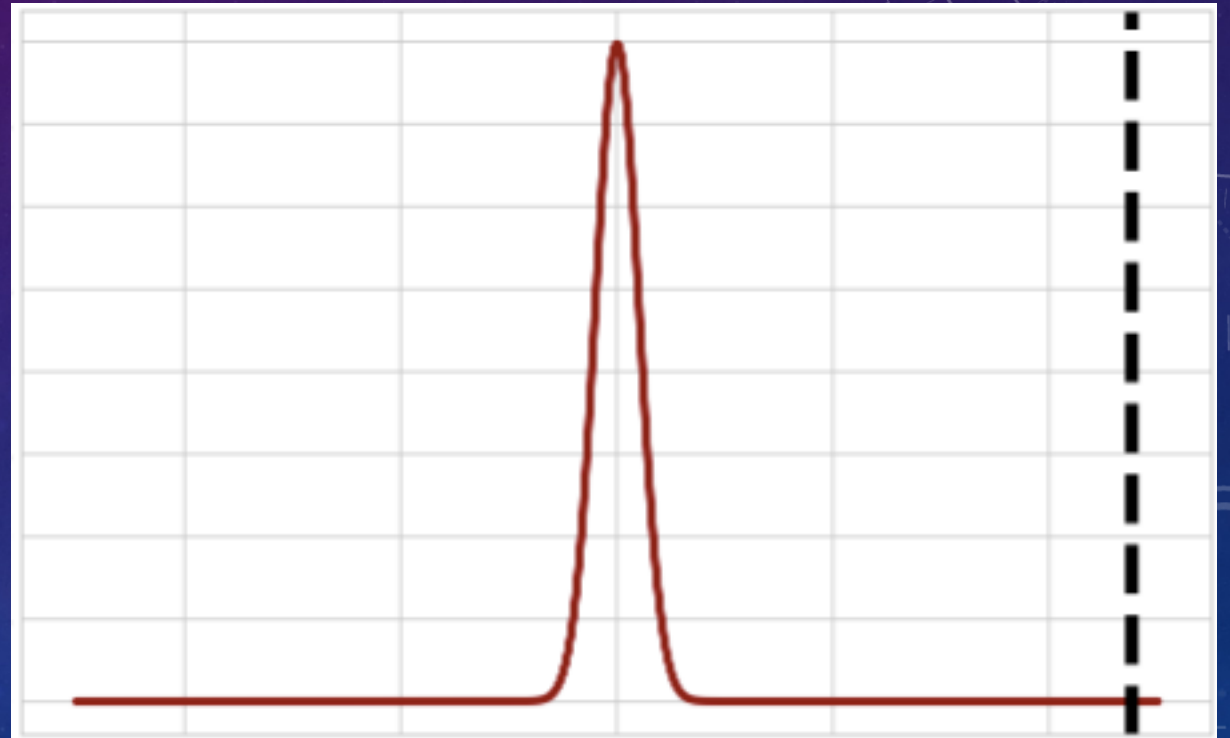
QUESTION 2: DOES DISCOUNT AFFECT REORDER LEVEL?

- Value of interest:
 - Average reorder level
- Result:
 - Difference is not statistically significant
- Implication:
 - Don't offer a discount if you care about how often an item gets reordered
 - Instead, charge full price and discount items that you need to sell more of



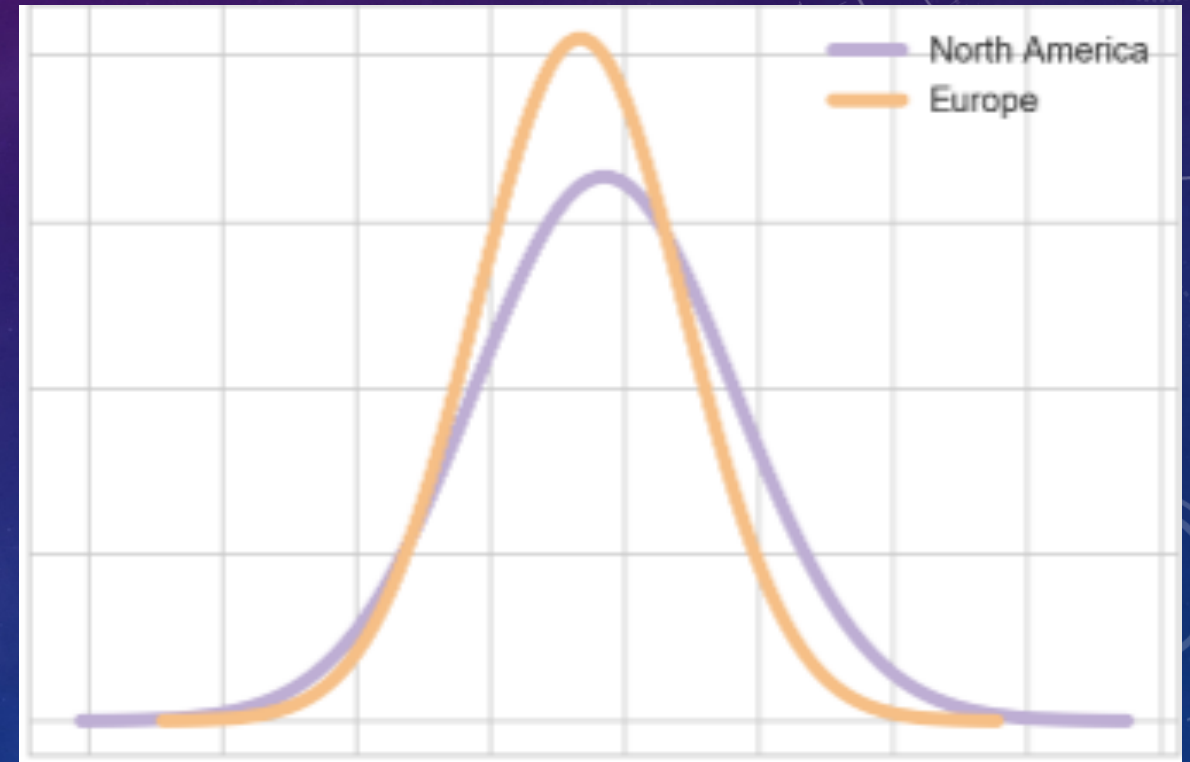
QUESTION 3: DO SEAFOOD PRODUCTS GENERALLY COST MORE THAN MEAT/POULTRY?

- Value of Interest:
 - Average unit price
- Result:
 - The difference is statistically significant
- Implication:
 - Want to increase revenue? Offer more seafood products!



QUESTION 4: DO ORDERS SHIPPED TO NORTH AMERICA COST MORE THAN ONES SHIPPED TO EUROPE?

- Value of interest:
 - Total cost (quantity * unit price)
- Result:
 - The difference is statistically significant
- Implication:
 - Getting more orders out to North America will bring in more money!



FUTURE WORK

- Ideas to consider:
 - Determine why a 20% discount was not effective in increasing the quantity of a product ordered.
 - Additional analysis and demographic segmentation of consumers to determine the most effective marketing targets.
 - Analyze the possible benefits of adding a headquarters in North America.