

NORTHWIND

MARKETING RECOMMENDATIONS

By Steve Newman

OVERVIEW

Analysis of the Northwind database led to posing four question to assist in improving sales.

Hypothesis testing is used to evaluate if there is a significant difference between sample groups.



QUESTION 1

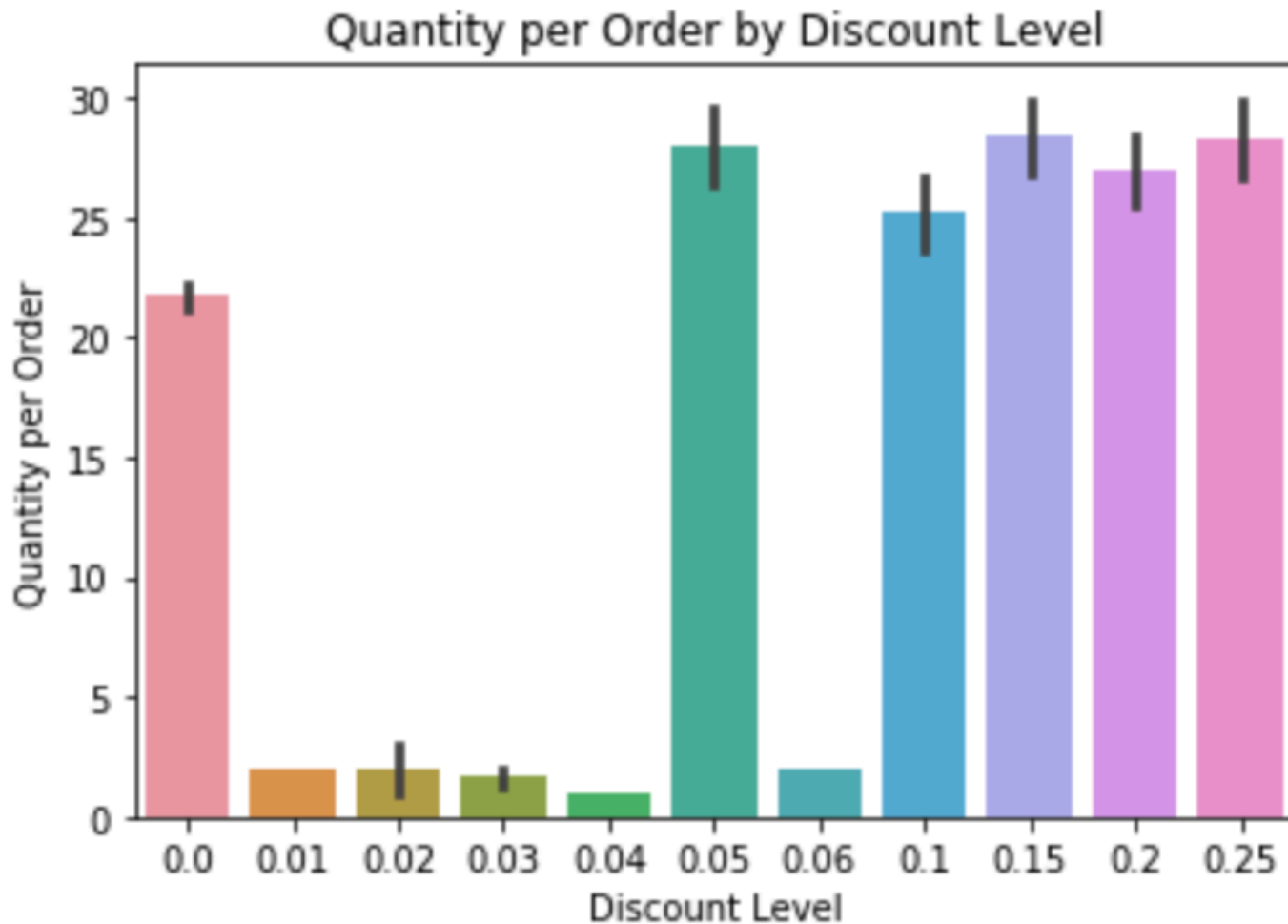
Does discount amount have a statistically significant effect on order quantity?

If so, at what level(s) of discount?



DISCOUNT & QUANTITY

Discount does affect order quantity.



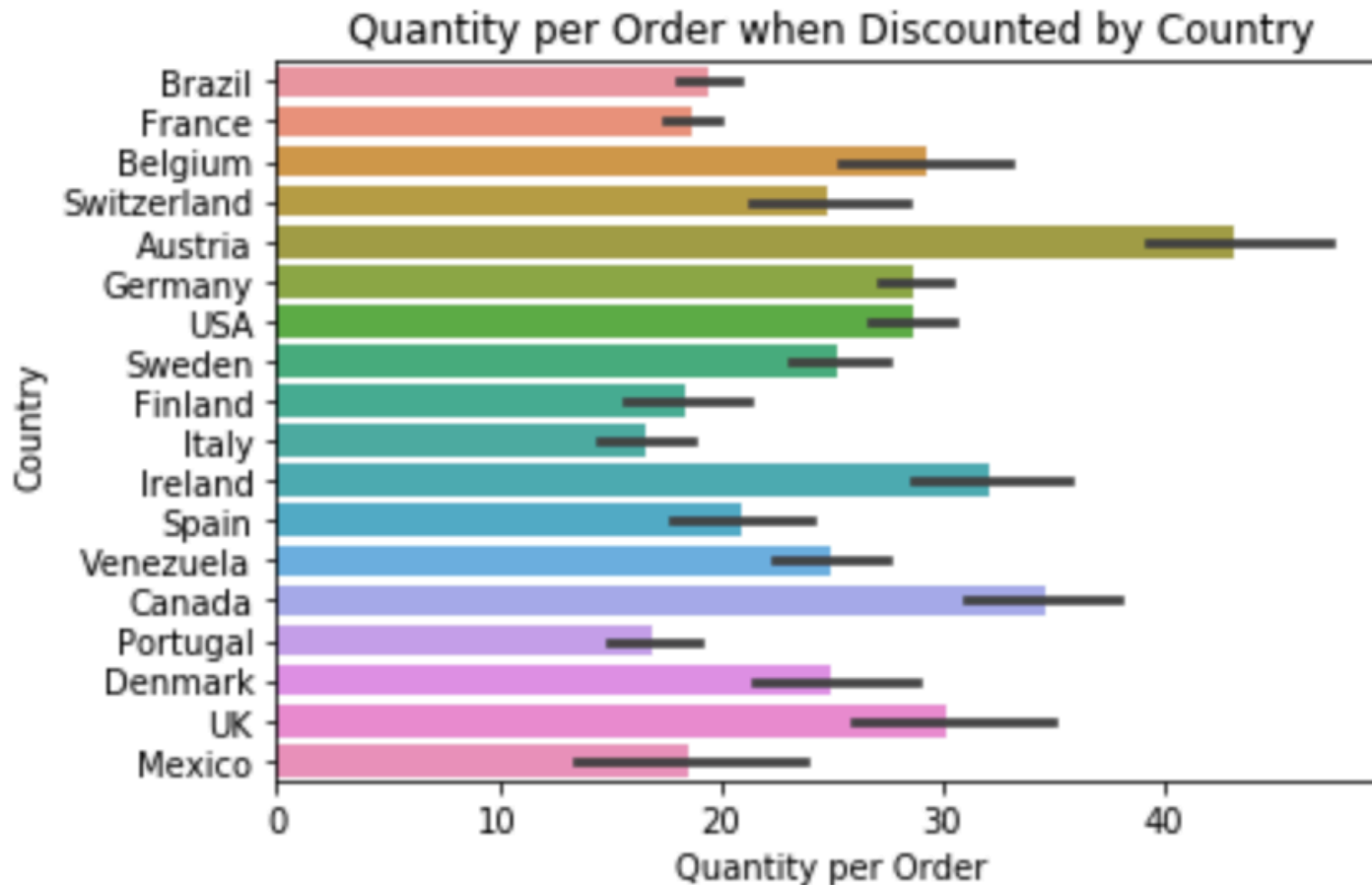
QUESTION 2

Do order quantities of countries differ when discounted?



ORDER QUANTITIES WHEN DISCOUNTED & COUNTRIES

Country does affect order quantity when discounted.



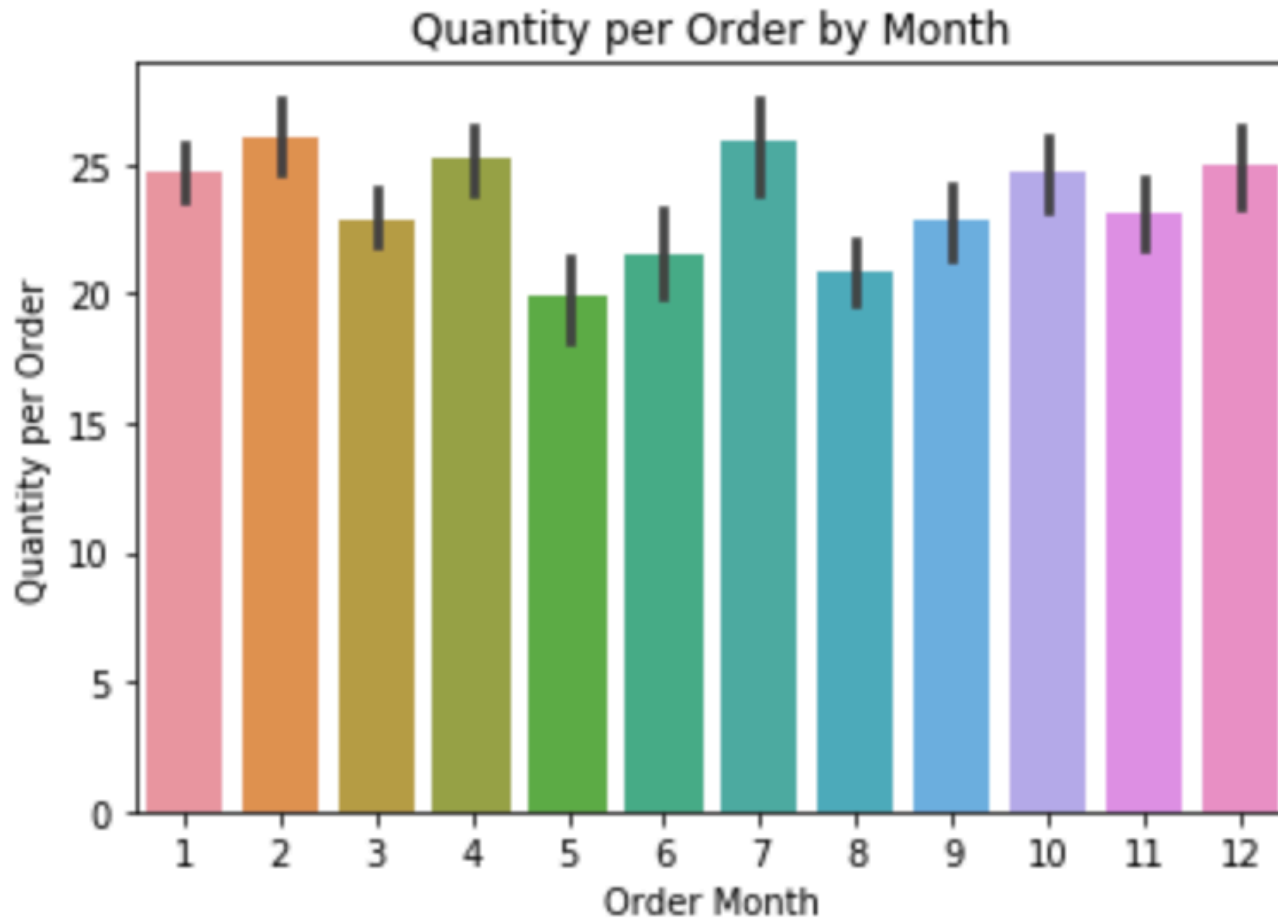
QUESTION 3

Does purchase month have an effect on quantity per order?



ORDER MONTH & QUANTITY

Order month does affect order quantity.



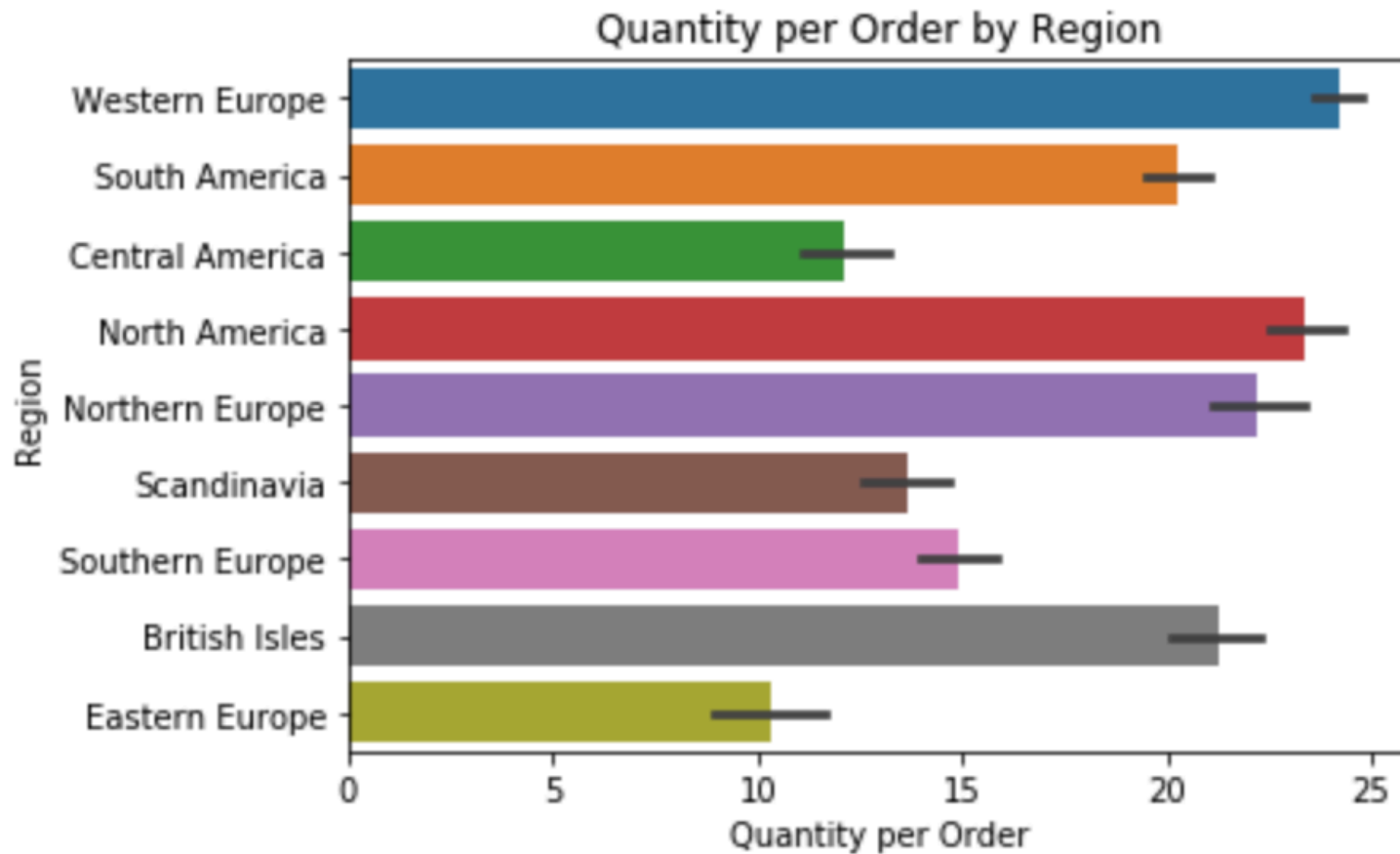
QUESTION 4

Does region have an effect on quantity per order?



REGION & QUANTITY

Region does affect order quantity.



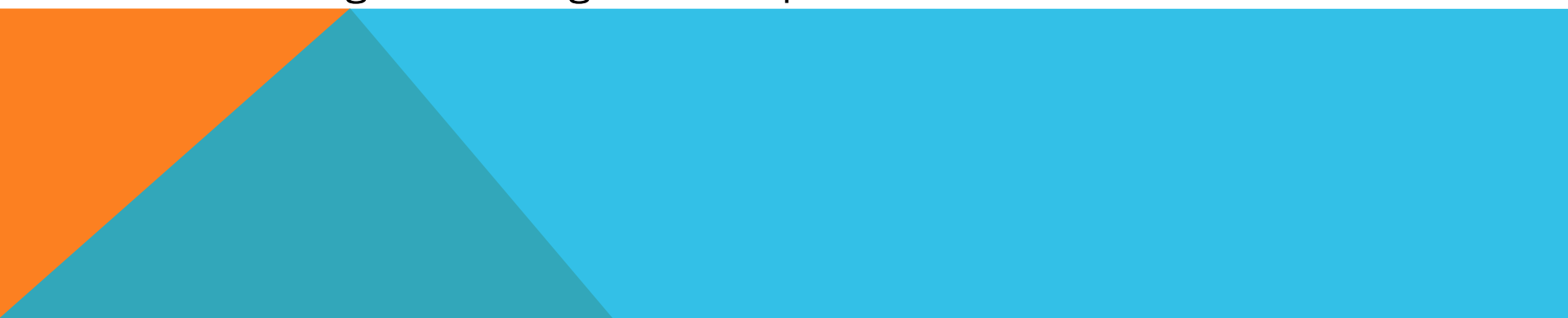
CONCLUSION

Q1: A 5%, 15%, 20%, and 25% discount all increase order quantity from not offering any discount.

Q2: Order quantities when discounted vary by country. Austria is highest and Brazil, France, Finland, Italy, Portugal and Mexico are lowest.

Q3: Purchase month does have an effect on quantity per an order. May stood out where order quantities were lower than January.

Q4: Region does effect the quantity of a product in an order. About half the regions had higher order quantities than the lower ones.



RECOMMENDATIONS

Q1: Offer a 5% discount and not offer the other discounts in order to save revenue.

Q2: Evaluate which discounts offered in countries with lower quantity orders and try to emulate the results seen in Austria.

Q3: Increase discount or offer other promotions during May.

Q4: Focus marketing efforts in Central America, Scandinavia, and Eastern Europe to increase order quantity.



FUTURE WORK

1. Analyze sales people's records to better understand performance and offer incentive based commissions,
2. Use AI based models to suggest products to order to customers,
3. Restructure database to make useful queries easier to execute.

Thank you!

Q & A

