



# Statistical Recommendations for Your Business

Four Hypothesis tested out and proved

# Discovery Questions

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1

Does discount amount have a statistically significant effect on the quantity of a product in an order? If so, at what level(s) of discount?

2

Does whether or not a product was regionally imported or domestically handled impact the discount of the order?

3

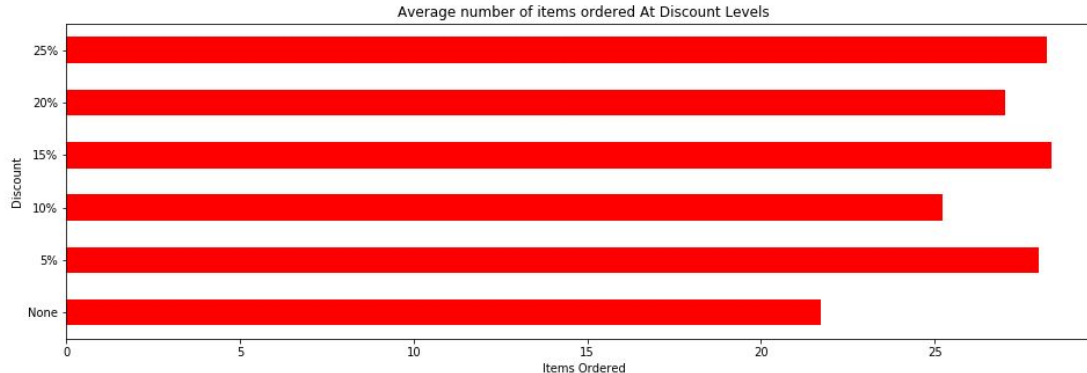
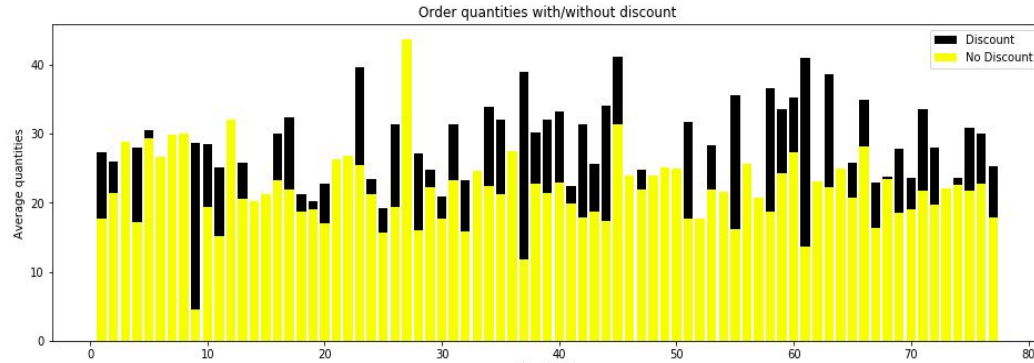
Does the volume of territories owned by an employer have a statistically significant effect on an employers order performance?

4

Does number of customers in a country have a statistically significant effect on the amount of total orders?

# Discounts Vs. Total Orders

Does discount amount have a statistically significant effect on the quantity of a product in an order? If so, at what level(s) of discount?



Alpha = .05

Two-Tailed T Test

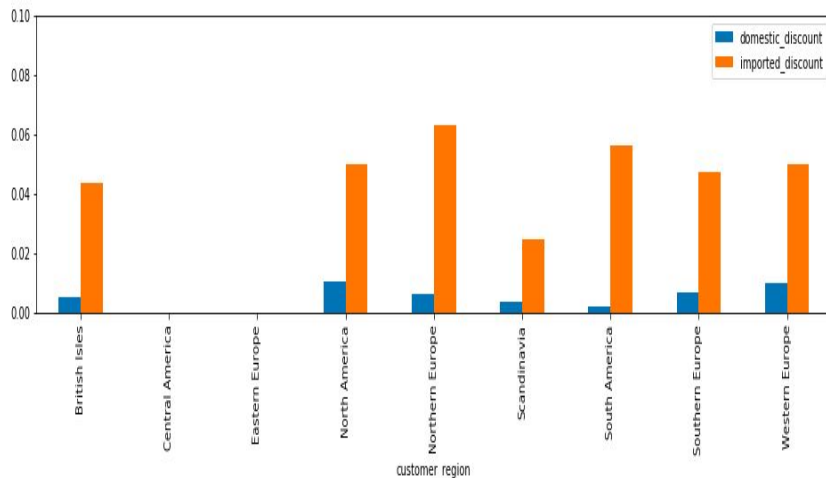
P-value = 2.8e-10

Proven: The quantity of a product in an order is increased by the discount at all different levels

Business Recommendation:  
Discount more for volume of products. If you purchase more in bulk, discount appropriately so you can sell that bulk

# Discounts vs Imported/Domestic

Does whether or not a product was regionally imported or domestically handled impact the discount of the order?



	domestic_discount	imported_discount
customer_region		
British Isles	0.005526	0.043684
Central America	0.000000	0.000000
Eastern Europe	0.000000	0.000000
North America	0.010468	0.049813
Northern Europe	0.006643	0.062937
Scandinavia	0.003571	0.025000
South America	0.002138	0.056414
Southern Europe	0.006934	0.047445
Western Europe	0.010054	0.049932

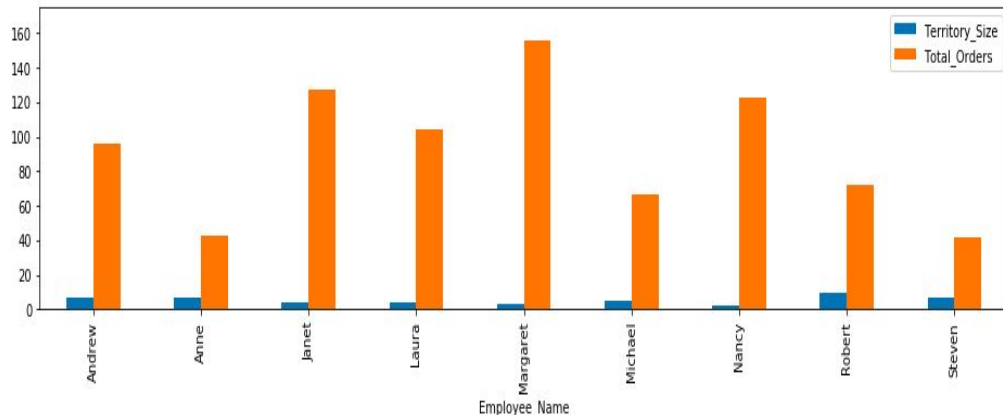
Alpha = .05 | P-value = .0016 | Two-Tailed Test

Proven: There is a statistical significance, and imported orders are sold with a greater discount

Business Recommendation: Imported orders likely have higher costs because it is more expensive to ship these items. Work with your team to discount these orders less than domestic.

# Employee Territory Vs. Total Orders

Does the volume of territories owned by an employer have a statistically significant effect on an employers order performance?



	Territory_Size	Total_Orders
Employee_Name		
Andrew	7	96
Anne	7	43
Janet	4	127
Laura	4	104
Margaret	3	156
Michael	5	67
Nancy	2	123
Robert	10	72
Steven	7	42

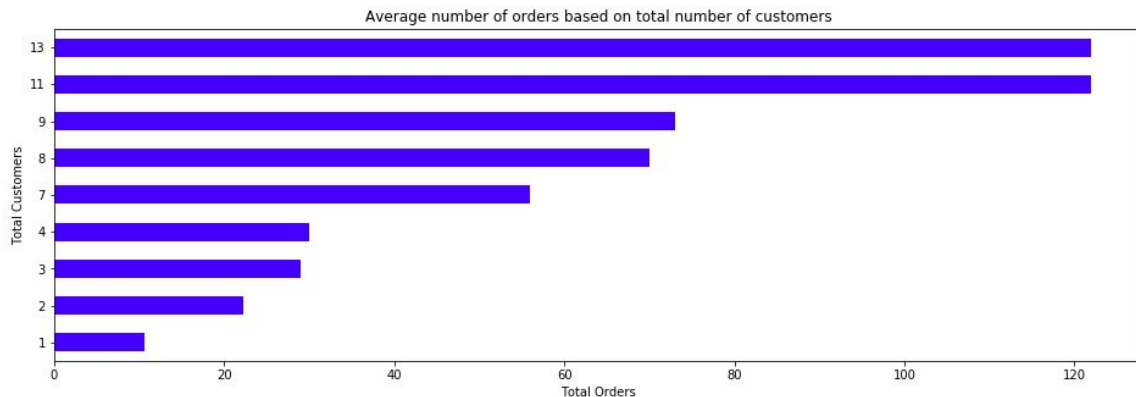
Alpha = .05 | P-value = 8.1e-5 | Two-Tailed Test

Proven: Employees with smaller territories perform better than those with larger territories

Business Recommendation: May want to organize employees all with smaller, denser territories where they can have an expertise in the market and perform optimally.

# Customers Vs. Total Orders

Does number of customers in a country have a statistically significant effect on the amount of total orders?



	ShipCountry	Total_Customers	Total_Orders
0	Argentina	2	11
1	Austria	2	40
2	Belgium	2	19
3	Brazil	8	70
4	Canada	3	30

Alpha = .05 | P-value = .019| Two-Tailed Test

Proven: Number of Customers in a Country has an effect on total orders

Business Recommendation: Focus on volume. Account management and enterprise customers aren't the bread and butter



# Places Worth Further Examining

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1. **Discount vs. Total Orders:** Digging deeper into the total cost of products that were discounted, and seeing if discounting these specific items makes sense
2. **Discounts vs. Imported/Domestic:** Exploring the exact shipping totals, and seeing how much we are making/losing by discounting imported goods
3. **Employee Territory vs Total Orders:** Dig into the populations of each territory.
4. **Customer vs. Total Orders:** Looking into the quantities of each order as opposed to just order total. Maybe there are specific customers which could use special service because they are large buyers

The image shows a modern, open-plan office or co-working space. In the foreground, a woman with red hair, wearing a blue beanie, glasses, and headphones, is sitting on a couch and working on a laptop. She has a tattoo on her left arm. Next to her, another woman is also working on a laptop. In the background, there are more people working at tables and a counter area with shelves and plants. The space has a high ceiling with exposed wooden beams and a brick wall on the left. A large white text box is overlaid on the center of the image.

Thank You. Any Questions?