
Northwind:

Strategic Discounting & Price Elasticity of Demand

Reed W. • 04.08.2019

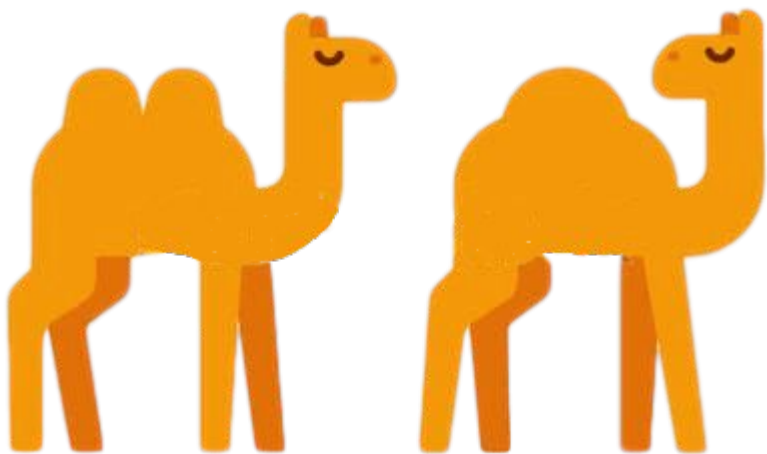
Primer

PRICE ELASTICITY OF DEMAND:

- Economic measurement to show the responsiveness, or elasticity, of the quantity demanded to a change in its price, when nothing but the price changes

KEY QUESTIONS:

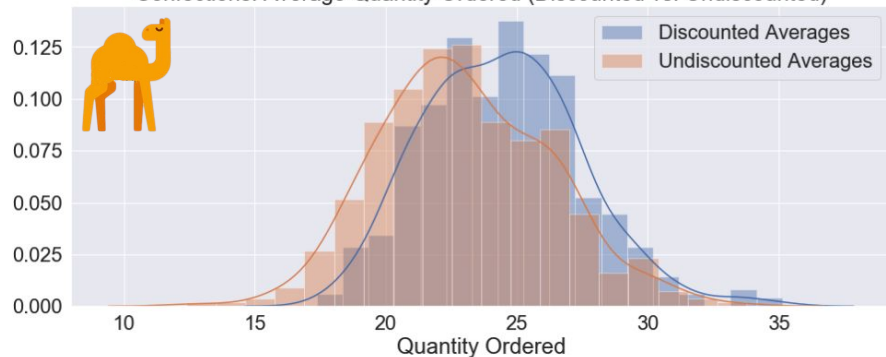
- Do you have any **products/categories** that have a greater price elasticity of demand?
 - Do you have any **customers/regions** that have a greater price elasticity of demand?
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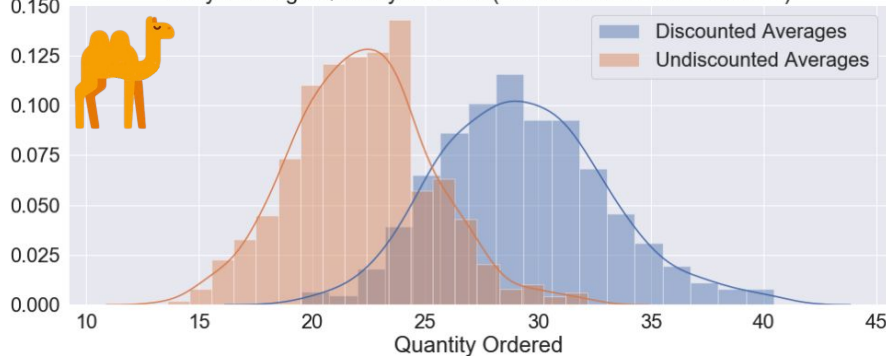
CAN YOU TELL THE DIFFERENCE?

Hint: Look At Their Humps

Confections: Average Quantity Ordered (Discounted vs. Undiscounted)



Dairy: Average Quantity Ordered (Discounted vs. Undiscounted)



HOW ABOUT HERE?

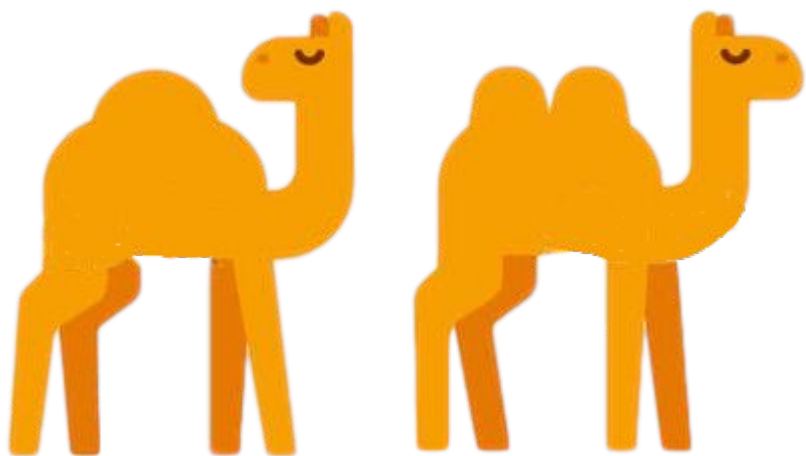
- **DAIRY** looks more like a two-hump camel
- **CONFECTIONS** looks more like a one-hump camel

SO WHAT DOES THIS MEAN?

- Dairy price elasticity of demand > Confections price elasticity of demand
- **DAIRY:**
 - Clear change in quantity ordered
- **CONFECTIONS:**
 - Indiscernible change in quantity ordered (in comparison)

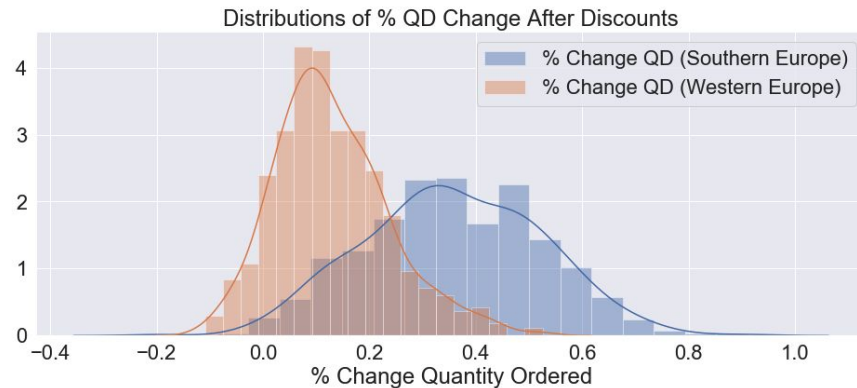
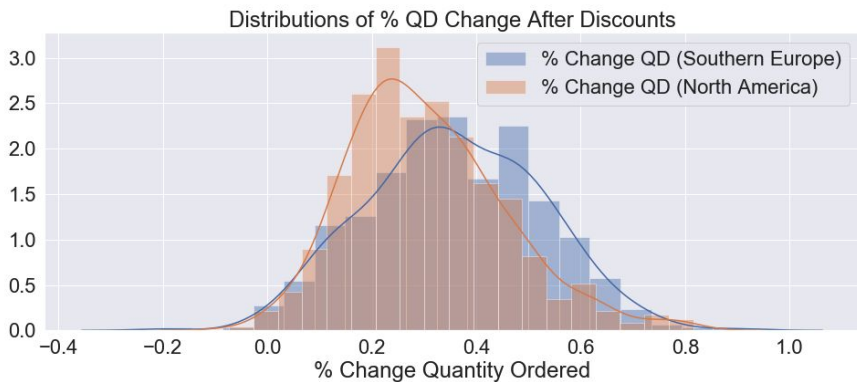
DISCOUNT STRATEGY:

- Focus discounts in categories that see meaningful change in demand



LET'S TRY THIS AGAIN

CUSTOMER REGION



HOW ABOUT HERE?

- Southern Europe & North America saw similar % increases in quantity demanded, relative to their original order sizes
- Southern Europe > Western Europe

SO WHAT DOES THIS MEAN?

- Not all your customers respond to pricing discounts in the same way
- Some regions are very responsive to price cuts (Southern Europe, North America, British Isles)

DISCOUNT STRATEGY:

- Focus discounts in regions that see significant change in demand
- Consider pairing with categorical discounts



BIG GAINERS:

Beverages, Condiments, Dairy, Meat/Poultry

SMALL GAINERS:

Confections, Grains/Cereals

BIG GAINERS:

British Isles, North America, Southern Europe

SMALL GAINERS:

South America (small customer)

KEY TAKEAWAYS

1. Focus discounts on product types that have higher price elasticity of demand
 - a. Grains & Confections had the lowest price elasticity of demand
 2. Focus discounts on regions that have higher price elasticity of demand
 3. All categories & regions* saw statistically meaningful increases in quantity demand
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NEXT STEPS

Include Price

Repeat tests on quantity demanded, but incorporate product prices
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Compare Regions/Categories

Repeat individual category tests by region - likely that regions
respond differently depending on product type

Fix Your Data

No actual foreign key constraints, employees hired in future
