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# Northwind:

## Strategic Discounting & Price Elasticity of Demand

Reed W. • 04.08.2019

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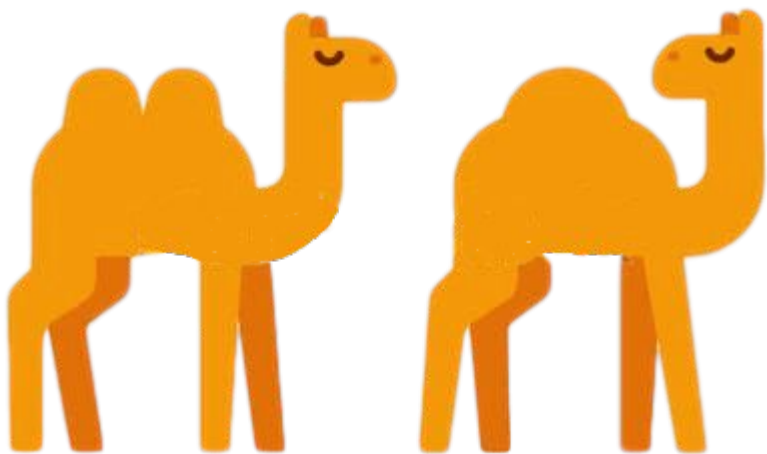
# Primer

## 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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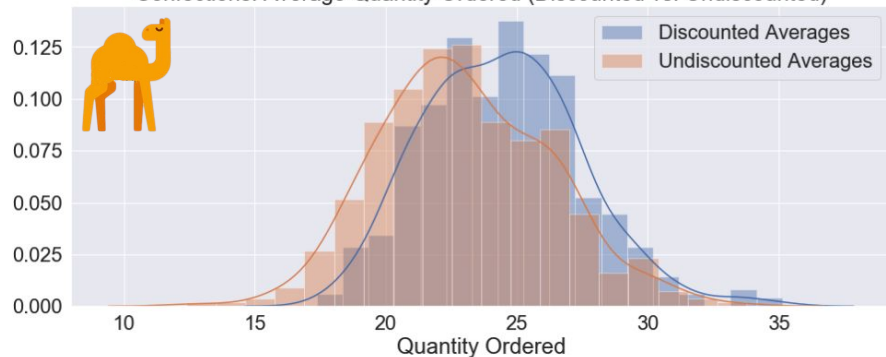


**CAN YOU TELL THE DIFFERENCE?**

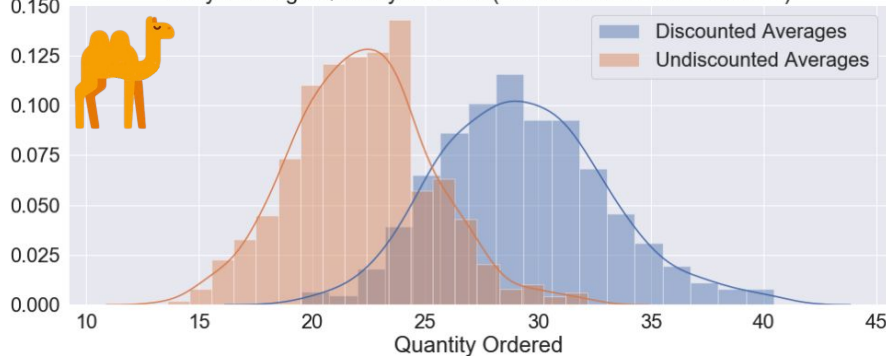
Hint: Look At Their Humps

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Confections: Average Quantity Ordered (Discounted vs. Undiscounted)



Dairy: Average Quantity Ordered (Discounted vs. Undiscounted)



## HOW ABOUT HERE?

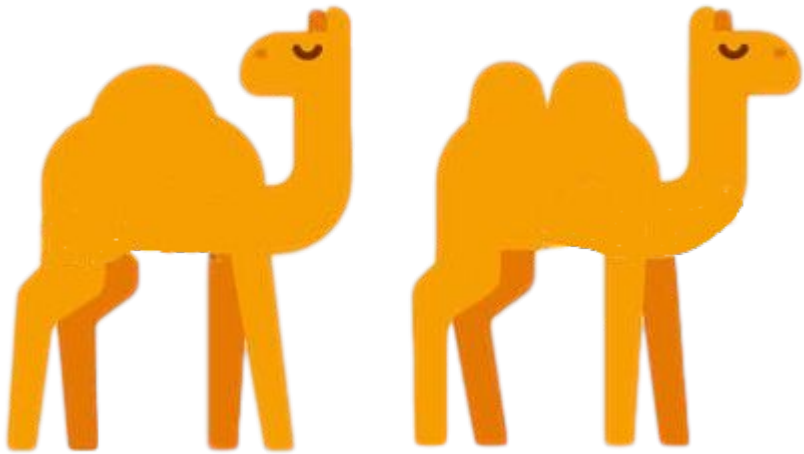
- **DAIRY** looks more like a two-hump camel
- **CONFECTIONS** looks more like a one-hump camel

## 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:

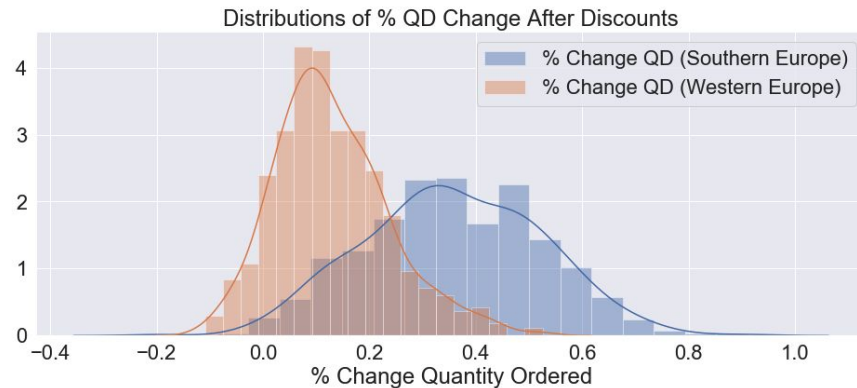
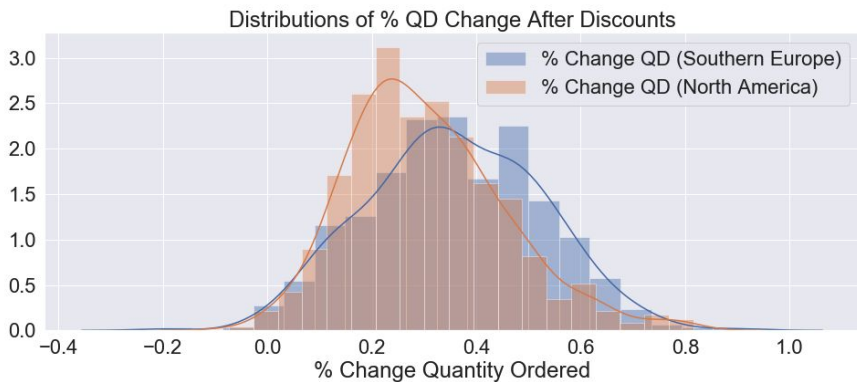
- Focus discounts in categories that see meaningful change in demand



**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

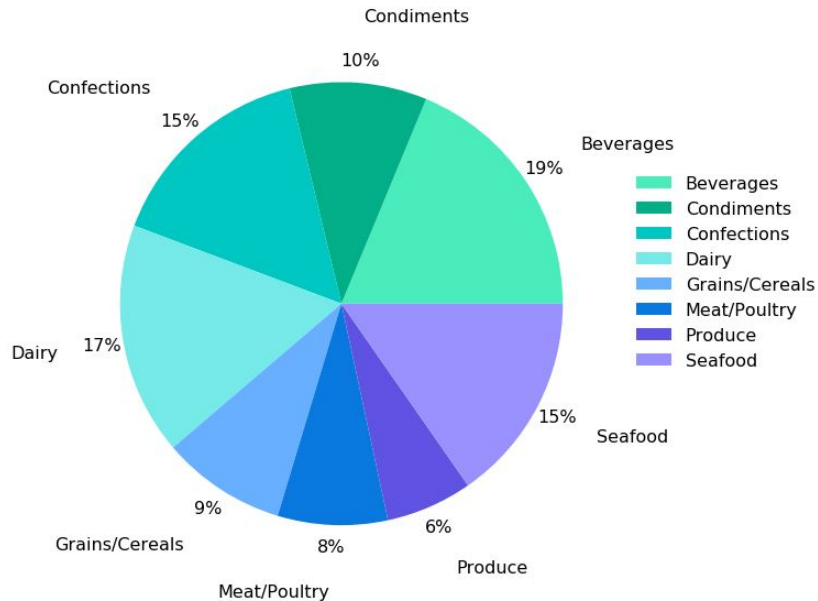
## BIG GAINERS:

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

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