

# Eltecon Data Science Course by Emarsys

Measuring effect through experimenting

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# About me

- Background in Economics
- Works as Data Scientist @ Emarsys

# What is an effect?

Added value of a treatment

# Why do we want to measure the effect?

To decide if our treatment works

# Measure the effect of what?

# What to measure?

# What is worth measuring?

- **Based on customer's need**
- Validated by data based research
  - Will the algo work?
  - Does it scale?
  - Cost of the feature?
- Make sure you understand your feature/algorithm!

# Measure the effect of what?

- Adding a new feature to the software
- Change in the algorithm
- Change on the website/UI
- etc.



# How can we measure the effect?

- Simulation
- Based on historical data
- Experimenting

# How do we experiment?

# Setup

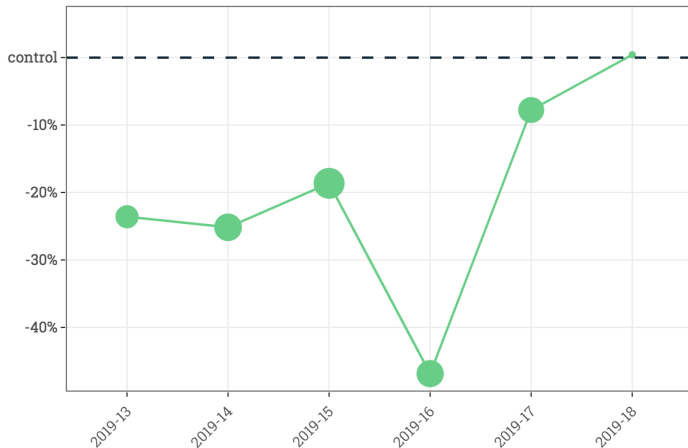
- Define what is the goal of your experiment, what you want to measure
- Split contacts *randomly* into control and treatment group(s)

# There is always an effect. . .

- We can always measure something.
- Is there really an effect?

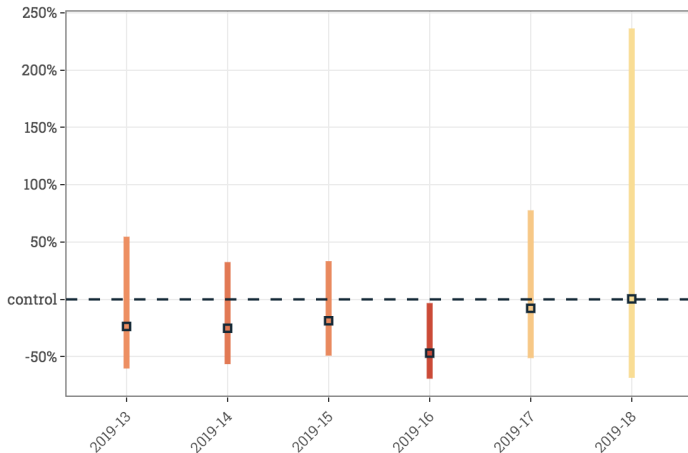
# There is always an effect. . .

STO's effect on open rate



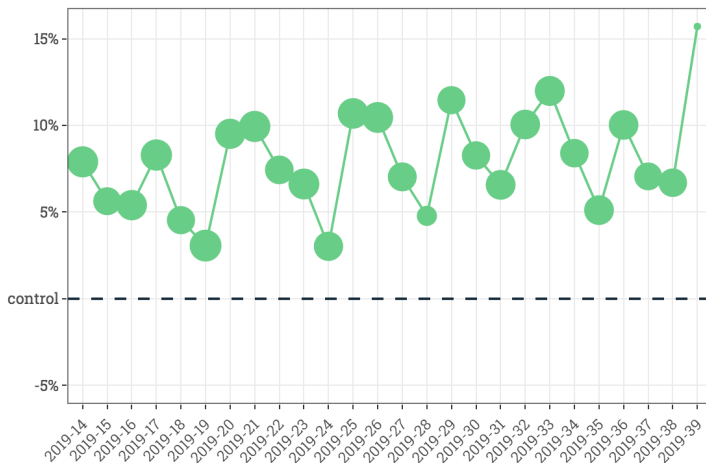
# But not necessarily significant!

STO's effect on open rate



# Know your data!

STO's effect on click rate



# Effect caused by underlying



# Minimum Detectable Effect

- a great blogpost by a great guy