# Marketing & Data Analysis

Intro.  Data & Marketing

**Santiago Alonso-Díaz**

Tecnólogico de Monterrey
EGADE, Business School

# Data & Business

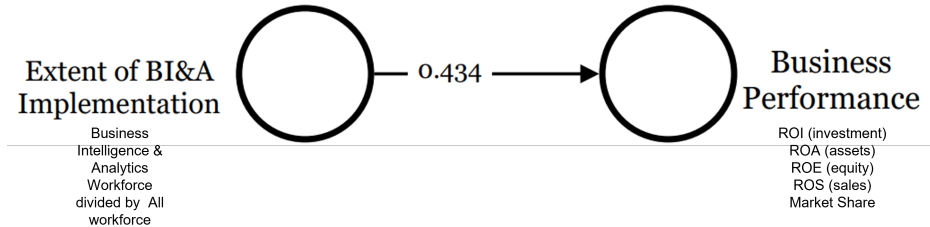Using data works for business



Figure: Daneshvar Kakhki and Palvia, 2016

# Evidence based management

Discuss in class:

Should we play battleship with a random strategy? Are there better players? What data can you exploit?

Why do you think data matters for Marketing? When it does and when it does not?

# Evidence based management
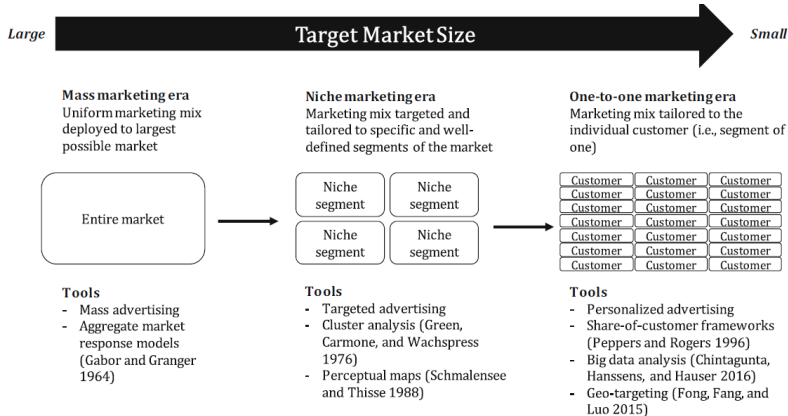
## Strategies could vary by market size



Figure: Palmatier and Crecelius, 2019

# Table of contents

# First Principles and Analytics (inspired by Palmatier et al., 2022)

# Customers produce data

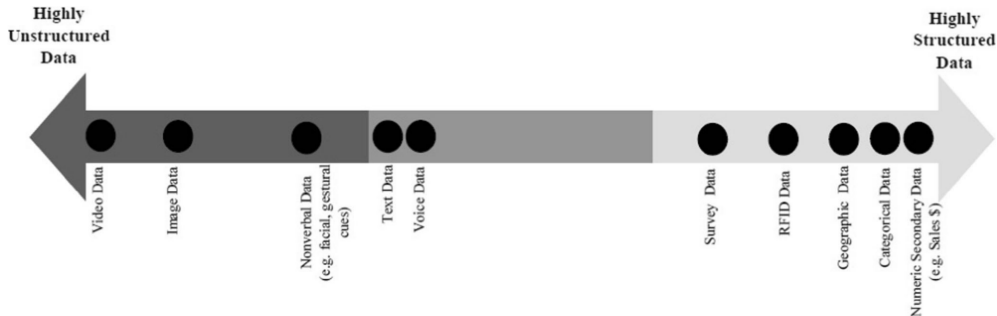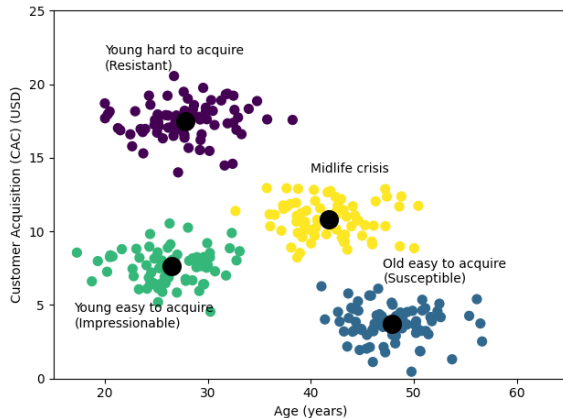- Data sources (internal, external, synthetic)
- Data types



Figure: Balducci and Marinova, 2018

# Patterns in customers' data

- Clustering
- Visualization

# All/some customers differ
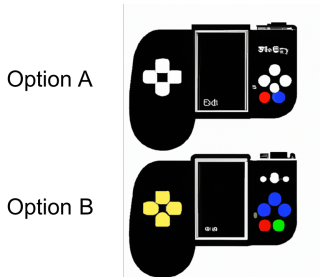
- Inference
- Experiments



Option A

Option B

Figure: Which one sales more?

# Customers are reasonable

We can model customers
- Rational attention models
- Drift-diffusion models
- More

I do not need or find a cybertruck attractive

I find a cybertruck attractive

Marketing Campaign



Result: I do need and now love cybertruck

Prob. of results:
0.1 vs 0.9

# Statistical Software

# Excel? Power-Bi?

Why Excel / Power - Bi?

- Intuitive
- Fast to use
- Widely used

Why not Excel / Power - Bi?

- Reproducibility of point and click
- Arbitrary transformation of cells
- Prone to errors (Excel problems, Excel Horror Stories)

# Python / R

Why Python / R?

- Reproducibility
- Widely used
- Up-to-date techniques

Why not Python / R?

- Steep learning curve

# Jupyter Notebooks

Let's go to Jupyter Notebooks

# References

**Balducci, B., & Marinova, D. (2018).** Unstructured data in marketing. *Journal of the Academy of Marketing Science*, *46*, 557–590.

**Daneshvar Kakhki, M., & Palvia, P. (2016).** Effect of business intelligence and analytics on business performance.

**Palmatier, R. W., & Crecelius, A. T. (2019).** The "first principles" of marketing strategy. *Ams Review*, *9*, 5–26.

**Palmatier, R. W., Petersen, J. A., & Germann, F. (2022).** *Marketing analytics: Based on first principles.* Bloomsbury Publishing.