

Class 1 Intro to Marketing Analytics

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UCL School of Management

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Section 1

Module Overview

About Me

- Hi there, I'm Wei Miao!
- I did my PhD in Quant Marketing at NUS (Singapore) and a undergrad in Finance at Fudan (Shanghai)
- I love musical instruments, video games, and food (bubble tea is my soul mate)!
- My research focuses on **digital marketing**, **sharing economy**, and **platform design**.

Weekly Arrangements

- Detailed weekly arrangements can be found in this link
 - Add bookmark for easier reference
- Each week, we have a 3-hour lecture on Wednesday, usually with two sessions
 - A **methodology** session, in which we learn a new analytics tool
 - A **case study** session, to practice the analytics tools

Assignments

- No exams; 3 **individual assignments**, which are similar to case studies in class, and you will need to use what you learned in class to solve these real-life marketing analytics problems.
 - 1st assignment, 30% weight, 1500 words, due on Oct 30
 - 2nd assignment, 30% weight, 1500 words, due on Nov 24
 - 3rd assignment, 40% weight, 2000 words, due on Dec 15
- How to submit?
 - Only submit **PDF** rendered from R Quarto with codes printed; **don't submit any other file format or your submission won't be marked.**
 - The quarto-based answer sheets (qmd files) will be given to you.

Assignments (Cont.)

- **Word count** and **late submission** penalties will be applied by **BA admin**.
For related queries and EC applications, please directly contact BA admin at mgmt.ba-admin@ucl.ac.uk.
- We have random second marking in place to mitigate marking errors.
Please refrain from emailing teaching assistants for re-marking as re-marking is not allowed by school policy.

Section 2

What is Marketing?

Role of Marketing

- Finance (finance a company's business activities)
- Accounting (bookkeeping of past transactions)
- Operations (supply chain, manufacturing, inventory management)
- **Marketing** (directly deal with consumer; value exchange and value realization)



What is Marketing?

- Kotler (1991): “Marketing is a social and managerial process by which individuals and groups obtain what they **want and need** through **creating, offering** and **exchanging** products of value with others.”
- British Chartered Institute of Marketing (2000s): “Marketing is the **management process** responsible for **identifying, anticipating and satisfying** customers’ requirements **profitably**.”
- American Marketing Association (2017): “Marketing is the activity, set of institutions, and **processes** for creating, communicating, delivering, and **exchanging** offerings that have value for customers, clients, partners, and society at large.”

What is Marketing? A Word Cloud Approach



Marketing is a management **process** that **creates and exchanges values** for the company by selling the right products to the right **customers**. - Wei, 2024

Marketing Process



Figure 1: Marketing Process

- We will go through the above concepts.

Situation Analysis: 5 C's

- Any marketing decision can benefit from a deep understanding of the players within the market ecosystem—your own company, current and potential customers, collaborators and competitors—and the context they interact within: the 5Cs for short.



Figure 2: 5Cs of Marketing

Situation Analysis: Competitors

- Managers tend to pay attention towards more salient direct (industry) competitors, but we should also consider indirect and potential competitors.
- Indirect competitors are defined by who your customers consider to satisfy the same goals.
- Potential competitors are those who might pose a competitive threat in the future; who possess equivalent resources that would allow them to enter the market

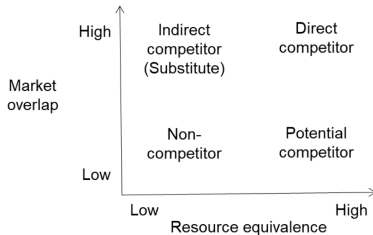


Figure 3: Situation Analysis: Competitors

Situation Analysis: Context/Climate

- **Context/Climate analysis** is a strategic planning method used to assess major external factors that influence the market ecosystem, and is often referred to as **PESTLE** analysis.

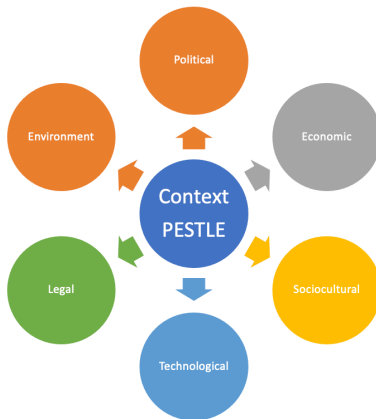


Figure 4: Situation Analysis: Context

Strategy: STP

- Situation analysis is a critical input into marketing strategy design, the sequential application of the processes of segmentation, targeting, and positioning. Marketing strategy is inherently related to the concepts of the business model and business strategy—who you are serving, with what value proposition, and how you do so.



Figure 5: Segmentation, Targeting, and Positioning

Tactics: 4P's

- The marketing mix provides an implementation of your positioning. Segmentation is here applied at the tactical level, to optimally design the marketing mix or 4Ps.



Figure 6: 4Ps of Marketing

Section 3

Marketing Analytics

Big Data Era

With the advancement in information and communication technologies (ICTs), data scientists nowadays are equipped with data analytics tools powerful than ever!

Firms now have access to enormously rich information trail of customers

- Demographic profiles (DoB, gender, ethnicity, income)
- Purchase history (recency, frequency, monetary value, spending behavior)
- Online browsing and search history (browsing, click through, add to cart, purchase)
- GPS data from mobile phones for offline store visits
- Social media (location, consumer preference, social network)

What Marketing Analytics Can Do

graph TD

```
A[Apple Marketing Analytics Process] --> B[Predictive Analytics (Machine Learning)]
A --> C[Causal Inference (Marketing Impact Evaluation)]
```

```
B --> D1[Data Collection]
```

```
D1 --> D2[Sales Data]
```

```
D1 --> D3[Customer Demographics]
```

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D1 --> D4[Marketing Campaign Data]
```

```
D1 --> D5[Website Behavior]
```

```
D2 --> E1[Train Predictive Models]
```

```
D3 --> E1
```

```
D4 --> E1
```

```
D5 --> E1
```

```
E1 --> F1[Predict Customer Preferences]
```

```
E1 --> F2[Forecast Sales]
```

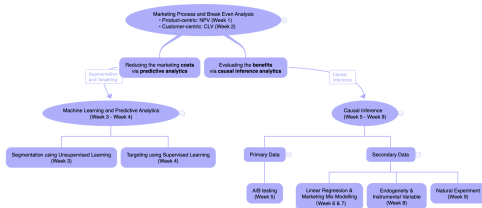
```
E1 --> F3[Personalized Offers]
```

```
C --> G1[Design Experiments]
```

```
C --> G2[Conduct A/B Testing]
```

```
C --> G3[Apply Instrumental Variables]
```

Our Roadmap



Unique Position of Marketing Analytics

