Class 4: (Case Study) CLV Analysis for M&S's Delivery Pass

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Section 1

Case Overview

Class Objectives

- Apply CLV calculation in a real business scenario where M&S is considering launching an online grocery delivery service
- Understand how CLV can be used by marketers to guide marketing decisions

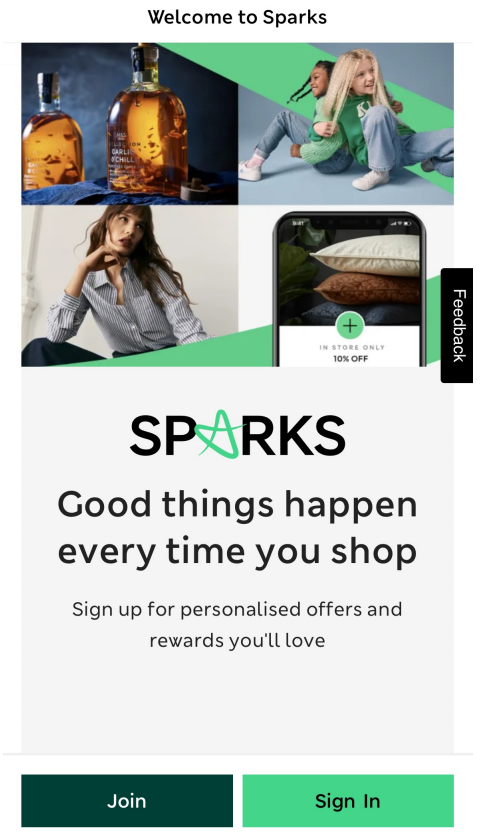
Situation Analyses for M&S

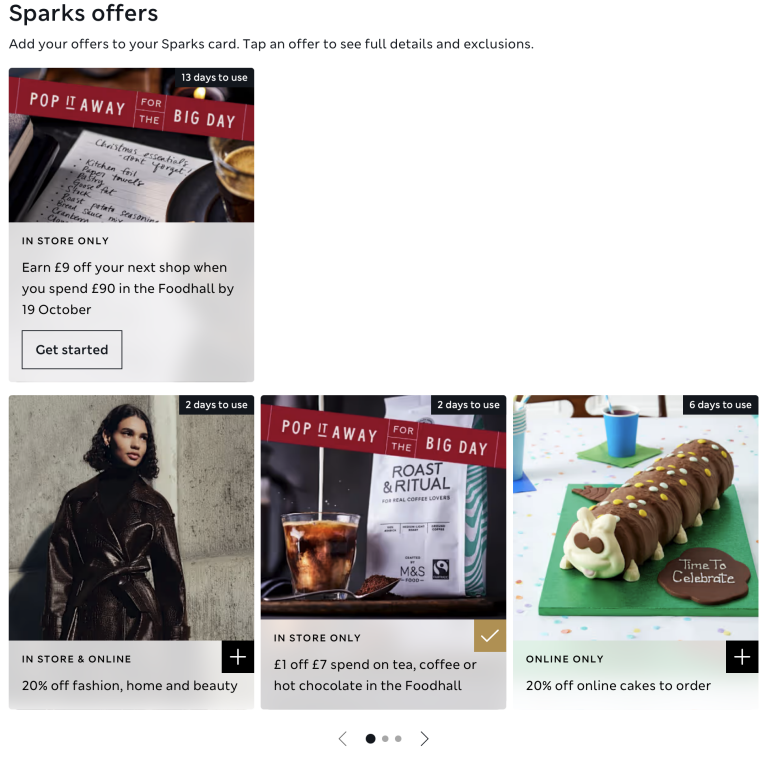
- Company
- Customer
- Competitor
- Collaborator
- Context

The Sparks Loyalty Program

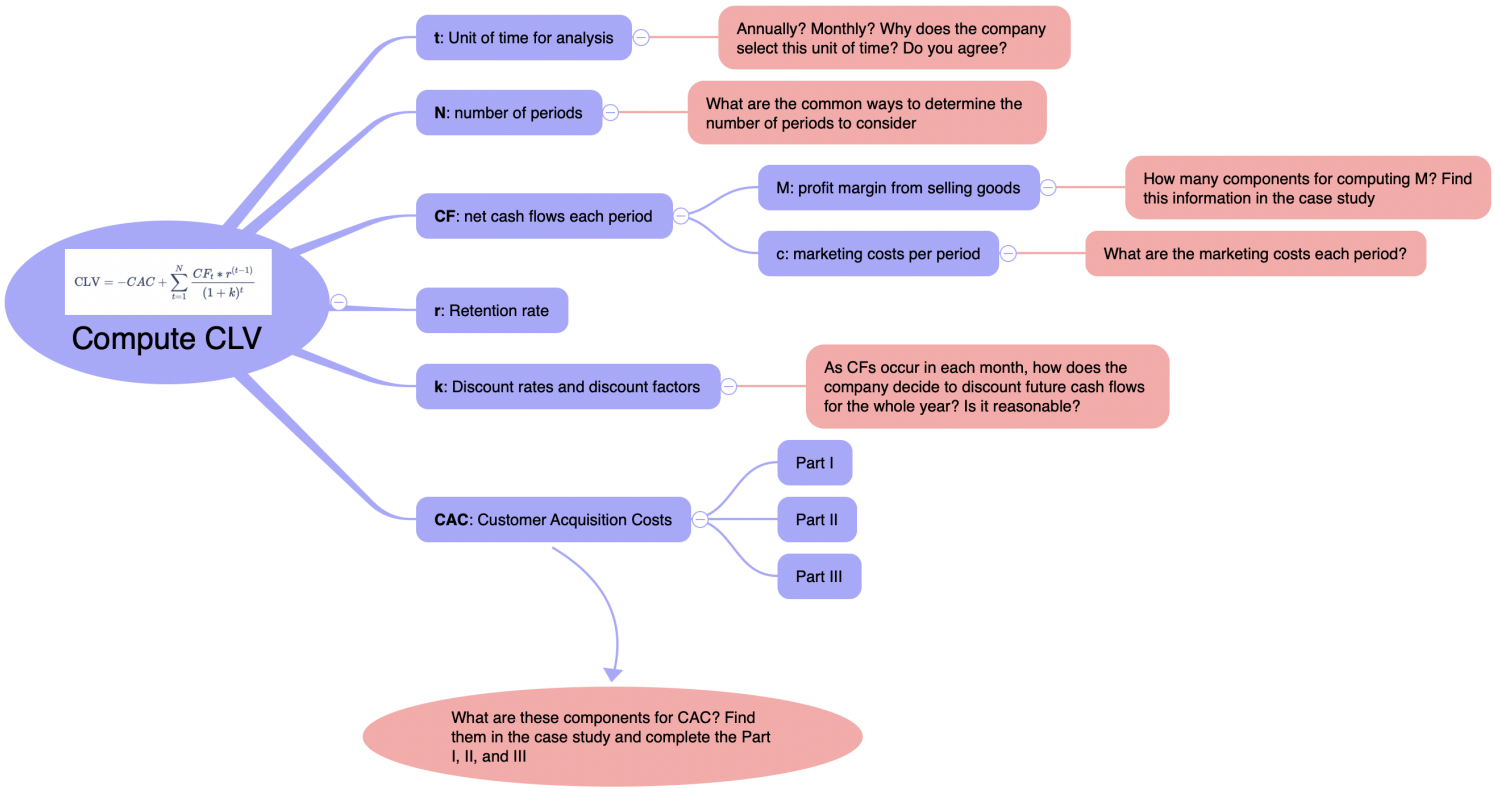
Are you using any grocery store's loyalty programmes? Did you need to pay for the membership?

Why do you think the grocery chains offer these loyalty programmes?





Overview for Computing CLV



Section 2

CAC for M&S

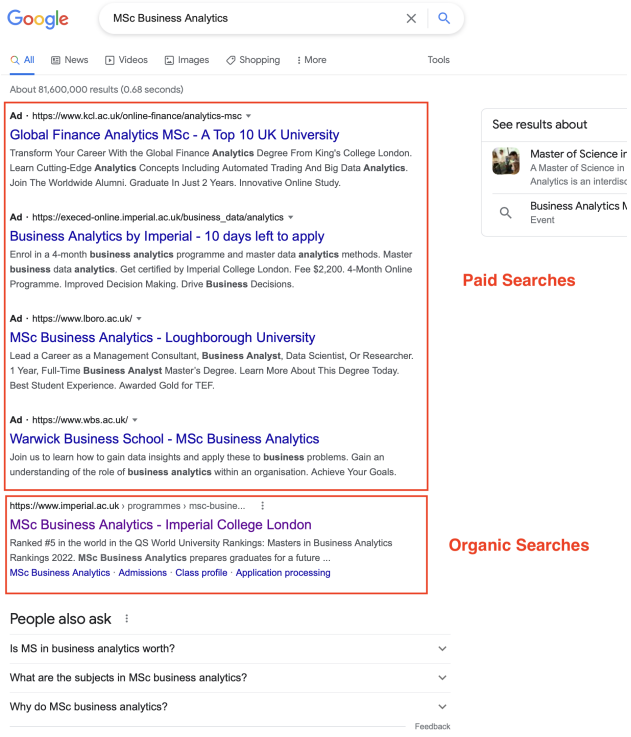
Customer Acquisition Costs for M&S

- What is the channel for customer acquisition in the case study? What steps does M&S need to take to acquire **one new customer**?

[...] (find info in the case study)

Paid Search Advertising

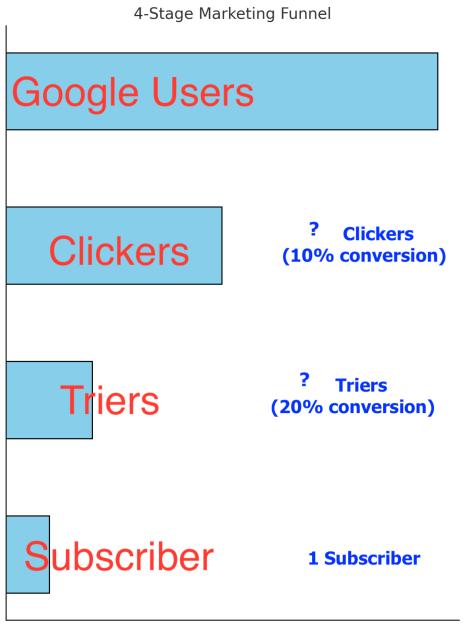
Search Engine Marketing (SEM) is a form of online marketing where businesses pay to display their ads on search engine results pages. This type of advertising is highly targeted and aims to capture users who are actively searching for products related to the advertiser's offerings.



- Brands/companies (The universities)
- bid on keywords (MSc Business Analytics)
- Advertisers (Google)
- paid search (bids-based with ads label)
- organic (quality-based)

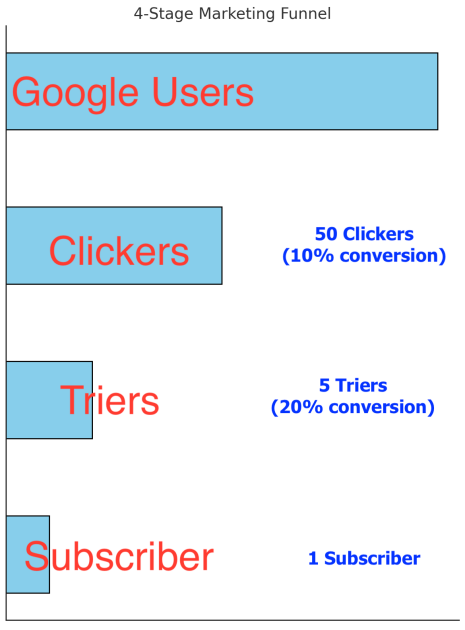
Marketing Funnel for Paid Search Ads

A **marketing funnel** is a model that represents the customer's journey from the initial awareness of a product or service to the ultimate purchase. This journey is depicted as a funnel to illustrate the decrease in the number of potential customers at each stage.



- **Question**: (1) how many customers do you need to convert in each stage to ultimately acquire one new paying customer? (2) how many sources of acquisition costs do we need to consider in this case study?

CAC: Roadmap



- Conceptually, we would need 50 clickers to get 5 triers and eventually convert 1 new member.
- Each funnel stage has its own acquisition costs:
  - Part I: Each clicker costs M&S £0.4, so the total cost for 50 clickers is £20.
  - Part II: We offer £10 promotion for each trier's first order
  - Part III: We earn profits from selling groceries during the trial period, which offsets some of the acquisition costs.

CAC Part I: paid search ads

CAC Part I: Costs of paid search ads to get 1 new member.

- *[...] about **10%** of customers who click on an ad on a search engine or social media will sign up for a free trial (i.e., triers); triers will on average shop **twice** during the trial period. **20%** of those trial users will eventually become paying customers.*

1. We think from the bottom up. To get 1 new member, how many triers do we need?

```
# trier_to_member_rate is the % of a new member from triers
trier_to_member_rate <-
```

2. To get 1 trier, how many clickers do we need?

```
# clicker_to_trier_rate is the % of trier customers from clickers
clicker_to_trier_rate <-
```

Compute customer acquisition costs: paid search ads

3. How many clickers are needed to eventually convert 1 new member?

```
n_clickers_for_1newmember <- (1 / clicker_to_trier_rate) * (1 / trier_to_member_rate)
```

4. Now, let's calculate the total cost of acquiring 1 new member by multiplying the number of clickers needed by the cost per click.

```
total_cost_clicks <- 0.4 * n_clickers_for_1newmember
```

CAC Part II

CAC Part II: total costs of £10 promo for first order for each trier customer

- What is the total promo cost for these "trier" customers' first order? These are free goods offered to customers in addition to their usual £100 shopping.

```
profit_margin <- 0.07
promo_first_order_each_trier <- 10

total_cost_promo <- promo_first_order_each_trier * # promotion amount = £10
    (1 - profit_margin) * # 7% profit margin
    (1 / trier_to_member_rate) # num of triers = 5
```

Compute customer acquisition costs

CAC Part III: total costs from selling groceries during the trial period

- For each trier, compute the net profits and marketing costs from the two free visits.

```
profit_each_trier <- revenue_each_visit * # £100 per visit
    profit_margin * # 7% profit margin
    2 # a trier shops twice
```

- For each trier, the 2 visits are free of delivery charges, which are marketing costs to M&S

```
deliverycost_each_trier <- 5 * # delivery cost per visit £5
    2 # a trier shops twice
```

- For each trier, compute net marketing costs from the 2 visits (marketing costs - earned profits)

```
netcost_each_trier <- deliverycost_each_trier - profit_each_trier
```

- Total net profits from all triers

```
totalcosts_from_all_triers <- netcost_each_trier * # cost each trier
    (1 / trier_to_member_rate) # how many triers to get 1 new member
```

Step 6: Compute customer acquisition costs

- CAC = total costs for customer ad clicks (for all clickers) + total costs of £10 promo free groceries (for all triers) + total costs of selling groceries (for all triers)

```
CAC <- total_cost_clicks + # Part I: cost for all clickers £20
    total_cost_promo + # Part II: free goods costs £46.5
    totalcosts_from_all_triers # Part III: net costs from selling groceries -£20
```

Section 3

CLV for M&S

Step 1: Determine time unit of analysis

- Time unit of analysis
  - *[...] (find info in the case study)*
    - When should we use monthly analysis or other units of time?

Step 2: Determine number of years

- N: the number of years over which the customer relationship is assessed
  - *[...] (find info in the case study)*
  - How can you do better here?

```
N <-
```

Step 3: Compute g for each period

$g = M - c$: **net profit each year**; Remember, M is the gross profit from membership fees and grocery purchases, and c is the cost of delivering goods to customers.

- *most customers paid the £89 annual membership fee*

```
membership <-
```

Step 3: Compute g for each period

- *40 times each year; each time £100; with profit margin 7% (COGS 93%)*

```
n_visit <-
revenue_each_visit <-
profit_margin <-

M <-
```

- *Variable delivery costs each order. Find info in the case study about delivery costs*

```
deliverycost_each_visit <-

c <- deliverycost_each_visit * n_visit
```

Step 3: Compute g for each period

- The annual g from customers' regular grocery shopping

```
# CF is the cash flow for one year

g <-

# create a sequence of CF for N years

g_seq <- rep(g, N)
```

Step 4: Compute sequence of retention rate

4. r: retention rate
   - *[...] (find info in the case study)*

```
# retention_rate is the probability of customer staying with us after 1 year
r <-

# create a geometric sequence of accumulative retention rate for N years
r_seq <-
```

Step 5: Compute sequence of discount factors

5. k: the discount rate
   - *[...] A yearly discount rate of 10%*

```
k <- 0.1
d <-
d_seq <-
```

   - *[...] The team decided to take a **conservative approach** whereby all profits are booked at the end of the year.* Why is this a conservative approach?

Step 6: Compute CLV

6. Compute the CLV based on the CLV formula (Table A)
   - g for the next 5 years

```
g_seq
```

   - Apply retention rate r

```
g_seq_after_churn <- g_seq *
```

   - Apply discount factor d

```
g_seq_after_churn_discount <- g_seq_after_churn *
```

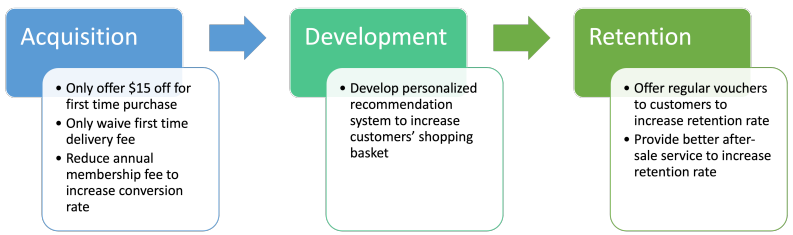
   - Compute CLV by summing up future expected profits

```
CLV <- sum(g_seq_after_churn_discount) - CAC
```

Section 4

CLV for Marketing Decisions

CLV as a Key Management Tool



We can use CLV as the key managerial tool for evaluating different marketing initiatives!

Scenario

- If M&S decides to reduce the pass price to £79 per year, then the retention rate will increase to 75%
- We can write down an R user-defined function to solve the question.

After-class

1. (To guide customer acquisition) What if the company only offers £5 for the first-time purchase? This will save some CAC but the clicker-to-trier rate will decrease to 5%. Please compute the new CLV. Should you go ahead with the proposed change?
2. (To guide customer retention) What if the company increases the annual membership fee to £119? This will increase revenue from memberships but will also make some customers unhappy, so their retention rate will reduce to 55%. Please compute the new CLV. Should you go ahead with the proposed change?