Marketing Campaign Effectiveness - Introduction

📌 Measuring Marketing Campaign Effectiveness – Case Study

🎯 Objective

To evaluate marketing campaign performance using Key Performance Indicators (KPIs):

- ROI (Return on Investment)
- CPA (Cost Per Acquisition)
- Profit & Loss
- Lead Generation

Column Name	Description
ID	Unique customer identifier
Year_Birth	Year of birth of the customer
Education	Education level (e.g., Graduation, PhD, etc.)
Marital_Status	Marital status (e.g., Single, Married, etc.)
Income	Yearly household income in monetary units
Kidhome	Number of small children at home
Teenhome	Number of teenagers at home
Dt_Customer	Date of customer's enrollment with the company
Recency	Days since the last purchase
MntWines	Amount spent on wine in the last 2 years
MntFruits	Amount spent on fruits in the last 2 years
MntMeatProducts	Amount spent on meat products in the last 2 years
MntFishProducts	Amount spent on fish products in the last 2 years
MntSweetProducts	Amount spent on sweets in the last 2 years
MntGoldProds	Amount spent on gold products in the last 2 years
NumDealsPurchases	Number of purchases made with a discount
NumWebPurchases	Number of purchases made through the company's website
NumCatalogPurchases	Number of purchases made using a catalog
NumStorePurchases	Number of purchases made directly in stores
NumWebVisitsMonth	Number of visits to the website in the last month
AcceptedCmp3	1 if the customer accepted campaign 3, else 0
AcceptedCmp4	1 if the customer accepted campaign 4, else 0
AcceptedCmp5	1 if the customer accepted campaign 5, else 0
AcceptedCmp1	1 if the customer accepted campaign 1, else 0
AcceptedCmp2	1 if the customer accepted campaign 2, else 0
Complain	1 if the customer complained in the last 2 years, else 0
Z_CostContact	Cost related variable
Z_Revenue	Revenue-related variable
Response	1 if customer accepted the last campaign, else 0

1 Return on Investment (ROI)

- Measures how much profit is earned for every dollar spent on the campaign.

🔍 Formula:

Frame

$$\text{ROI} = \left(\frac{\text{Revenue} - \text{Cost}}{\text{Cost}}\right) \times 100$$

📘 Example:

```
Revenue = $1000

Cost = $200
```

Frame

$$\text{ROI} = \left(\frac{1000 - 200}{200}\right) \times 100 = 400\%$$

💡 Interpretation:

- For every $1 spent, $4 is earned. High ROI = successful campaign.

2 Cost Per Acquisition (CPA)

- Shows the cost to acquire one customer from the campaign.

🔍 Formula:

Frame

$$CPA = \frac{\text{Total Cost}}{\text{Total Conversions}}$$

📘 Example:

```
Cost = $200

Conversions = 5
```

Frame

$$\text{CPA} = \frac{200}{5} = \$40$$

💡 Interpretation:

- The company spends $40 to acquire each customer. Lower CPA = better efficiency.

3 Profit & Loss

- Shows whether the campaign is making or losing money.

🔍 Formula:

Frame

$$\text{Profit} = \text{Revenue} - \text{Cost}$$

📘 Example:

```
Revenue = $1000

Cost = $1200
```

Frame

$$\text{Profit} = 1000 - 1200 = -\$200$$

💡 Interpretation:

- A negative profit means a loss of $200. Campaign was not financially successful.

4 Lead Generation

- Counts total customer interactions across channels.

🔍 Formula:

Frame

$$\text{Total Leads} = \text{Web Purchases} + \text{Catalogue Purchases} + \text{Store Purchases}$$

📘 Example:

```
Web = 3

Catalogue = 2

Store = 4
```

Frame

$$\text{Total Leads} = 3 + 2 + 4 = 9$$

💡 Interpretation:

- Higher leads = more customer engagement and sales potential.

📝 Quick Summary Table

KPI	Formula	Goal
ROI	((Revenue - Cost) / Cost) × 100	Higher is better
CPA	Total Cost / Total Conversions	Lower is better
Profit	Revenue - Cost	Positive = good
Lead Generation	Web + Catalogue + Store Purchases	Higher = better engagement