**Return on Marketing Investment –**

**The impact of sales promotion and shampoo sales**

**A bottle of shampoo on a white surface

Description automatically generated**

Image via Unsplash

**Data set information**

You will use a store-level scanner data set for shampoo category. It is a panel data set with 48 stores, each providing around 104 weeks of data.

**Data set description at store level**

**Characteristics**

Original file: shampoo

Number of brands: 11

Number of observations: 5195

Number of stores: 48

Number of weeks per store (max.): 109

Note: not every store has 109 weeks

Period: week 20 in 2016 until week 24 in 2018   
Missing value indicator: . in SAS

**Brands**

1. Head & Shoulders 250 ml

2. Herbal Essences 300 ml

3. Garnier Fructis 250 ml

4. Dove 200 ml

5. TRESemmé 400 ml

6. Aussie 200 ml

7. Sunsilk 250 ml

8. L'Oréal Paris 300 ml

9. Pantene Pro-V 200 ml

10. Suave 200 ml

11. Batiste 300 ml

**Variables**

shopnr store number

weeknr week number

sales*i* unit sales brand *i*

salml*i*  sales in ml for brand *i*

actpri*i*  actual unit price brand *i*

regpri*i*  regular (normal) price per unit brand *i*

prind*i*  price index of brand *i* = actpr*i* / rgpr*i*

pci*i*  dummy for price discount for brand *i*

prom*i categorical* promotion variabele for brand *i*:

1 feature-only with just text   
2 feature-only with picture

3 coupon

4 display-only

5 display with feature with just text

6 display with feature with picture   
7 display + coupon

prom*i\_j*   promotion dummy for brand *i* (=1 if brand *i* has promotion *j*, = 0 else)

j=..

1 feature-only with just text   
2 feature-only with picture

3 coupon

4 display-only

5 display with feature with just text

6 c   
7 display + coupon

spec*ji*  intensity of special pack (=9 if brand *i* sold only special packs of variety *j*, down to 0) 0)

Special pack variables: (ordered according to position in database)

1. two bottles with price discount

2. pay two, get three

3. two bottles with free ..... (brand dependent)

- Andrelon + mini hair spray

- Elseve: + mini conditioner

- Organics: + mini conditioner

- Sanex: + shower gel

4. other special pack:

- week 1397: Andrelon 1 bottle of shampoo +free mini hair spray - Elseve: + mini conditioner

- Sanex : 1 bottle of shampoo + shower gel

- Zwitsal: special package with shampoo, + soap + bath tub duck

*Note: the variables* salml*i have been corrected for these special packs.*