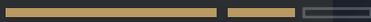


MARKET BASKET ANALYSIS



THE CLIENT PROBLEM

Our client, a **leading beverage manufacturer** wanted to analyse bills (purchase baskets) to identify products which were frequently purchased together. The objective was to analyse shopping baskets based on SPSS data to **identify the purchase patterns and establish product associations**. The client wanted to use insights from the analysis to **improve merchandising opportunities, bundling opportunities and design effective promotions**.

THE AQ SOLUTION

Our approach can be divided into three stages.



DEFINE

We defined the association rules that evaluated dependencies between categories.



ANALYSE

We analyzed basket compositions to determine category relationships based on these defined rules.



IDENTIFY

We identified opportunities for category placement and promotions with other categories.

WE FRAMED THREE TYPES OF RULES OF ASSOCIATION FOR OUR ANALYSIS

SUPPORT

We defined support as the share of transactions where two categories (A & B) were purchased together.



INTERPRETING SUPPORT

Support could also be interpreted as the popularity of a category or a combination of categories.

CONFIDENCE

Confidence was defined as the ratio between the number of transactions which contained both A & B and the number of transactions which contained only A.



INTERPRETING CONFIDENCE

It tells us how often category B occurs in transactions that involve category A. The higher the confidence, the higher the probability that category B would be purchased.

LIFT

This helped us understand how the probability of the occurrence of category A was affected by the presence of category B.

INTERPRETING LIFT



- Lift < 1 indicated that category A & category B appeared less often together than expected; it implied a negative correlation of A with B.
- Lift = 1 indicated that there was a minimal effect or almost zero correlation.
- Lift > 1 indicated that a strong degree of correlation existed and there was a higher probability that a transaction which included category B would also include category A.

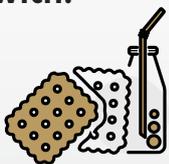
THE CLIENT BENEFIT

We helped the client identify key category associations in an efficient way. An example output screen is given below. The study also helped our client evaluate the bundling offers which he had already rolled into the market.

KEY FINDINGS: BEVERAGE X

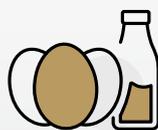
FOODS

Each combo of Beverage X with:



Biscuits

OR



Eggs



5% of total transactions are a combination of Beverage X with biscuits or eggs.



Beverage X with biscuits and eggs were bought together as a combo **40%** of the time.

FOODS

Purchases of:



AND



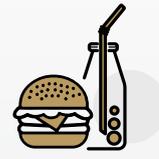
Salty snacks

Ice cream

45% of salty snacks and ice cream purchases were likely to include Purchase X.

PREPARED FOODS

Purchases of:



Food dishes

Food dishes had a **50%** probability of being bought with Beverage X.

OTHER BEVERAGE CATEGORIES

Purchases of:



AND



Soy-based beverages

Tea powder



Soy-based beverages and powdered tea had a **62%** probability of being bought with Beverage X.



Spirits with Beverage X were an important category combo.

OTHERS

Purchases of pet food supplies



Pet food supplies with Beverage X were an important category combo.



Thank You

For any queries, get in touch with us.

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