





## What we get in the market?

Retail management being a challenging field as it is in regard to the data analysis as we have found, has seen in the market space innumerable solutions, all in the name of Business intelligence, none of them however mitigates the already complex problematic. In actuality, the pressure of the solution aggravated the pressure of complexity of the problematic. The various solutions in this space may be grouped as

- Market Basket analysis [MBA]
- ANOVA analysis
- Aggregate analysis
- Product profitability analysis
- Shop profitability analysis
- Special promotion campaign efficacy analysis

We will spend a little time in each case to point out that none of these gives an elegant solution.

**Market Basket Analysis [MBA]** is however the best of the inventions in this space. Every transaction per customer at any point in time is a package with a specific identity. This enables to strike an association of the different products a customer goes for. As an example a very creative consumer behaviour is fathomed when a customer buys products when (s)he buys main items, like what does she buy with meat or with the main dish? - this is a question the industry always wanted to know, the follow up question would be how much of an associative product is brought with a main product and then go for the aggregate and the average- this will give the business analysts and idea of how much say of potato need to be stocked if there is a sudden surge of meat demand due to say some kind of an occasion. Many different algorithms are in the market trying to measure the comparative relative weights of products in associations with some specified “main products”.

In this regard we must assert that the point-of-sales data at the transaction level can provide the best value and any kind of modelling would actually bulldoze these nuances. Data analytics as opposed to Business Analytics through normal OLAP based business intelligence tools are not addressing the problematic. Packets or baskets are physical realities that may and can be aggregated over consumers, sundry or repeat ones. They can however be conceived and created without the consumer oriented gaze but again through an aggregated measure viz, how much potatoes are sold in a week and map that to the amount of meat sold- the assumption here is however a little romantic- that people who consume meat also would concomitantly consume potatoes- this again is arguable. But to cut the complexity many retail outlet owners take recourse to some assumptions in consumer behaviour which they augur with what they call empirical experience. Empiricization of this sort brings down the value of reality in the actual transaction data set- we may call these as “reading in of pre-conceived knowledge artefacts in the data set”.

Market Basket analytics however has to deal in a huge number of data set and needs to be disentangled at the point-of-sale through algorithms built in to the ERP system. This can give us the data measure of the associative values of products with respect to some prime products. Which product is prime is again a complex assumption based or empiricism based knowledge and cannot be accepted without any debate. The internal handling of the data becomes rather complex adding on to the ready reckoning of the data. Yet, MBA is the most advanced and creative solution in finding out the consumer behaviour in retail industry and any fast ad-hoc self-serving data analytics tool can offer wanders.









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