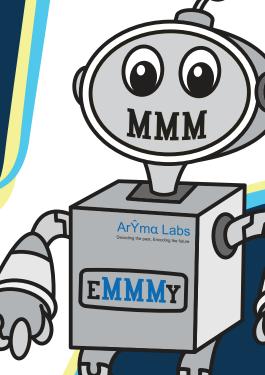
Marketing Mix Modeling with



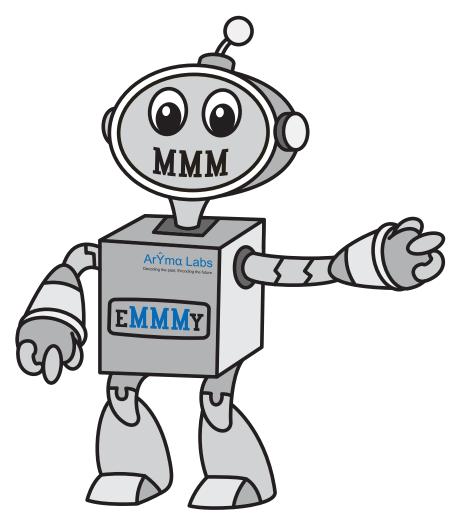
Marketing Mix Modeling (MMM) - 101

What is MMM?

Marketing Mix Modeling (MMM) is a technique which helps in quantifying the impact of several marketing inputs on sales or Market Share. The purpose of using MMM is to understand how much each marketing input contributes to sales, and how much to spend on each marketing input.



It is all about Marketing ROI (MROI)



MMM helps in the ascertaining the effectiveness of each marketing input in terms of Return on Investment. In other words, a marketing input with higher return on Investment (ROI) is more effective as a medium than a marketing input with a lower ROI.

OLS Regression

Pooled Regression (partial and complete)

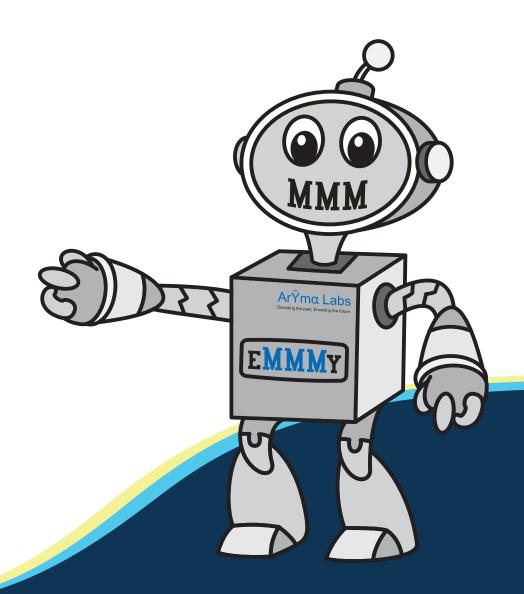
Partial Least Squares Regression

Cox Regression

Mixed Effects

Bayesian Linear Regression Which technique is used in MMM?

Market Mix Modeling (MMM) uses a variety of Regression techniques.



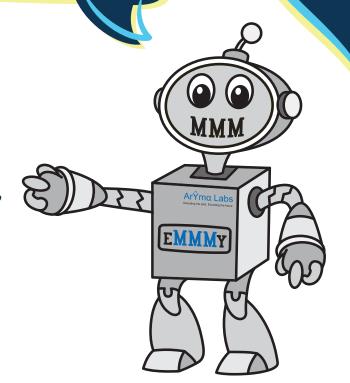


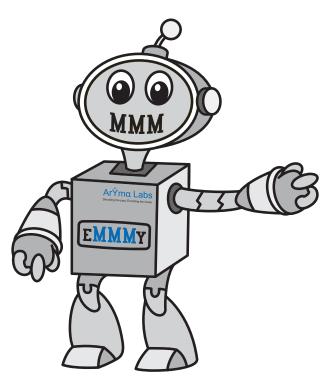
Decoding the past, Encoding the future

Let me explain MMM through Simple Linear Regression.

MMM Explained

The dependent variable could be Sales or Market Share. The independent variables usually used are Distribution, price, TV spends, outdoor campaigns spends, newspaper and magazine spends, below the line promotional spends, and Consumer promotions information etc. Nowadays, Digital and social media are highly used by marketers to increase brand awareness. So, inputs like Digital / social spends, website visitors etc. can also be used as inputs for MMM.

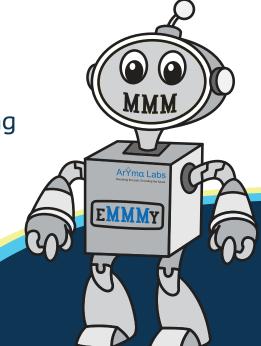




An equation is formed between the dependent variables and predictors. This equation could be linear or non-linear depending on the relationship between the dependent variable and various marketing inputs. There are certain variables like TV advertisement which have a non-linear relationship with sales. This means that increase in TV GRP is not directly proportional to the increase in sales. I will discuss about this in more detail in the subsequent section.

Sales = β o + β 1*x1 + β 2*x2

The ßetas generated from Regression analysis, help in quantifying the impact of each of the inputs. Basically, the beta depicts that one unit increase in the input value would increase the sales by Beta units keeping the other marketing inputs constant.





MMM Results

are usually
depicted through
contribution charts.

