Terminology for MMM

1. Linear regression equation "**Y= bX+C"**

   Y= DV
   X= IV
   b= Slope (coefficient of X)
   C- Intercept

2. Y=b1X1+ b2X2+bX3+....+bnXn+C
   Having different IVs

3. Coefficient (b1,b2, ..bn): Coefficient indicates the direction of the relationship between a predictor variable and the response variable and 1 unit change in IV will change DV according to the coefficient.

4. Base: Outcome is achieved without any advertisements. It is due to brand equity built over the years. Base outcomes are usually fixed, unless there are any economic or environmental changes.

   E.g.: Distribution (+ve coefficient)
   Price (-ve coefficient)

5. Incremental: Business outcomes generated by marketing activities like TV and print ads, digital spends, price discounts, promotions, social outreach etc

   E.g.: GRP, TRP, Impressions etc.

6. Effectiveness: Based on the volumes.

7. Efficiency: Based on the revenue or monetary term.

8. Dimensions: They are channels, states, regions, outlets etc.

9. Model Type: Pooled and un-pooled
   - Pooled: Commonality between different market by pooling it together
     Every market or section has different intercepts.
   - Un pooled: Treat every section in the same category. Having same intercept for every IV.

10. Additive: Same impact in every variable in any factor. (Additive process). Synergy is missing.

11. Multiplicative: Calculated in Percentage as percentage will be same but absolute value can be different. Synergy is between the variables.

12. P value: Significance value where Ho can be true.

13. Ad stock: Impact carried out by the advertisement over from the period from the start of advertisement.

    E.g.: Multiple iteration.

14. Gamma: Capturing multiple impact
    - Degree of freedom: Minimum time required for ad to make impact to the target cliental.
    - Lag Transform: Represent the effect of a previous value of a lagged variable.

      E.g.: Coupon System
    - Log: Variable having diminishing returns.

      E.g.: Price
    - Exponential decay: Definite time period or cut of time.

      E.g.: Expire date

15. Priors: Information that we are putting in the models.

16. Support: The Raw data that we have from where we are doing the modelling.

17. Contribution: Percentage contribution of a variable with respect to the all the total contributions of the variables.

18. Decom: Percentage incremental of the sales value. (Like contribution)

19. Due to: Comparing percentage change for two years

20. MAPE: Measures the average magnitude of the errors in a set of predictions.

21. R square: How close the data are to the fitted regression line.

    - Range from 0 to 100%

22. VIF: Variance inflation factor (VIF) detects multicollinearity in regression analysis.