

# Harmon Foods Harvard Case Solution & Analysis

## OBJECTIVE:

To help John MacIntyre forecast the sales of Treat in the Breakfast Food Division of Harmon Food Inc. in order to have:

- Accurate Schedules
- Effective Advertising Expenditures
- Precise Budgeting
- Careful Promotional Usage

## STEP 1

Calculate Consumer Allowance:  
 $\text{Consumer Packs} \times 0.2 \times 24$

## STEP 2

Found Lag 1 AND Lag 2 for each promotional usage- Consumer Allowance and Dealer Allowance.  
Also used the sale's percentage per week as weights for both consumer and dealer allowance.

## STEP 3

Conducted Various Regression Models:  
• Regression with account for Weights  
• Regression with Lags  
• Regression with both Weights and Lags  
• Regression by Deconstructing Data.

## STEP 4

Used both Regression Line using:  
• New Model Regression Error  
• Standard and Residuals  
• Collinearity Problem  
• Correlation Analysis

## STEP 5

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## STEP 3

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- **Regression with account for Weights**
- **Regression with Lags.**
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## STEP 4

**Tested each Regression line using:**

- **Root Mean Square Error**
- **R squared and multiple R**
- **T-value and P-value**
- **Confidence Intervals**

## SOLUTION!!

We found the Best Regression Line to be the Lag 1 for the Consumer Allowance and Lag 2 for Dealer Allowance:

$$Y = -80183.45 + 1084.63t + 0.084X_1 + 0.068X_2 - 0.045X_3 - 0.017X_4 + 391089.75Z$$

- T= Time in months from (Jan-84)
- X1= Consumer Allowance
- X2= Dealer Allowance
- X3= Lag 1 Consumer Allowance
- X4= Lag 2 Dealer Allowance
- Z= Seasonal Index