# Case 2 - Experiential Retailing: Influence on Young Indian Consumer’s Response

Multivariate linear regression model

## Objective -

To identify the impact of all independent variables i.e. sound, light, layout, music, fragrance, etc on the customers retail experience

## Justification -

Since all variables are quantitative(numerical) in nature therefore, to check the above said objective we will use multivariate regression model

## Data Analysis

Hypothesis for multivariate linear regression model

Null hypothesis (H0) : the overall model is not statistically significant

Hypothesis (H1) : Overall model is statistically significant

### Step 1 -

If , p<α(alpha) - we reject H0

Here from output P = 0.0001341 less than Alpha (0.05)

We reject , Null hypothesis (H0) and accept H1

Therefore we can say that model is statistically is significant

### Step 2 -

Hypothesis for beta ß coefficient

H0i = All beta coefficient are not statistically significant

H1i = At least one of the beta coefficient is statistically significant

| Coefficients: |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Estimate | Std. Error | t | P Value |  |
| (Intercept) | 0.818982 | 0.707732 | 1.157 | 0.250096 |  |
| shoping.when.bored | 0.009209 | 0.089835 | 0.103 | 0.918567 |  |
| waste.of.time | -0.102435 | 0.110548 | -0.927 | 0.356477 | 0 |
| wall.colour | 0.175777 | 0.099336 | 1.77 | 0.080015 | . |
| fragrance | 0.084468 | 0.110294 | 0.766 | 0.445669 |  |
| emp.knowledge | -0.367028 | 0.1491 | -2.462 | 0.015635 | \* |
| layout.flooring | -0.078535 | 0.105669 | -0.743 | 0.459183 |  |
| recommend | 0.044022 | 0.124292 | 0.354 | 0.723986 |  |
| emp.concerned | 0.176481 | 0.122625 | 1.439 | 0.153383 |  |
| layout.spacious | -0.151162 | 0.099258 | -1.523 | 0.131102 |  |
| emp.trustworthy | 0.150259 | 0.116543 | 1.289 | 0.200424 |  |
| layout.design.display | 0.030934 | 0.122993 | 0.252 | 0.801963 |  |
| entertain | -0.076202 | 0.162124 | -0.47 | 0.639416 |  |
| enthusiam | 0.172139 | 0.134744 | 1.278 | 0.204527 |  |
| moretime.spent | 0.451503 | 0.116039 | 3.891 | 0.000185 | \*\*\* |
| buy.more | 0.107271 | 0.098752 | 1.086 | 0.28011 |  |
| light.dull | 0.108277 | 0.117792 | 0.919 | 0.360307 |  |
| design.good | -0.053493 | 0.160039 | -0.334 | 0.738926 |  |
| music.bothersome | -0.208864 | 0.104116 | -2.006 | 0.047693 | \* |
| emp.not.assist | 0.12882 | 0.101218 | 1.273 | 0.20623 |  |

Single star, double star, or triple star means it is significant

Dot mean significance is less than 10%

| Coefficients: |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Estimate | std error | t | P Value |  |
| (Intercept) | 1.13789 | 0.31771 | 3.582 | 0.000508 | \*\*\* |
| wall.colour | 0.1865 | 0.08737 | 2.135 | 0.034985 | \* |
| emp.knowledge | -0.22314 | 0.10351 | -2.156 | 0.033259 | \* |
| moretime.spent | 0.52414 | 0.09432 | 5.557 | 1.91E-07 | \*\*\* |

### Step 3

y=α+ß1.x1+ß2.x2+..++E

Frequency of Visit=

1.1378+0.1865(wall.color) - 0.223(emp.knowledge)+0.52414(moretime.spent)+E

#### Interpretation:

If employment knowledge and more time spent is constant and also they increase the wall color by 1 unit, then frequency of visit will increase by 18.65%

If again wc and more time spent constant and if we increase employee knowledge by 1 unit then frequency of visit will decrease by 22.3%

If again wc and employee knowledge constant and if we increase moretime spent by 1 unit then frequency of visit will increase by 52.4%

After comparing beta coefficient we conclude that more time spent in retail store is more important and most influencing variable followed by employee knowledge and wall color

#### Step 4 -

Multi-familiarity (multicollinearity )

If there is high positive correlation between variables then we can say that multicollinearity is present between the correlation

wall.colour emp.knowledge moretime.spent

1.067438 1.313283 1.298247

Since the vif value for all independent variables is below 5 , therefore no multicollinearity is present between the variables