

Assignment 2C

Results

Description

The two independent variables include the newness of the consumer to online grocery shopping and their income range. Three scales were constructed as discussed in the previous assignment. Firstly, the scale of online shopping is created with the items Deterrent factor, Ease of delivery, Consistency of shopping list, Absence of re-ordering as a deterrent factor, Use of re-ordering, and Reduction of impulse buying due to reordering. Secondly, the scale of loyalty is created with the items Frequency of online shopping, Frequency of in-person shopping, Loyalty with the online shopping site, Change in expenditure while shifting to a new shopping site, Watching/tracking shopping time, and Distraction during shopping. Thirdly, the scale of shopping time is constructed with the items Shopping within limited time lessens expenditure, More time leads to more expenditure, and Time is not a crucial factor affecting expenditure.

Descriptive Statistics

The customers who were not new to the online grocery shopping had indicated that shopping time matters in reducing their expenditure in 4.86 responses (SD = 1.72) and those users who were relatively new in 5 responses (SD = 1.49). The users with income greater than the national average (around 30,000) and less than 1,00,000 in Indian rupees preferred online grocery shopping in 4.4 cases (SD = 1.85) and those having income less than the national average in 5.22 cases (SD = 1.38). Online shopping as a scale has been favorable amongst regular users in 4.53 cases (SD = 1.52) and new users in 4.98 cases (SD = 1.53). Those with income above the national average preferred it in 5.14 cases (SD = 1.45) and those with lesser income preferred it in 4.71 cases (SD = 1.73). The scale of loyalty was given importance by regular users in 3.83 cases (SD = 1.33) and in new users in 4.44 cases (SD = 1.41). Those users earning above the national average preferred it in 3.38 cases (SD = 1.19) and the rest in 4.38 cases (SD = 1.35).

Correlation

Pearson's correlation is calculated yielding an r-value and significance test is performed by considering the p-value. The r-value indicating Pearson product-moment correlation coefficient between the scale online shopping and shopping time is -0.03, $p = .918$ showing high significance but with a negative correlation. Between the scales loyalty and shopping time, the r-value is 0.1, $p = .729$ which also corresponds to high significance with a positive relationship. The correlation between loyalty and shopping time is given by r-value of -0.06, $p = .846$ indicating a negative relationship but with strong significance.

Inferential Statistics

This analysis was conducted as a two way within participants ANOVA since it involved two factors affecting the within participants' sample. The first factor is based on how relatively a new user the participant is to online grocery shopping and the second factor is based on whether their income is above the national average (30,000) and less than 1 lakh or less than the national average. The within-participants study is motivated rather than between participants because there are no significant differences or groups existing in the study sample. This model revealed a significant effect of the newness of the customer on the shopping time cue, $F = 0.041$, $p = .843$, and the income criteria as $F = 0.059$, $p = .813$. The effect on online shopping based on the first factor is $F = 4.082$, $p = .07$ and on the second factor is $F = 0.533$, $p = .482$ indicating that these are also significant. The loyalty as a cue on the first factor shows significance with $F = 1.403$, $p = .264$, and on the second factor with $F = 0.001$, $p = .98$. For post-hoc comparisons in R, TukeyHSD was used since it involves multivariate design consisting of more than one factor.

Visualizing the results

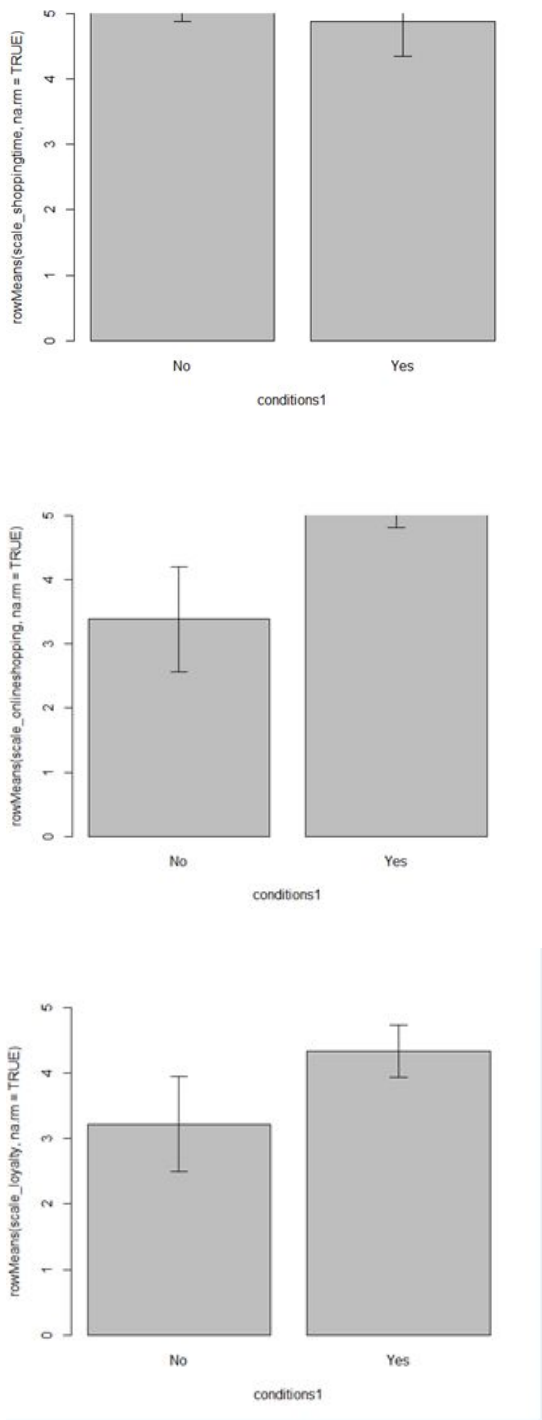


Figure 1: Bar graph representing the scales shopping time, online shopping, and loyalty for the factor determining whether the consumer is new to online grocery shopping.

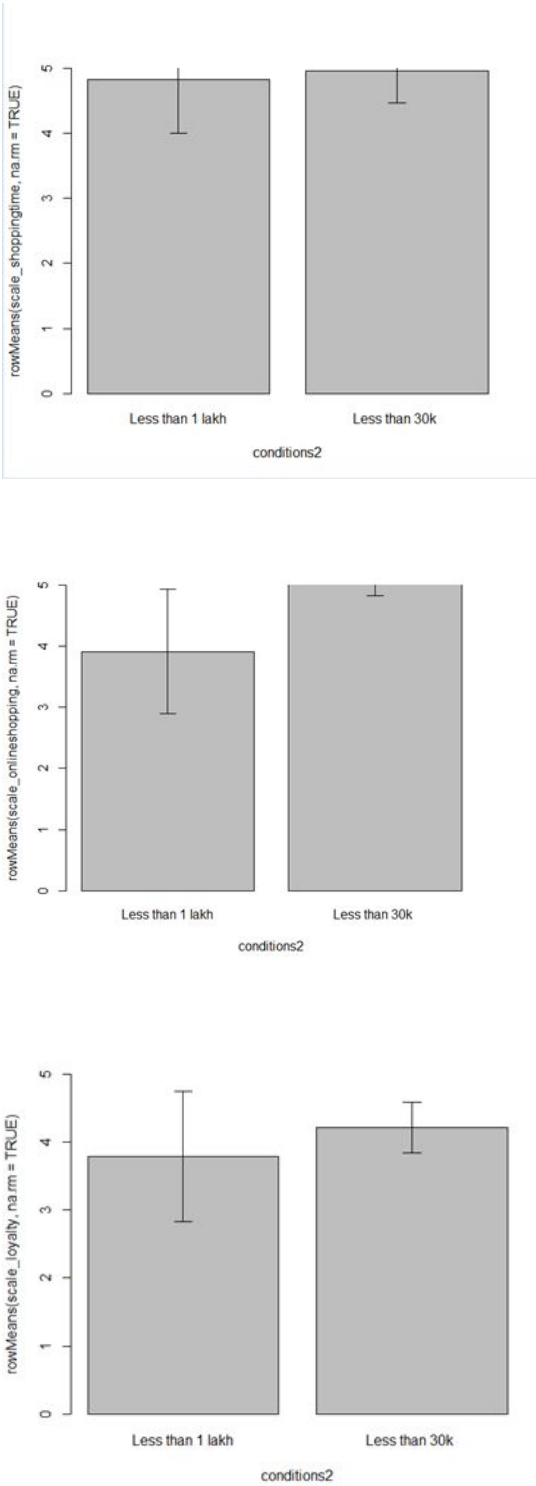


Figure 2: Bar graph representing the scales shopping time, online shopping, and loyalty for the factor indicating the income of the consumer.