Homework assignment 05

Use black text (if possible) for everything you include in this document. Keep both your answers and the original questions. Save this document in PDF format and submit it on Canvas. Please follow the general requirements described in the grading rubric.

1. Show a documentation header. Include your name, the purpose of the program, and the conditions under which others may or may not use your results.

2. Import the file collaborative-consumption.xlsx into SPSS. Refer to the data dictionary if needed. Display the first ten rows of data below.

3. Examine the correlation matrix of the variables wise\_move through saves\_time. Do not include the entire correlation matrix here, but do provide an interpretation. Most of the correlations should be positive, based on the wording used on the survey. Can you identify any variables that are negatively correlated?

4. Compute a principal components analysis of the variables wise\_move through saves\_time. Use the default options throughout and display a scree plot. Examining the scree plot suggest the number of components that might be computed.

5. Display the eigenvalues. Based on the eigenvalue greater than 1.0, how many factors might you include? How much variation in the data would be accounted for?

6. Save the first two principal components as new variables. Plot these two components with markers by the variable how\_often. Use the minus symbol for once a year, several times a year, and tried once or twice. Use a plus symbol for all other categories. Is there a trend or pattern that you see with either or both principal components and how often survey respondents used collaborative consumption?

7. Compute a factor analysis with the following options: maximum likelihood extraction based on eigenvalues greater than 1, varimax rotation, display the rotated solution, coefficients sorted by size, and suppress coefficients less than 0.5. Display and interpret the rotated factor matrix. Do the individual variables that load onto a particular factor share a common theme? Do some variables load onto more than one factor with a coefficient greater than 0.5? Do some load onto none of the factors with a coefficient greater than 0.5?

8. Display the extraction communalities from your factor analysis. Are any of the communalities small (less than 0.3)? What are the implications of this?