Configuration Manual

MSc Research Project
MSc FinTech

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Configuration Manual

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1   Introduction

This configuration manual is included with the research paper given as a section of the MSC Fintech module. The methods utilized to conduct the study are detailed in this guide.
To enable other researchers to recreate the study's findings, it also details the technology and hardware configuration of the system employed to generate the results.

2   System Configuration

This section discusses the system configuration required for executing the analysis

## 2.1   Hardware Requirements
- Device Name: LAPTOP-4I6TFH8U
- Windows Operating System Version 10 – 64bit
- Intel(R) Core(TM) i7-1065G7 CPU @ 1.30GHz   1.50 GHz
- RAM: 16GB

2.2   Software
- IBM SPSS STATISTICS 26: The IBM SPSS Statistics 26 software was used to analyze the data and execute the techniques employed in this research.

- Google Forms: the survey instrument used for disseminating the questions and collecting data was google forms.

- Microsoft Excel: Microsoft Excel was used to extract the data and responses from the google forms as a CSV file. Respondents who didn't consent to participate in the survey were removed from the data before importing it into SPSS.

3.   Installation of SPSS Software

The SPSS software was installed to analyze the data and carry out the statistical techniques considered in this study. Descriptive statistics, Cronbach alpha, Kruskal- Wallis test, and exploratory factor analysis were used and executed on SPSS to generate the results and findings of the research.
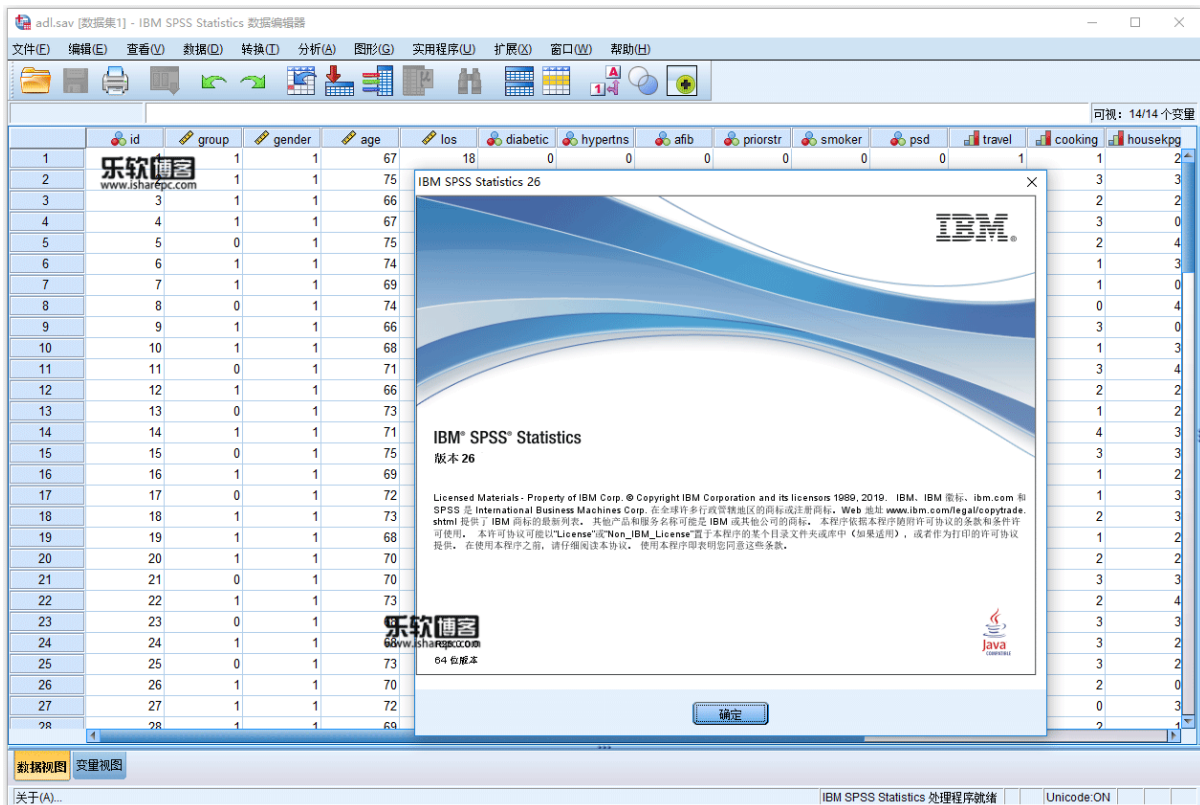
4. Importing the Data

Following data extraction from the Google Sheet, respondents who declined to participate in the survey were eliminated, and no additional missing values were found. The information was then put into SPSS for evaluation.
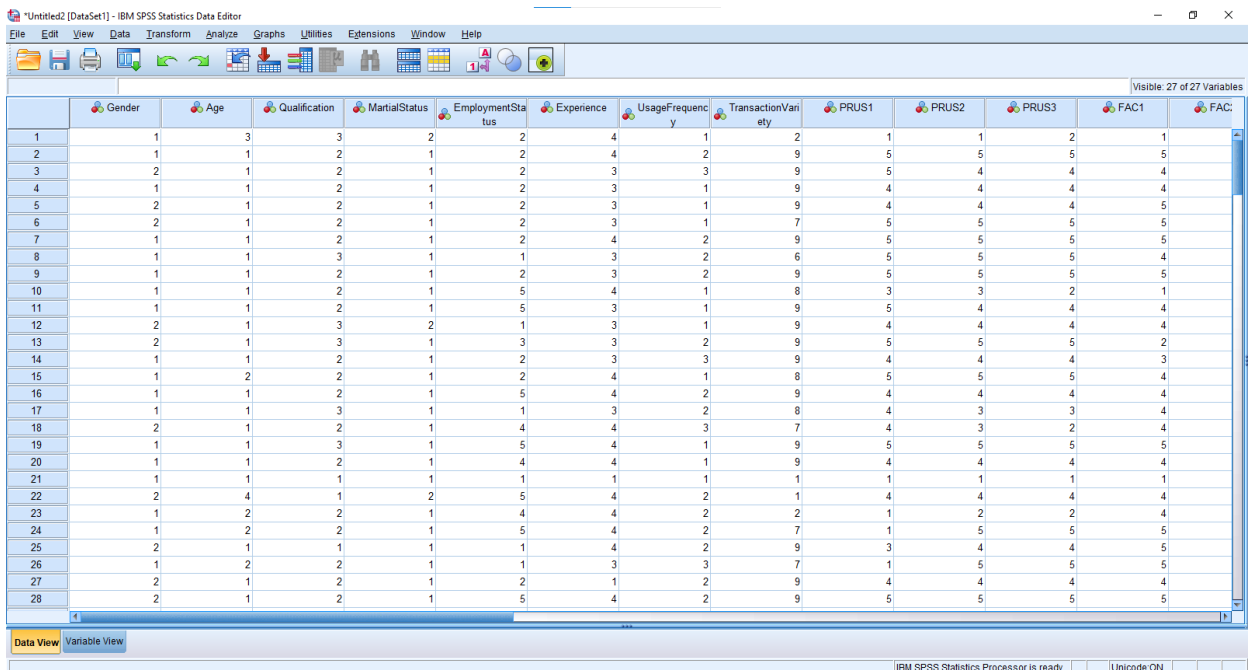

Figure 1: Display of the SPSS interface and the data extracted from the excel file

5. Techniques used for analysis

After importing the data into SPSS, the various techniques discussed below were executed.

5.1 Descriptive Analysis

Descriptive statistics were used to describe and identify the characteristics of a data set.

Step 1: After inputting the data, we used descriptive analysis. From the diagram below, Select Analyze on the top menu bar, click "Descriptive statistics," and then Select "Frequencies."
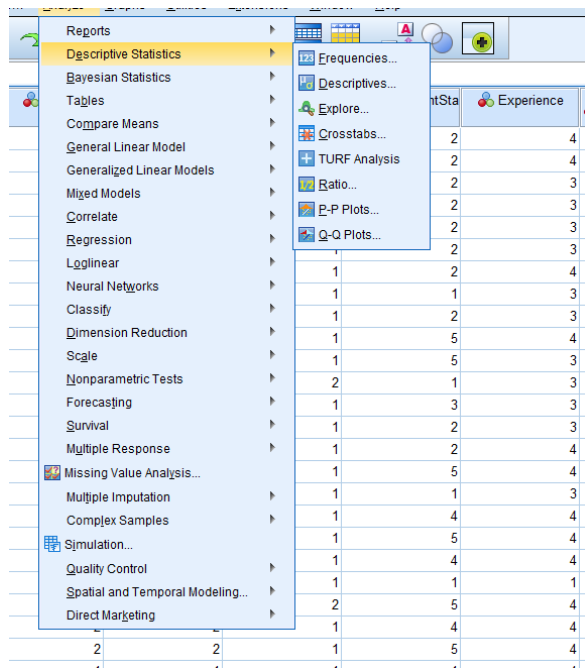
Step 2: Once Frequencies have been selected, Move all of the 19 items from the Frequency table to the box titled "Variables" and Select the dialog box labeled "Statistics"
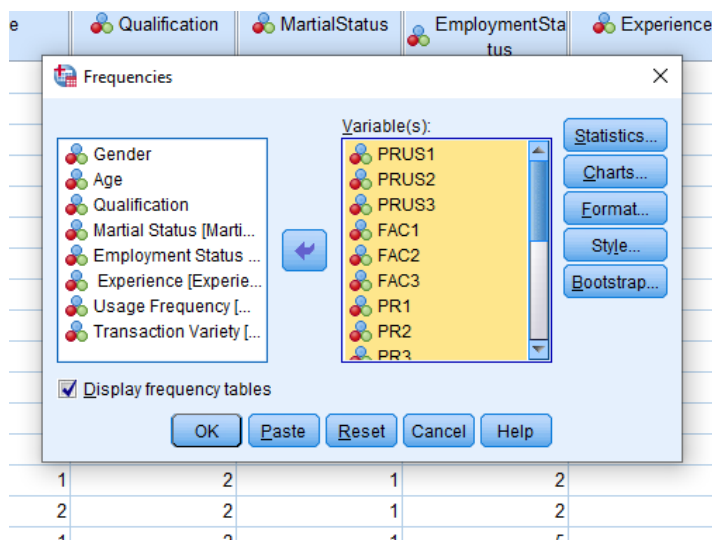
Step 3: Once the Statistics dialog box has been activated, check Quartiles under the Percentile Values, "Mean, Median, Mode, and Sum" under Central tendency and Standard deviation under Dispersion. And then click continue.
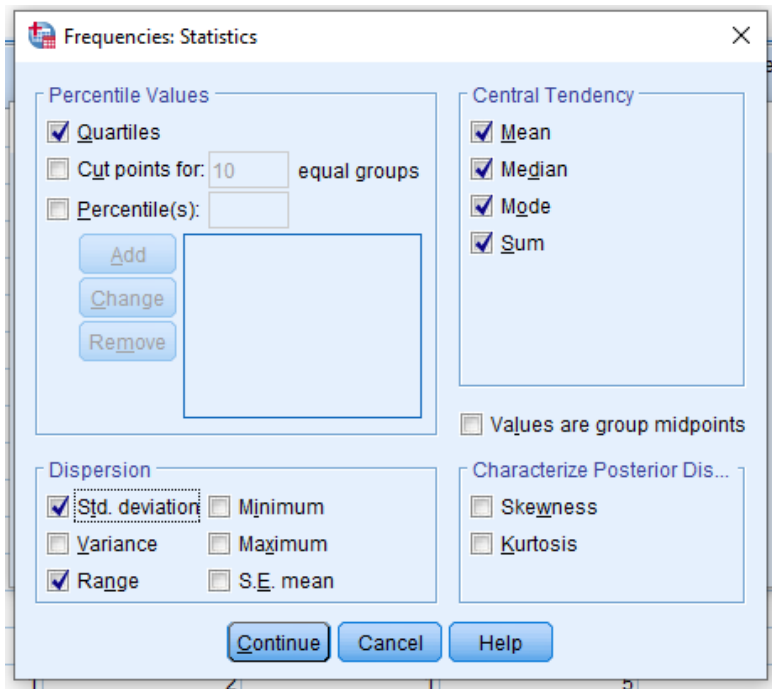
Step 4: The result is displayed in the diagram below. More information on the results of the descriptive statistics can be found in Table 1 in the Final Report

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	130	65.0	65.0	65.0
	2	69	34.5	34.5	99.5
	3	1	.5	.5	100.0
	Total	200	100.0	100.0	

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	96	48.0	48.0	48.0
	2	33	16.5	16.5	64.5
	3	43	21.5	21.5	86.0
	4	26	13.0	13.0	99.0
	5	2	1.0	1.0	100.0
	Total	200	100.0	100.0	

Qualification

|		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	22	11.0	11.0	11.0
	2	100	50.0	50.0	61.0
	3	59	29.5	29.5	90.5
	4	7	3.5	3.5	94.0
	5	12	6.0	6.0	100.0
	Total	200	100.0	100.0	

5.2 Cronbach Alpha Test

The Cronbach alpha test was used to check for the reliability and validity of the constructs and variables.
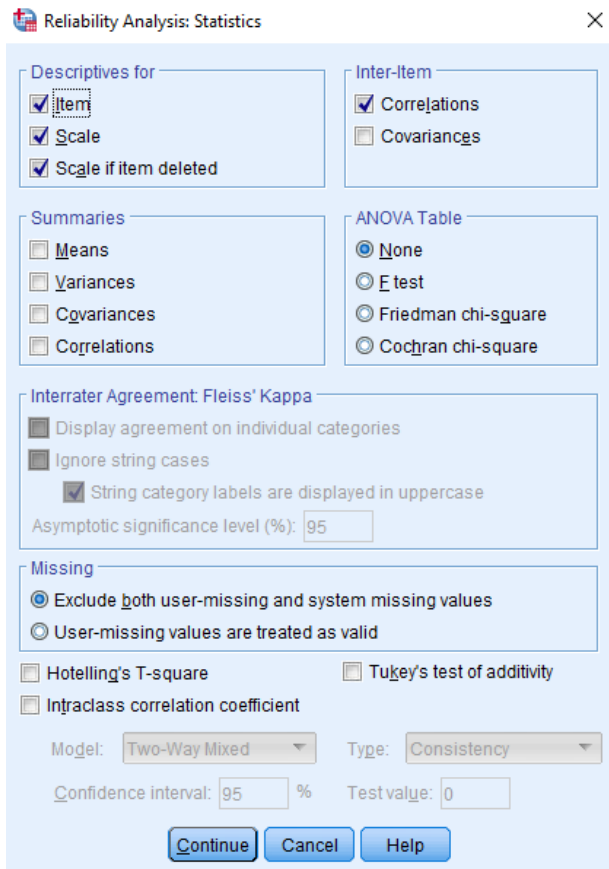
Step 1: Click on the Analyze tab, Scroll down and click "Scale," and then Select Reliability Analysis
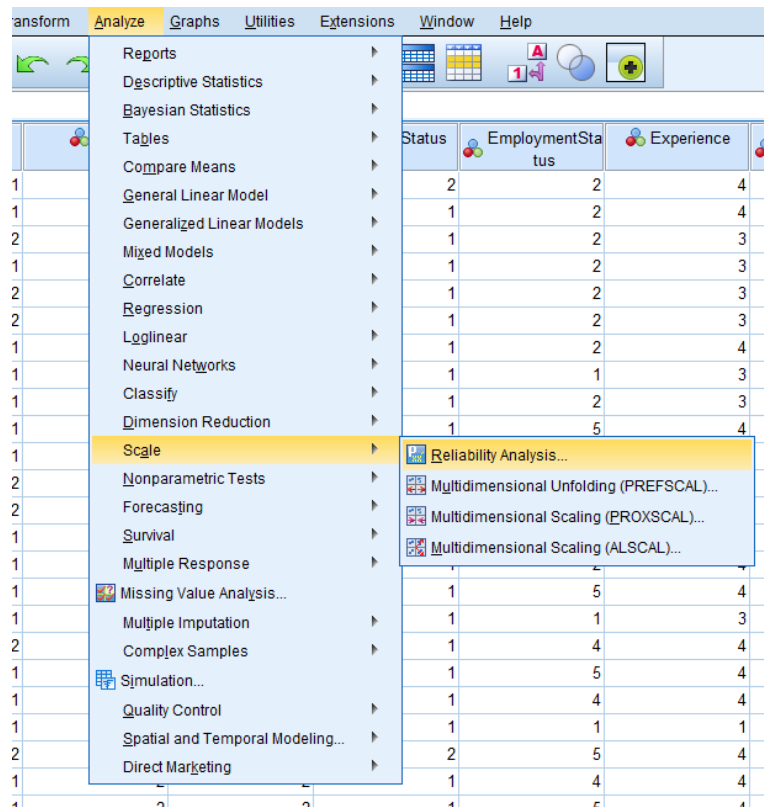
Step 2: Once the reliability analysis box has been opened, move all 19 variables into the "Items" box and ensure that Model is on 'Alpha'
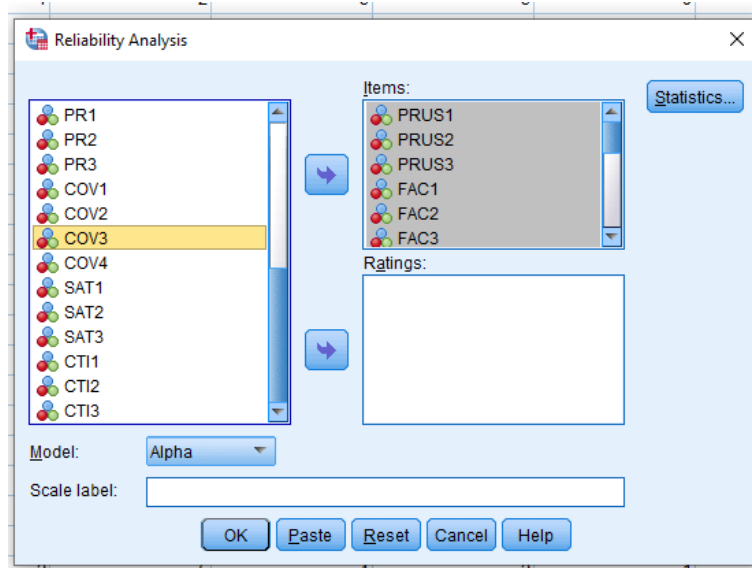
Step 3: Select the Statistics box and ensure that "item," "Scale," and Scale if item deleted and then tick Correlations under the Inter-item box

Step 4: The overall Cronbach alpha of all six factors is 0.728, which surpasses the threshold of 0.7.

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	200	100.0
	Excluded[a]	0	.0
	Total	200	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.728	.744	19

5.3 Kruskal-Wallis Test

The Kruskal Wallis test was used to identify the differences or relationship between the demographic variables of the users and the variables used in the study

Step 1: Select the Analyze tab, scroll down, click "Non parametric tests," select "Legacy dialogs," and activate the K-independent Samples.
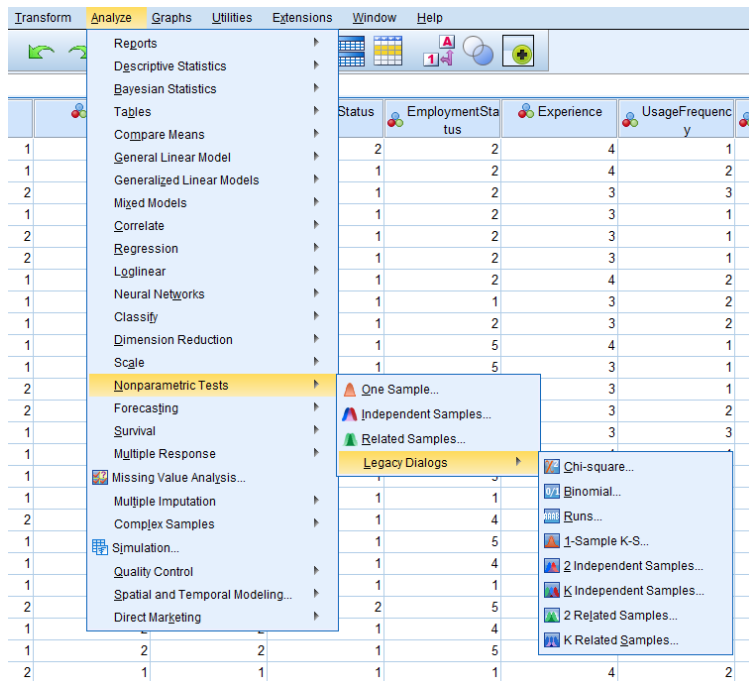
Step 2: Once the K-independent sample box is open, Move the categorical variable (Demographic variable) into the Grouping variable and select the "Define Range" dialog box. Ensure that the Test Variable items are moved into the Test Variable List dialog box
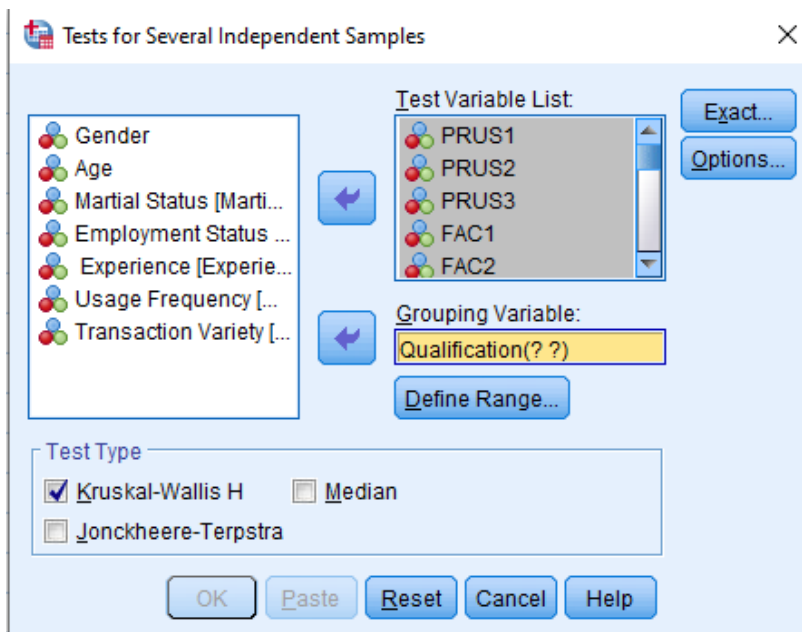
Step 3: Once the "Define Range" box has been selected, Insert the range of options available. E.g. in the survey, Qualification has five options, so the values selected range from 1 to 5.
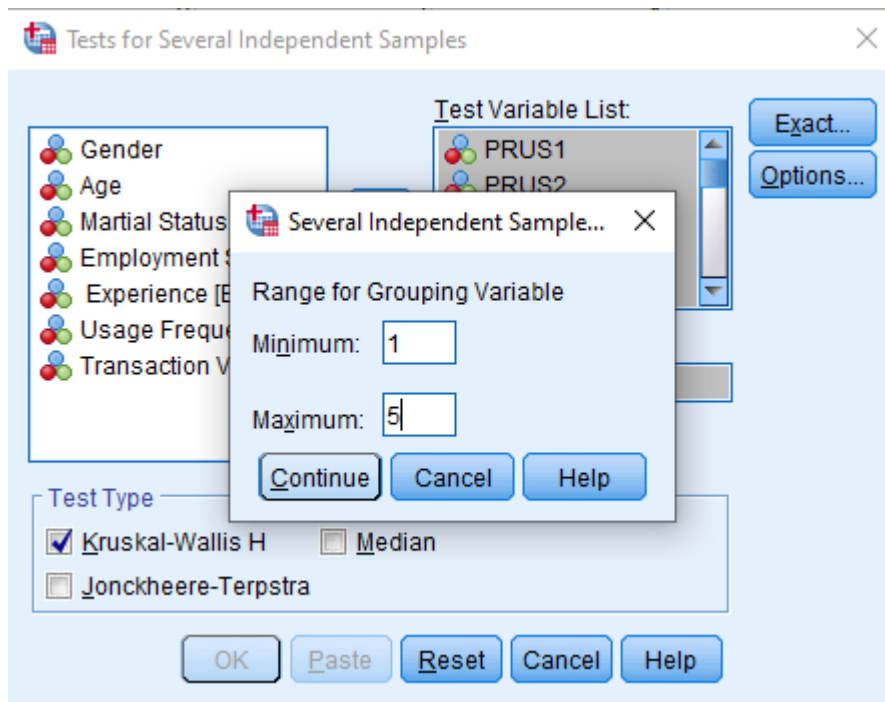

The final result of the Kruskal Test is observed in Tables 5 to 8 in the Final Report.

5.4 Exploratory Factor Analysis

Exploratory factor analysis was used to ascertain the association between latent and observed variables.

Step 1: Select the Analyze tab, scroll down the drop-down menu, and select Dimension Reduction. Another menu is opened, select the item named "Factor."


8
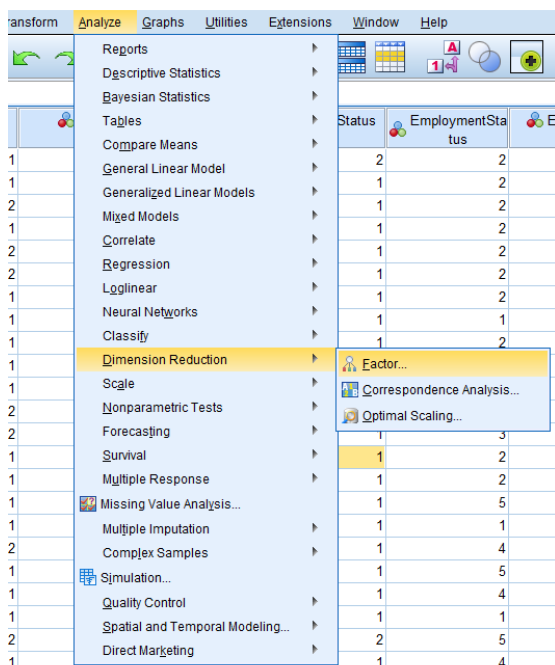
Step 2: Inside the Factor analysis section, transfer all the observed variables into the variable box and then Select the Descriptives dialog box.
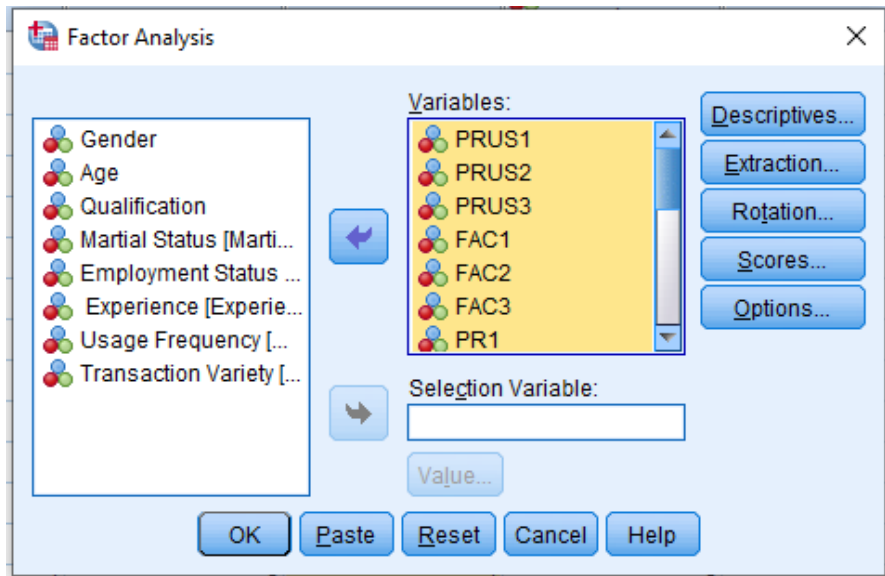

Step 3: Once the Descriptive box is displayed, select Initial Solution under the Statistics and click on Coefficients and KMO and Barlett's test of sphericity to ascertain if the data is suitable for factor analysis. Select continue and then select the "Extraction" dialog box right under the Descriptives box
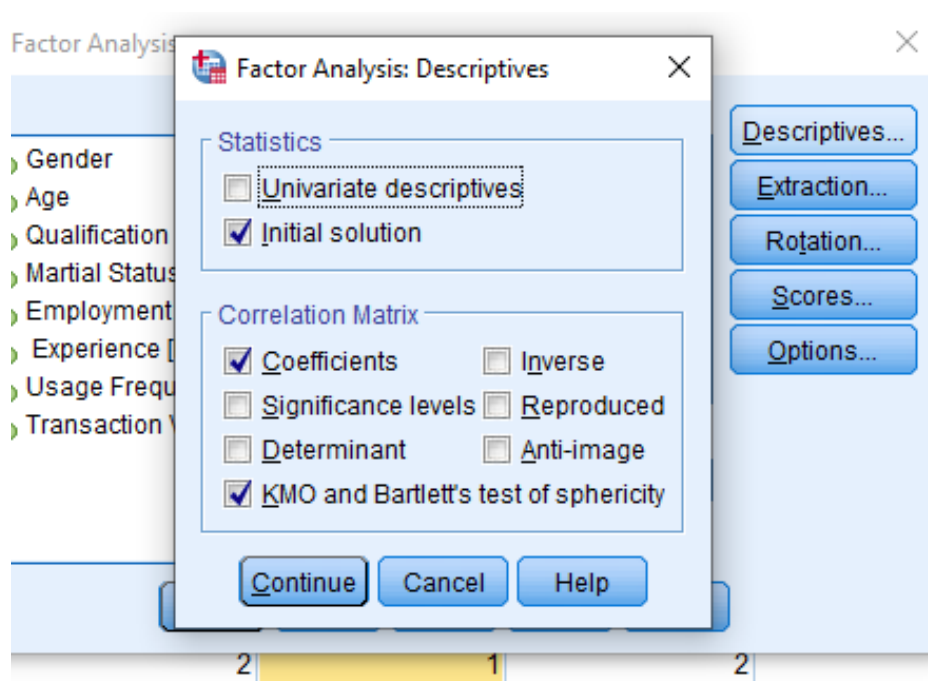
Step 4: Select the Extraction dialog box is opened, Select the drop-down menu box of Method and select "Principal components." Under the Analyze box, select "correlation matrix," and under display, select Unrotated factor solution and scree plot. Scroll down to the Extract box and insert six in the factors to extract box. The number six is inserted because the study has six factors. After inserting six, click continue and select the Rotation box under Extration
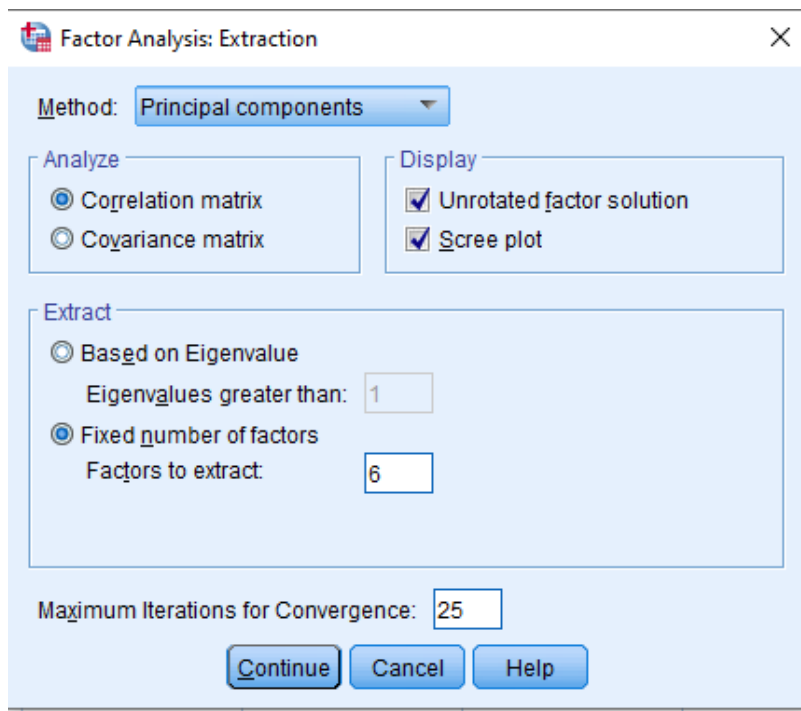
Step 5: In the Rotation box, select "Varimax" for rotation and identification of correlating variables. Select "Rotated solution "under the display box and select continue. Select the "Option" dialog box under scores

10
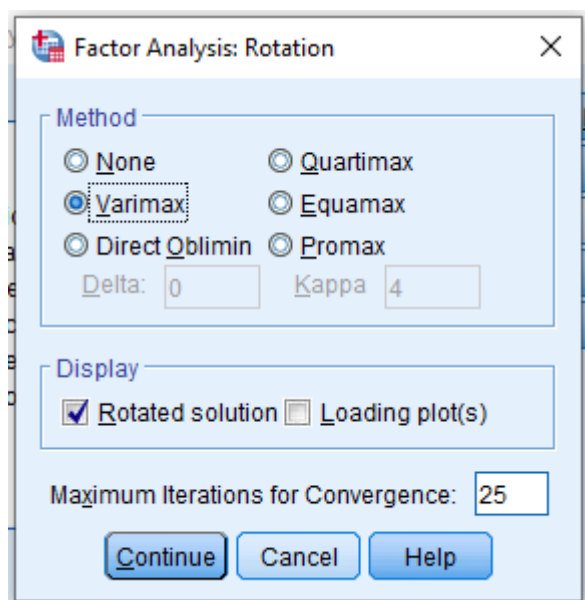
Step 6: Select "Exclude cases pairwise" under missing values and tick "Sorted by size" and "Suppress small coefficients." Insert 0.4 in the "Absolute value below box and select continue.
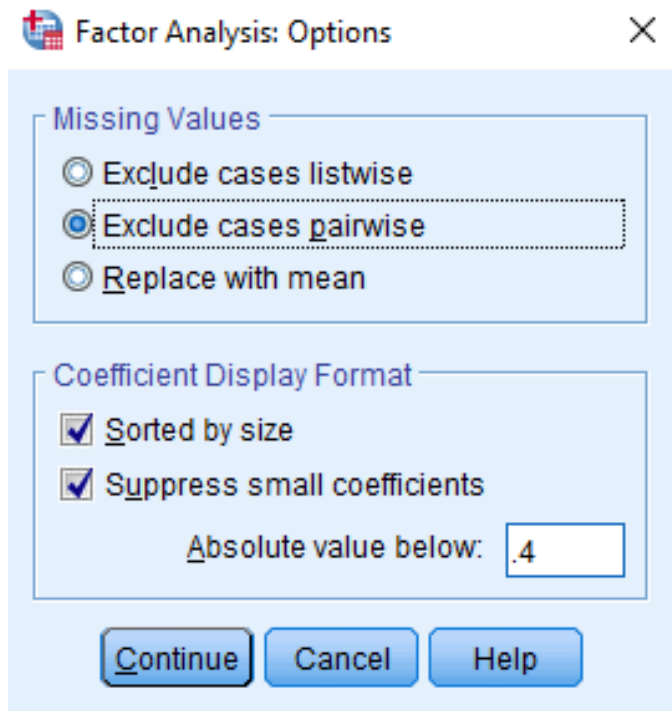
The final answer is displayed in Tables 9, 10, and 11 in the Final report.