

Configuration Manual

MSc Research Project
Financial Technology

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MSc Project Submission Sheet



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Project Title: Effect of Mobile Money Operators on Financial Inclusion Of SMES in Nigeria

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Configuration Manual

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1 Introduction

My research work submitted as part of the MSC Fintech module completion is accompanied with this configuration manual. The configuration manual includes the steps that were followed during the study, as well as the technologies and hardware configuration of the machine used. In addition, it aims to provide guidance for future research and instruct other researchers about how to reproduce the findings of this study.

2 System Specification

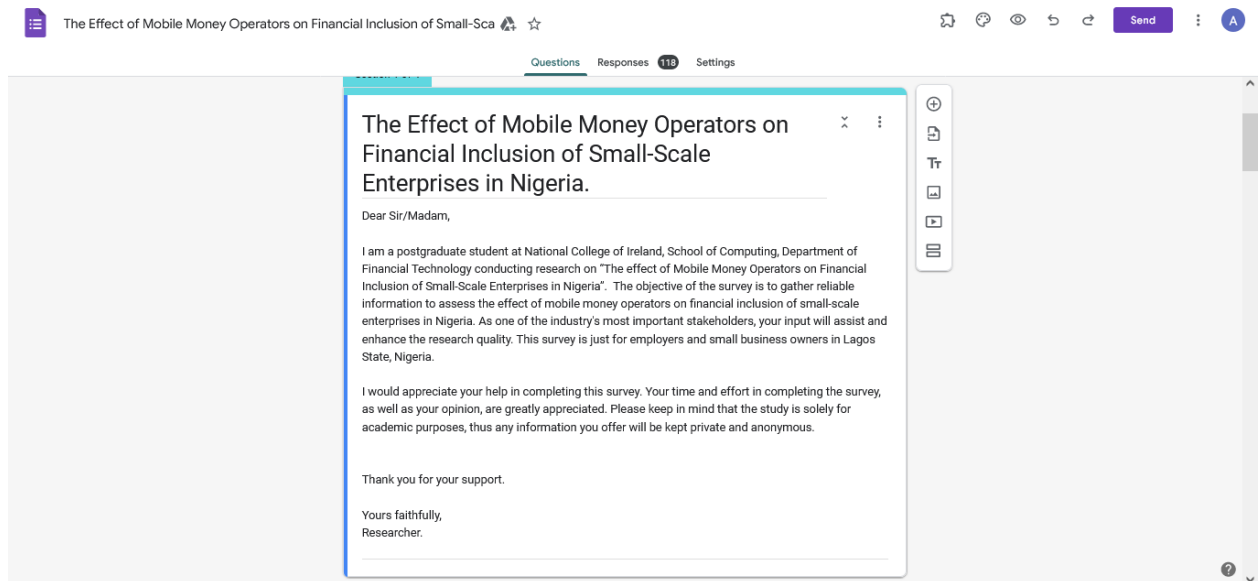
2.1 Hardware of the System

The research project was conducted on a Windows 10 computer:

- 64-bit Operating System; Windows 10 Pro
- Processor: Intel(R) Core(TM) i5-4310U CPU @ 2.00GHz 2.60 GHz 90GHz
- RAM: 8GB
- Storage: 464 GB

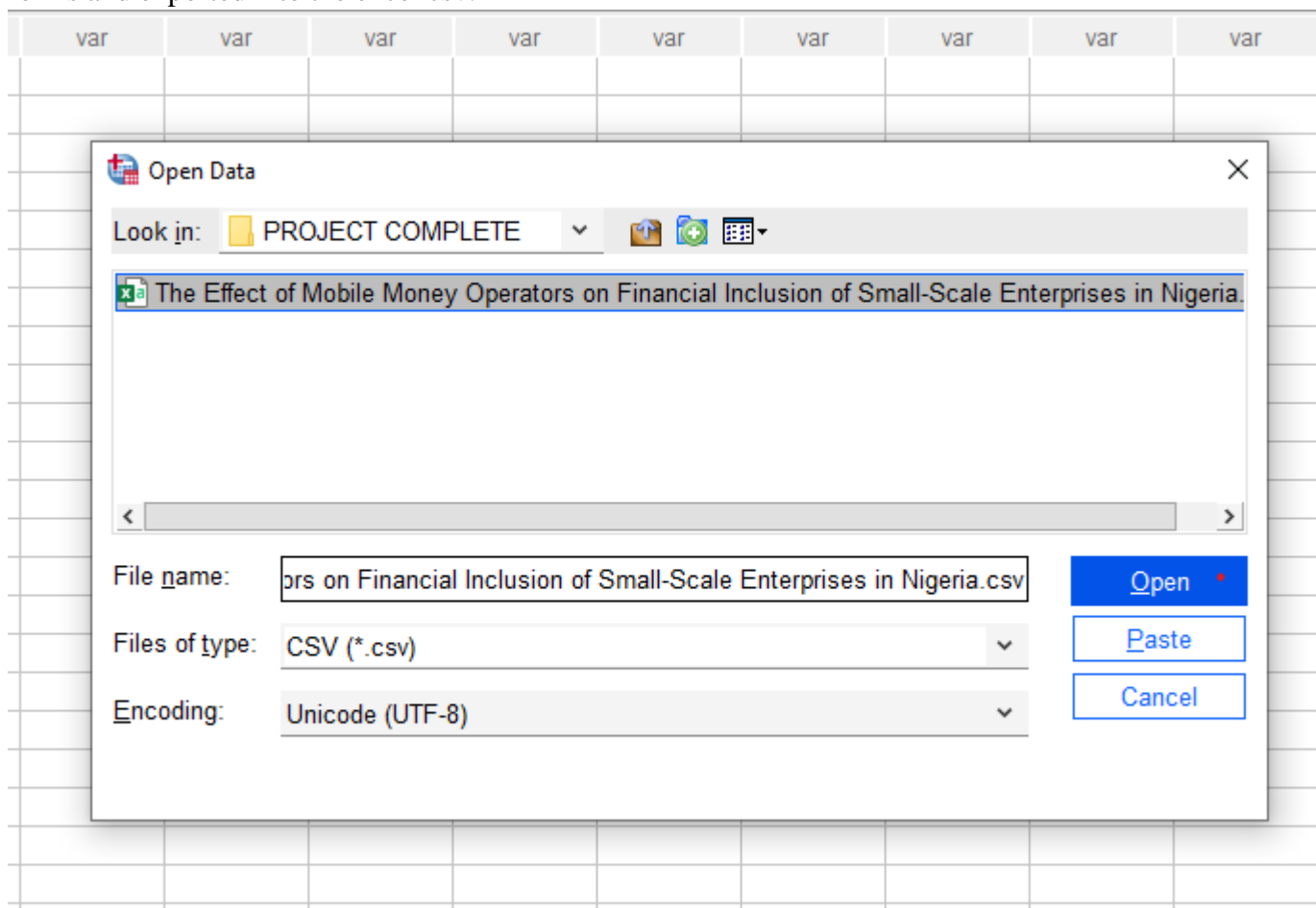
2.2 Software and Tools

Google Forms- The study's authorized questionnaire was embedded in Google Forms. This was given out to the respondents in order to collect data for the study. The gathered data was saved on a Google spreadsheet and then exported as a password-protected Excel csv file.



Microsoft Excel 2016: The Microsoft Excel was used to extract the data from google form into Comma-Separated Value (CSV) file.

SPSS: The Statistical Package for the Social Sciences, also known as IBM SPSS, was used for the analysis of statistical data generated from the google forms and exported into the excel csv.



3 DATA SOURCE

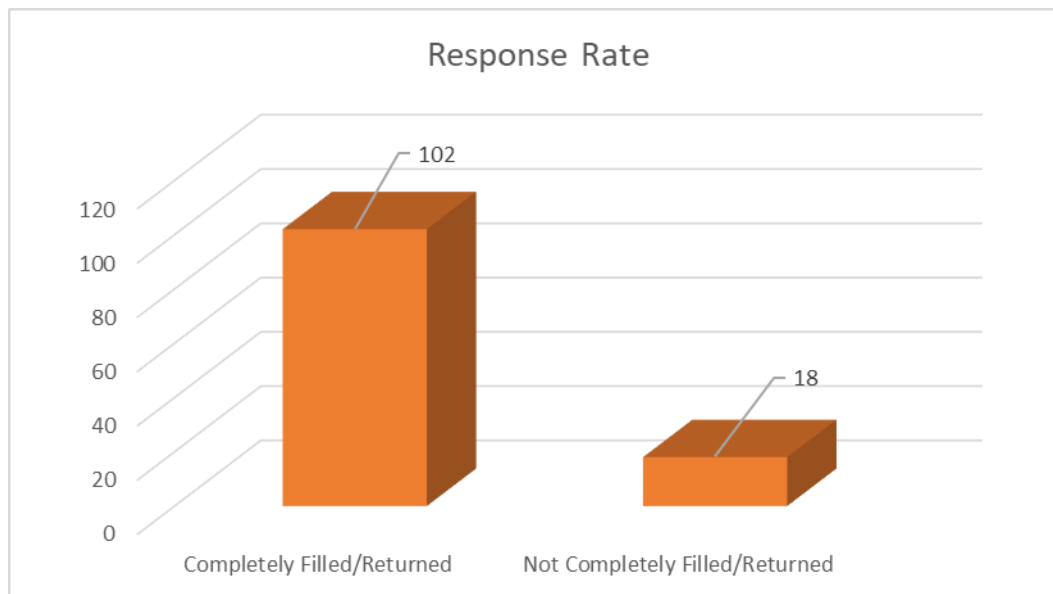
This study was conducted using the two data sources. A structured questionnaire and semi-structured interviews with respondents (managers and supervisors from the selected Mobile Money Operators) were used to collect the primary data (MMOs). 122 managers and supervisors from the top four (4) Mobile Money Operators (MMOs) in Lagos state, Nigeria, make up the population.

Table 3.1 Response Frequency

Questionnaire	Frequency	Valid percentage
Valid	102	85%
Invalid/unfilled	18	15%
Total	120	100%

Source: Researcher’s survey, 2022

Figure 3.1: Breakdown of Response Rate



4 DATA CLEANING AND PREPROCESSING

First, the data on the online google forms were imported into excel csv format. The data was then imported into the SPSS for statistical analysis

Data cleaning was done to remove all missing values and all unnecessary observations and responses. Structural errors and inconsistent labelling were also removed from the datasets. The researcher filtered unwanted outliers from the dataset. The outliers here are improper data entry. This helped to ensure the validity of the instrument.

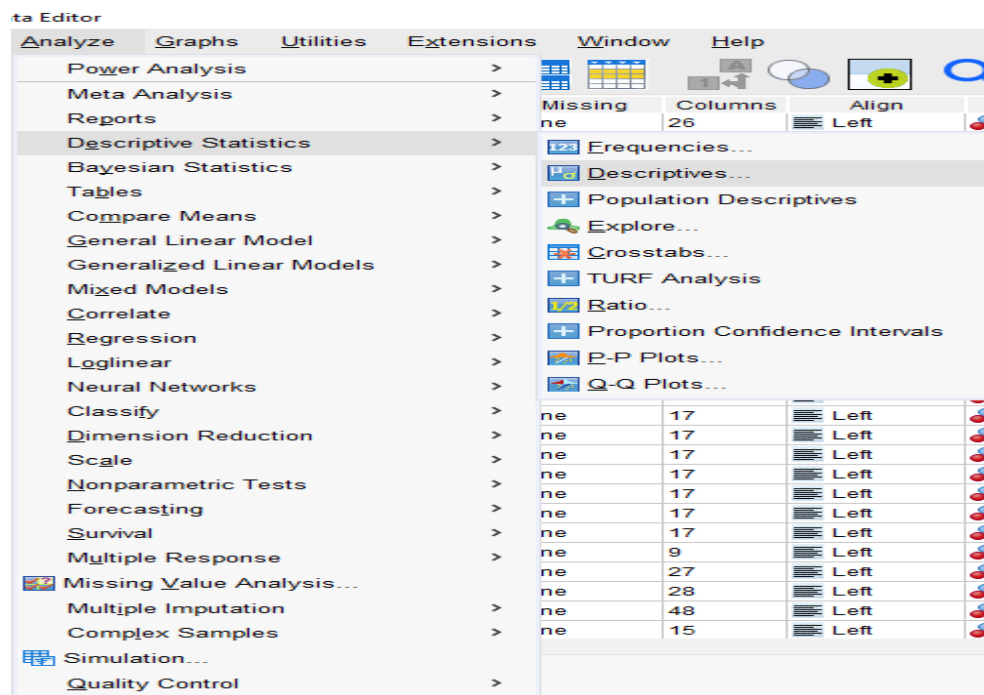
The use of the Statistical Package for the Social Sciences, version 26 was then adopted for the descriptive statistics (i.e frequency distribution). While Structural equation modelling and factor analysis was used to test the research hypothesis.

5 TECHNIQUES USED

5.1 Descriptive Statistics

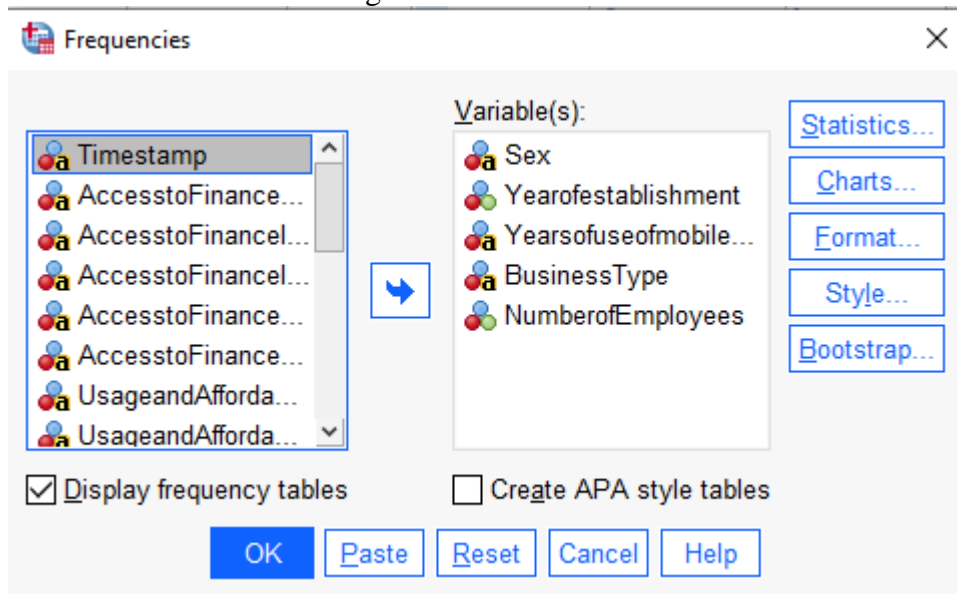
The descriptive statistics was used to explain the participants' responses on the research work.

Step: Following data entry, we employed descriptive analysis. To do this, Choose Analyze on the SPSS software, then choose "Descriptive statistics" before choosing "Frequencies". The figure below illustrates this.



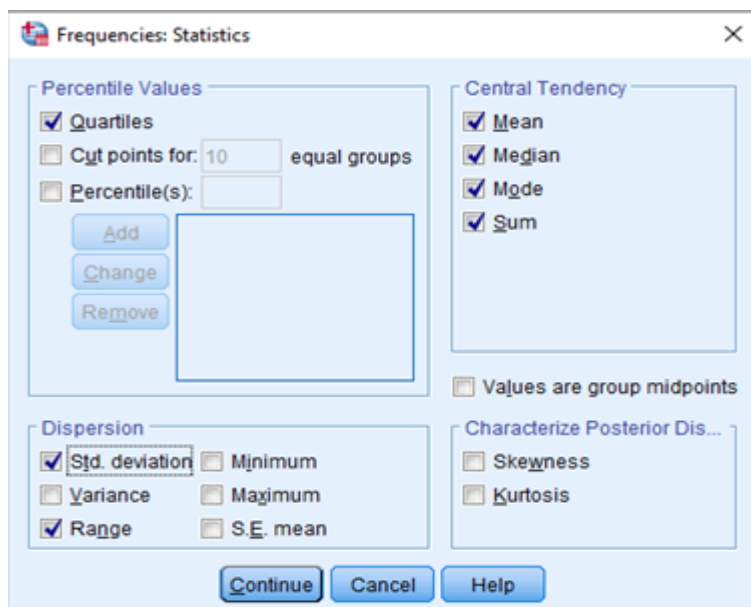
STEP 2:

After choosing the frequencies, move all items appearing on the frequency table to the "Variables" box using the arrow in the middle and it can also be highlighted and pasted then choose the "Statistics" dialog box.



STEP 3:

Check "Mean, Median, Mode, and Sum" under "Central Tendency," "Quartiles under the Percentile Values," and "Standard deviation" under "Dispersion" after launching the Statistics dialog box. then click the next button.

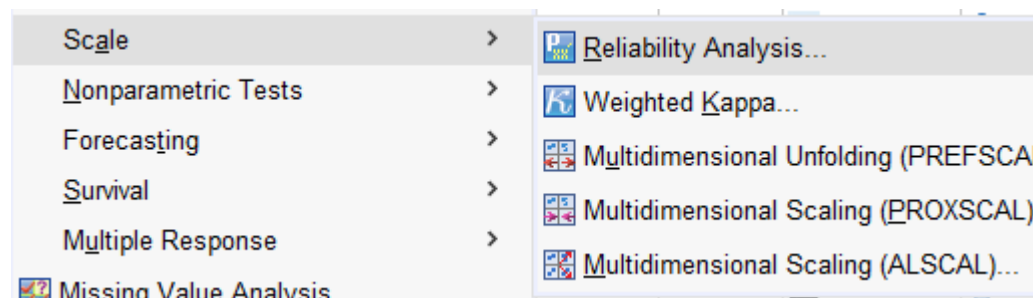


5.3. Cronbach Alpha

The Cronbach Alpha was used to measure the internal consistency between items in a scale. To show how participants responded across all items.

To do the Cronbach Alpha,

Go to Analyze – Scale – Reliability analysis. Once this is done, move all the variables into the "Items" box after opening the reliability analysis box, and make sure Model is set to "Alpha." then you perform a Cronbach Alpha for the 2 scale (Mobile money operators and financial inclusion) after the data has been modified



The result of the Cronbach Alpha is represented in Table 3.2:

Variables	Cronbach Alpha's Result	No of Items
Mobile money operators	0.793	24
Financial inclusion of SMEs	0.815	10
Ave. Cronbach Alpha	0.803	34

5.4. FACTOR ANALYSIS

Factor analysis was implemented to determine the variance of mobile money operators on the financial inclusion of SMEs in Nigeria.

STEP: Select the Dimension Reduction option from the drop-down menu after choosing the Analyze tab. A new menu appears; choose the "Factor" option. Transfer all the observed variables into the variable box inside the Factor analysis section, and then Descriptives dialog box should be selected. To determine whether the data is appropriate for factor analysis once the Descriptive box has been presented, click on Coefficients and KMO under Initial Solution in the Statistics section. Continue by selecting the "Extraction" dialog box, which is just beneath the "Descriptives" box. When the Extraction dialog box appears, choose "Principal components" from the Method drop-down option. Choose "correlation matrix" from the Analyze box, and then choose "Unrotated factor solution" and "scatter plot" from the Display menu.

Table 5.5 Factor Analysis for Mobile money services and financial inclusion

	Factor Loading	Error Variance	Composite Reliability	AVE	Cronbach's Alpha	No. of Indicators
Indicators	>0.7	<0.3	≥ 0.8	≥ 0.5	≥ 0.7	
Mobile money services (ICS)			0.942	0.717	0.882	10
AFS	0.860	0.140				
QSD	0.888	0.112				
UFS	0.912	0.082				
The Financial Inclusion of SMEs			0.821	0.759	0.890	7
FI1	0.885	0.115				
FI2	0.801	0.199				
FI3	0.854	0.146				
FI4	0.859	0.141				
FI5	0.816	0.184				
FI6	0.906	0.094				
FI7	0.821	0.179				

Note: AFS = Access to Financial Services, QSD = Quality of service delivery; UFS = Usage of Financial Services

According to Fornell and Larcker (1981), all scales and measuring items should have a reliability threshold of more than 0.70, composite reliability of 0.80, AVE (Average Variance Extracted) of 0.50 and factor loading of 0.70 minimal requirement. To conclude, when the Cronbach Alpha is equal to or greater than 0.70, it is considered dependable. Table 5.5 shows that all the constructs of mobile money services and the financial inclusion of SMEs have values more than 0.70. As a result, the instrument is deemed reliable, valid, and satisfactorily.

6. Conclusion

This configuration manual describes the key technologies that were used for the purpose of this research. It discusses how the data was collected, cleaned, processed, and analyzed. A structured interview and an online survey were used to obtain data from the respondents in this study. This manual contains information that will help replicate the research findings.