

Configuration Manual

The Role of Artificial Intelligence in Enhancing Financial Literacy and Education in India

MSc Research Project
FINTECH

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MSc Project Submission Sheet
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1 Data Collection Using Google Forms

1.1 Overview:

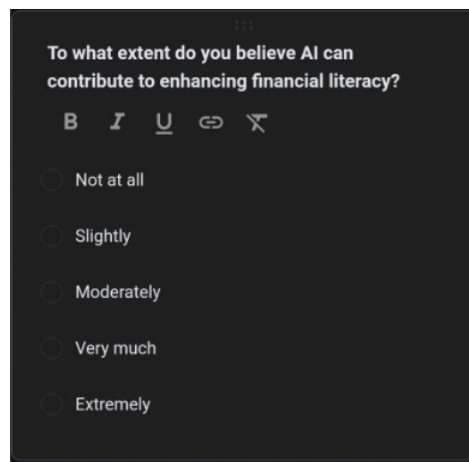
This section outlines the steps involved in creating and distributing the survey using Google Forms to collect data on the usage of AI tools in financial decision-making.

1.2 Creating the Survey:

1. Access Google Forms: Navigate to Google Forms and log in with your Google account.
2. Create a New Form: Click on the “+” icon to start a new form.
3. Form Title and Description: Provide a title (e.g., "AI in Financial Decision-Making Survey") and a brief description of the survey’s purpose.

1.3 Designing the Survey:

1. Add Questions: Use the “+” icon to add questions. Include various types such as multiple-choice, Likert scale, and open-ended questions.



To what extent do you believe AI can contribute to enhancing financial literacy?

B I U ↺ ↻

☐ Not at all

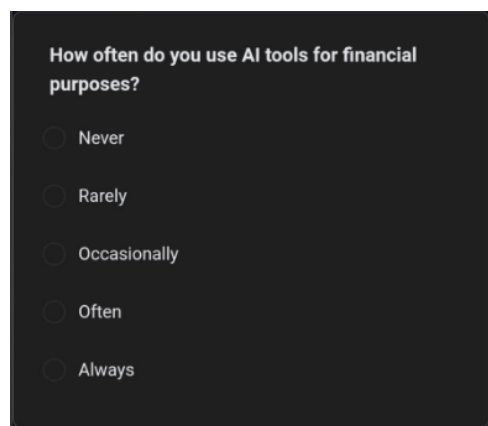
☐ Slightly

☐ Moderately

☐ Very much

☐ Extremely

2. Demographics: Age, education level, occupation.
3. AI Familiarity: Questions on familiarity with AI tools.
4. AI Usage: Frequency and extent of AI tool usage in financial decision-making.



How often do you use AI tools for financial purposes?

☐ Never

☐ Rarely

☐ Occasionally

☐ Often

☐ Always

5. Effectiveness: Perceived effectiveness of AI tools.

On a scale from 1 to 5, how has AI improved your understanding of financial concepts?

Not improved at all

1 ☐

2 ☐

3 ☐

4 ☐

5 ☐

Extremely improved

6. Challenges: Challenges faced in using AI tools.

7. Openness to Adoption: Willingness to adopt AI tools in the future.

8. Customization: Customize each question's settings (e.g., required questions, answer types).

1.4 Distributing the Survey:

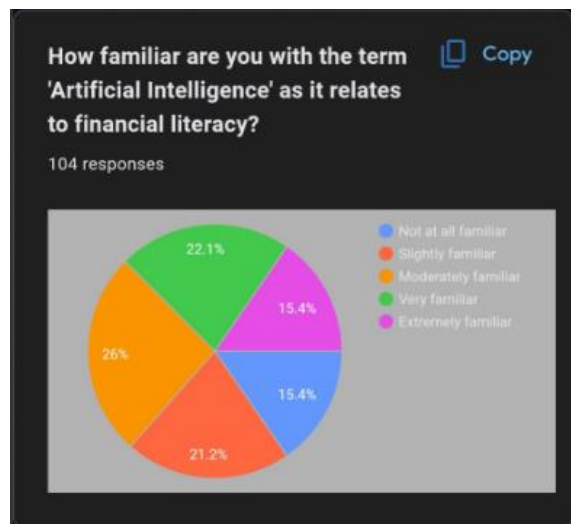
1. Share Link: Click on the "Send" button and copy the survey link.

2. Distribution Channels: Share the link via email, social media, or professional networks to reach the target audience.

1.5 Collecting Responses:

1. Monitor Responses: Regularly check the response summary in Google Forms to monitor the number of submissions and preliminary data trends.





- Export Data: Once data collection is complete, click on the “Responses” tab and export the data to Google Sheets for initial review and preparation for analysis.

2 Data Analysis Using SPSS

2.1 Overview:

This section describes the process of importing survey data into SPSS, performing descriptive and correlation analyses, and interpreting the results.

2.2 Importing Data:

- Download Data: Export the survey data from Google Sheets as a CSV file.
- Open SPSS: Launch SPSS and open a new data file.
- Import CSV: Go to “File” > “Open” > “Data” and select the CSV file to import the survey data into SPSS.

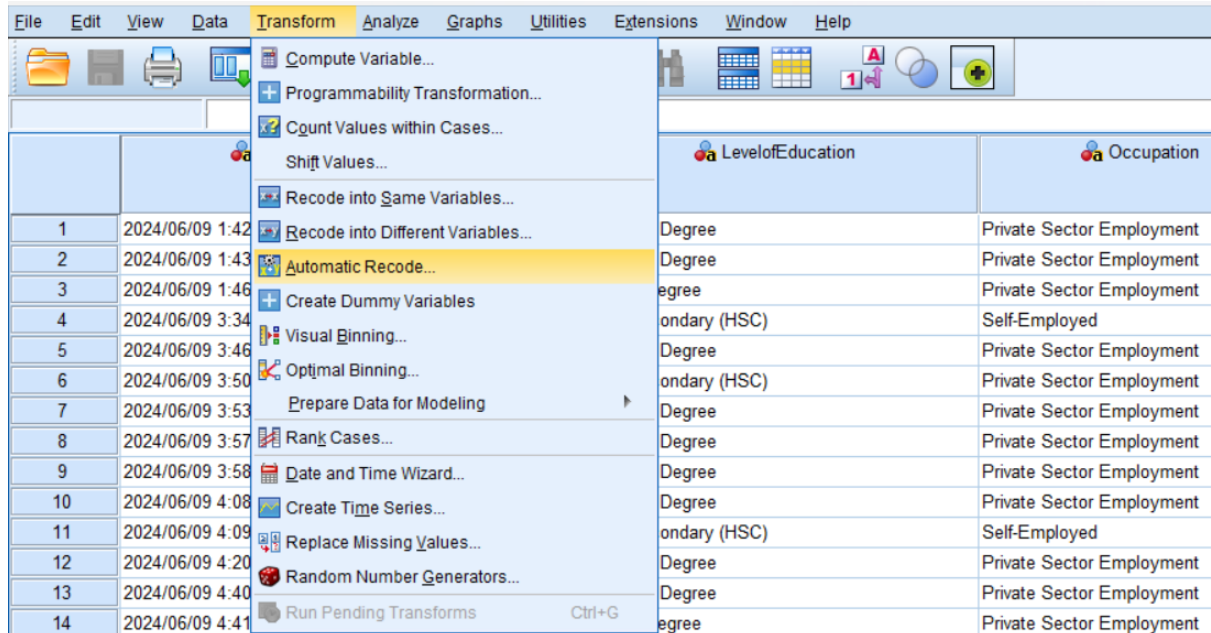
File Edit View Data Transform Analyze Graphs Utilities Extensions Window Help									Visible: 26 of 26 Variables	
	Timestamp	AgeGroup	LevelOfEducation	Occupation	HowfamiliarareyouwiththetermArtificialIntelligenceas	TowhatextentdoyoubelieveAIcancontributetoenhancingfin	HowoftendoyouuseAItoolsforfinancialpurposes	Onascalefrom1to5,howhasAIimprovedyourunderstandingof		
1	2024/06/09 1:42:37 pm CET	26 - 35	Bachelor's Degree	Private Sector Employment	Slightly familiar	Moderately	Rarely			
2	2024/06/09 1:43:33 pm CET	26 - 35	Bachelor's Degree	Private Sector Employment	Moderately familiar	Moderately	Never			
3	2024/06/09 1:46:09 pm CET	36 - 45	Master's Degree	Private Sector Employment	Extremely familiar	Extremely	Always			
4	2024/06/09 3:34:18 pm CET	26 - 35	Higher Secondary (HSC)	Self-Employed	Not at all familiar	Slightly	Never			
5	2024/06/09 3:46:41 pm CET	36 - 45	Bachelor's Degree	Private Sector Employment	Slightly familiar	Extremely	Occasionally			
6	2024/06/09 3:50:52 pm CET	36 - 45	Higher Secondary (HSC)	Private Sector Employment	Very familiar	Moderately	Never			
7	2024/06/09 3:53:49 pm CET	36 - 45	Bachelor's Degree	Private Sector Employment	Slightly familiar	Moderately	Never			
8	2024/06/09 3:57:02 pm CET	26 - 35	Bachelor's Degree	Private Sector Employment	Moderately familiar	Slightly	Occasionally			
9	2024/06/09 3:58:57 pm CET	26 - 35	Bachelor's Degree	Private Sector Employment	Moderately familiar	Moderately	Occasionally			
10	2024/06/09 4:08:38 pm CET	36 - 45	Bachelor's Degree	Private Sector Employment	Not at all familiar	Moderately	Never			
11	2024/06/09 4:09:58 pm CET	36 - 45	Higher Secondary (HSC)	Self-Employed	Slightly familiar	Not at all	Never			
12	2024/06/09 4:20:01 pm CET	36 - 45	Bachelor's Degree	Private Sector Employment	Slightly familiar	Very much	Rarely			
13	2024/06/09 4:40:29 pm CET	26 - 35	Bachelor's Degree	Private Sector Employment	Moderately familiar	Slightly	Rarely			
14	2024/06/09 4:41:13 pm CET	26 - 35	Master's Degree	Private Sector Employment	Moderately familiar	Very much	Occasionally			
15	2024/06/09 4:45:37 pm CET	18 - 25	Master's Degree	Student / Intern	Not at all familiar	Slightly	Never			
16	2024/06/09 4:54:10 pm CET	36 - 45	Master's Degree	Private Sector Employment	Slightly familiar	Very much	Rarely			
17	2024/06/09 5:02:35 pm CET	36 - 45	Bachelor's Degree	Private Sector Employment	Slightly familiar	Very much	Occasionally			
18	2024/06/09 5:41:52 pm CET	36 - 45	Master's Degree	Private Sector Employment	Slightly familiar	Not at all	Never			
19	2024/06/09 5:44:46 pm CET	36 - 45	Master's Degree	Private Sector Employment	Moderately familiar	Moderately	Rarely			
20	2024/06/09 6:39:50 pm CET	26 - 35	Bachelor's Degree	Self-Employed	Very familiar	Not at all	Rarely			
21	2024/06/09 6:46:00 pm CET	26 - 35	Doctorate or Professional Degree	Self-Employed	Slightly familiar	Moderately	Rarely			
22	2024/06/09 6:50:39 pm CET	26 - 35	Higher Secondary (HSC)	Self-Employed	Not at all familiar	Not at all	Never			
23	2024/06/09 6:50:56 pm CET	26 - 35	Master's Degree	Private Sector Employment	Not at all familiar	Extremely	Never			
24	2024/06/09 8:01:51 pm CET	26 - 35	Master's Degree	Student / Intern	Very familiar	Very much	Never			
25	2024/06/09 8:02:20 pm CET	26 - 35	Higher Secondary (HSC)	Private Sector Employment	Extremely familiar	Very much	Rarely			
26	2024/06/09 8:03:16 pm CET	18 - 25	Bachelor's Degree	Private Sector Employment	Slightly familiar	Moderately	Never			
27	2024/06/09 8:28:31 pm CET	18 - 25	Secondary School (SSC)	Government Service	Not at all familiar	Extremely	Rarely			
28	2024/06/09 8:38:57 pm CET	36 - 45	Higher Secondary (HSC)	Private Sector Employment	Extremely familiar	Extremely	Never			

Data View

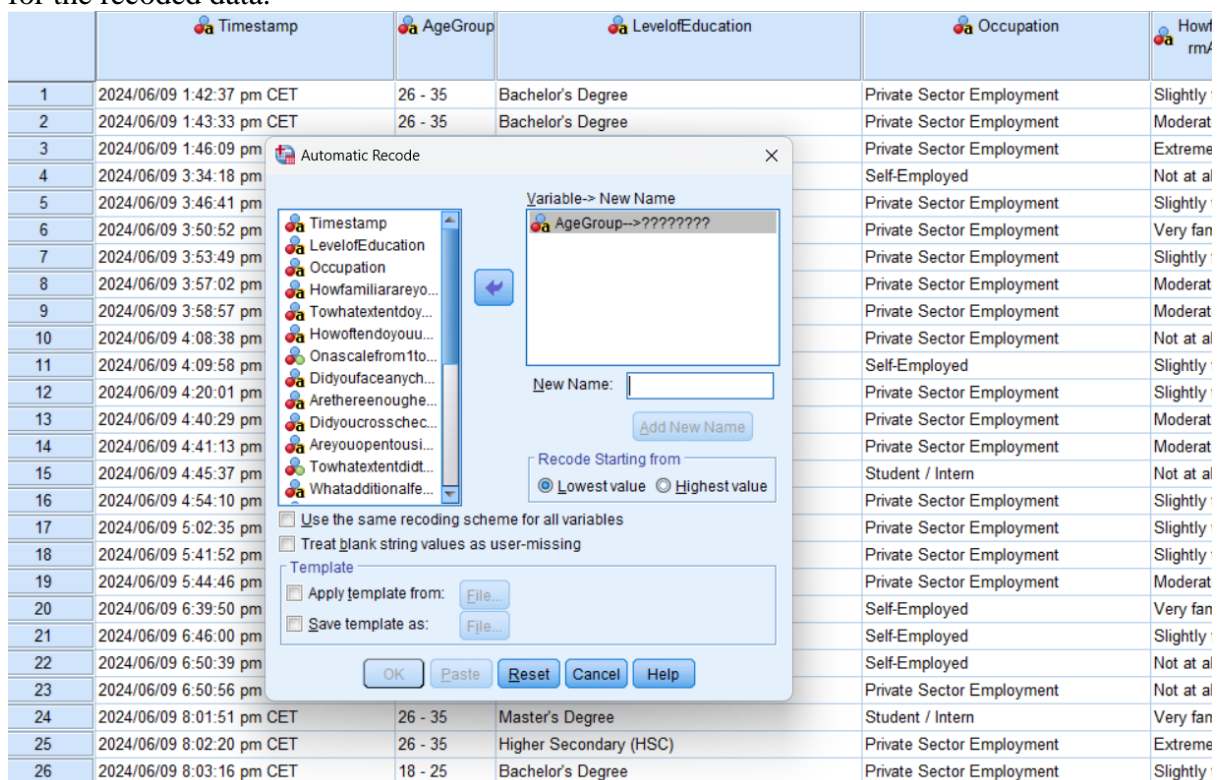
Variable View

2.3 Transforming Data:

1. Automatic Recode: To make the data easier for SPSS to handle, especially for categorical variables, use the automatic recode feature.
- Select Variables: Go to “Transform” > “Automatic Recode.”



- Recode Variables: Select the variables you want to recode. Assign new variable names for the recoded data.



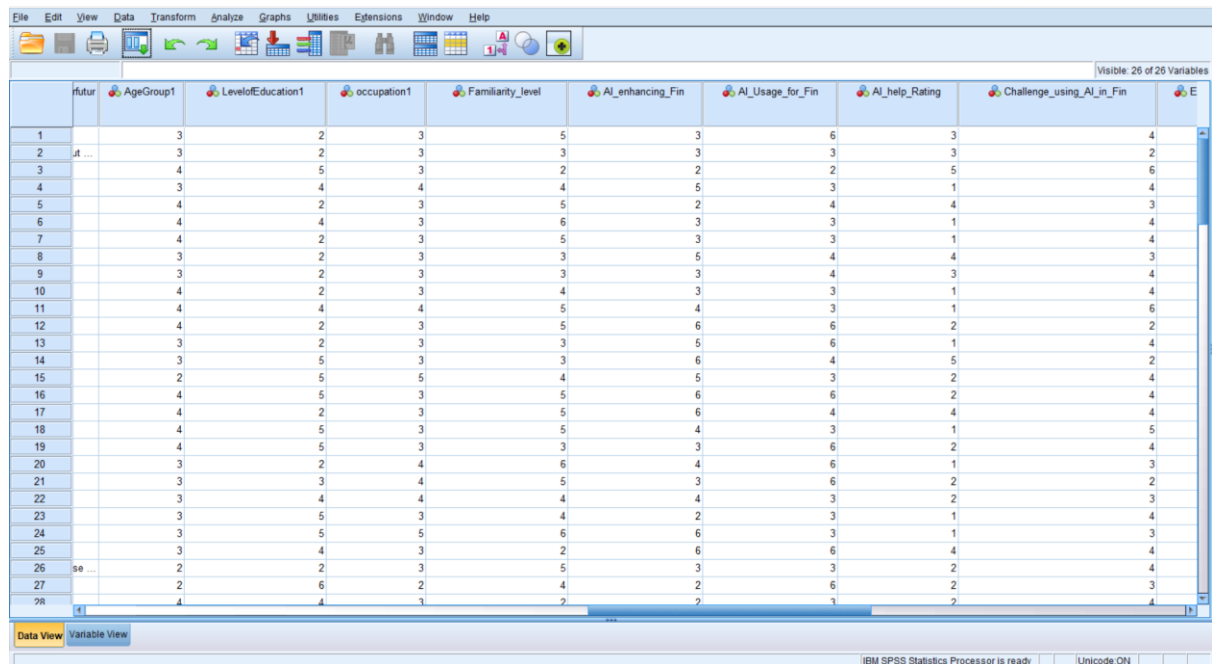
- Execute Recode: Click on “OK” to perform the recoding. This will create new variables in your dataset that are easier for SPSS to understand and analyze.
2. Export Transformed Data: Export the transformed data as a new CSV file: Go to “File” > “Save As” and save the transformed dataset as a CSV file.

3. Re-Importing Data:

- Open New Data File: Open SPSS and import the newly transformed CSV file.
- Import CSV: Go to “File” > “Open” > “Data” and select the transformed CSV file to import it into SPSS.

2.4 Data Cleaning:

1. Review Data: Inspect the imported data for any inconsistencies or missing values.



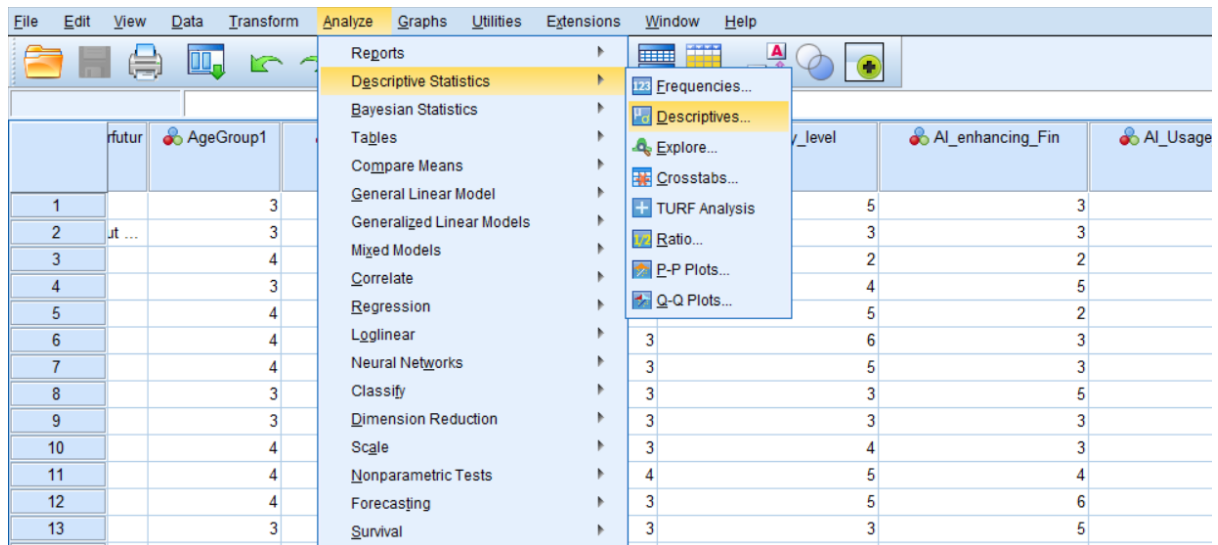
The screenshot displays the IBM SPSS Statistics Data View. The interface includes a menu bar (File, Edit, View, Data, Transform, Analyze, Graphs, Utilities, Extensions, Window, Help) and a toolbar with icons for file operations, data manipulation, and analysis. The main data grid shows 28 rows of data across 10 variables. The variables are: futur, AgeGroup1, LevelEducation1, occupation1, Familiarity_level, AI_enhancing_Fin, AI_Usage_for_Fin, AI_help_Rating, Challenge_using_AI_in_Fin, and E. The data is presented in a table format with row numbers on the left and variable names as column headers. The status bar at the bottom indicates 'IBM SPSS Statistics Processor is ready' and 'Unicode ON'.

	AgeGroup1	LevelEducation1	occupation1	Familiarity_level	AI_enhancing_Fin	AI_Usage_for_Fin	AI_help_Rating	Challenge_using_AI_in_Fin	E
1	3	2	3	5	3	6	3	4	
2	3	2	3	3	3	3	3	2	
3	4	5	3	2	2	2	5	6	
4	3	4	4	4	5	3	1	4	
5	4	2	3	5	2	4	4	3	
6	4	4	3	6	3	3	1	4	
7	4	2	3	5	3	3	1	4	
8	3	2	3	3	5	4	4	3	
9	3	2	3	3	3	4	3	4	
10	4	2	3	4	3	3	1	4	
11	4	4	4	5	4	3	1	6	
12	4	2	3	5	6	6	2	2	
13	3	2	3	3	5	6	1	4	
14	3	5	3	3	6	4	5	2	
15	2	5	5	4	5	3	2	4	
16	4	5	3	5	6	6	2	4	
17	4	2	3	5	6	4	4	4	
18	4	5	3	5	4	3	1	5	
19	4	5	3	3	3	6	2	4	
20	3	2	4	6	4	6	1	3	
21	3	3	4	5	3	6	2	2	
22	3	4	4	4	4	3	2	3	
23	3	5	3	4	2	3	1	4	
24	3	5	5	6	6	3	1	3	
25	3	4	3	2	6	6	4	4	
26	2	2	3	5	3	3	2	4	
27	2	6	2	4	2	6	2	3	
28	4	4	3	2	2	3	2	4	

2. Handle Missing Values: Use appropriate techniques to handle missing data, such as imputation or deletion.

2.5 Descriptive Statistics:

1. Generate Descriptive Statistics: Go to “Analyze” > “Descriptive Statistics” > “Descriptives” and select the variables of interest (e.g., age, education level, AI familiarity, AI usage).



2. Output Interpretation: Review the output for measures such as mean, median, standard deviation, and frequency distributions.

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
AgeGroup1	105	1	5	3.30	.867
LevelofEducation1	105	1	6	3.30	1.467
occupation1	105	1	5	3.34	.842
Familiarity_level	105	1	6	4.06	1.433
AI_enhancing_Fin	105	1	6	3.92	1.459
AI_Usage_for_Fin	105	1	6	3.98	1.330
AI_help_Rating	104	1	5	2.86	1.403
Challenge_using_AI_in_Fin	105	1	6	3.44	1.082
Enough_Res_Avail	105	1	6	3.36	1.170
Tool_rec_crosscheck	105	1	6	4.32	1.390
Open_to_use_AI_for_Fin Mgmt	105	1	6	4.40	1.370
Extend_of_usage_AI_in_Fin	103	1	5	2.79	1.348
Valid N (listwise)	103				

2.6 Correlation Analysis:

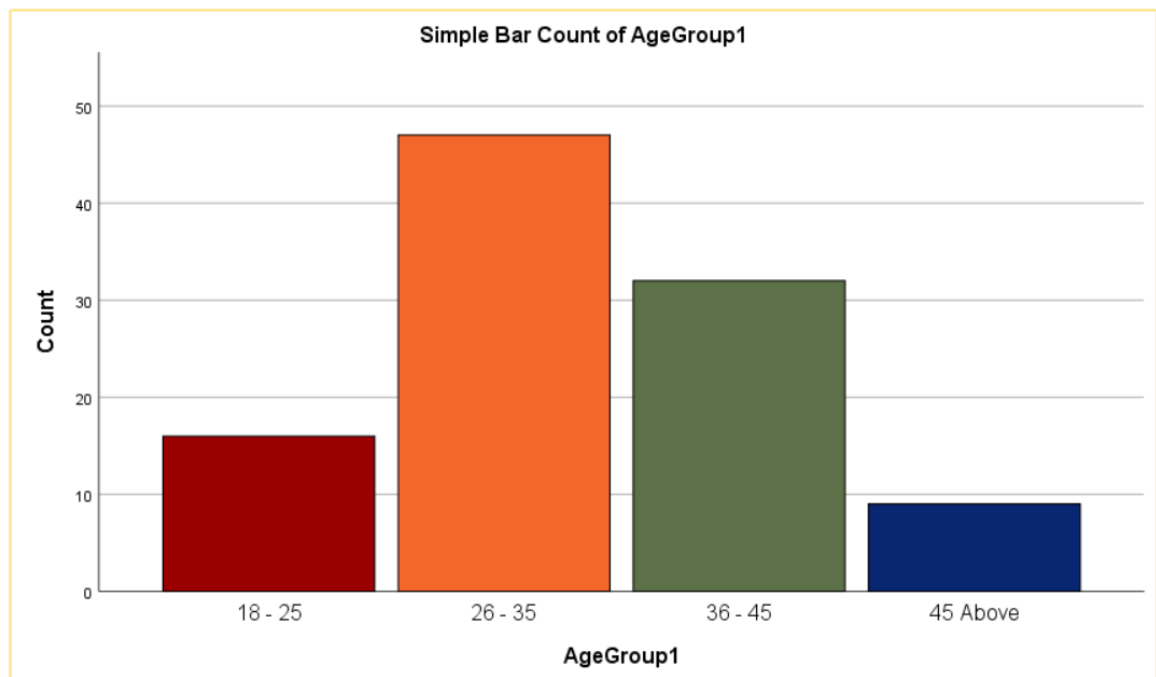
1. Conduct Correlation Analysis: Go to “Analyze” > “Correlate” > “Bivariate” and select the variables for correlation analysis (e.g., AI familiarity and AI usage).

Correlations													
		AgeGroup1	LevelofEducation1	occupation1	Familiarity_level	AI_enhancing_Fin	AI_Usage_for_Fin	AI_help_Rating	Challenge_using_AI_in_Fin	Enough_Res_Avail	Tool_rec_crosscheck	Open_to_use_AI_for_FinMgmt	Extend_of_usage_AI_in_Fin
AgeGroup1	Pearson Correlation	1	-.011	-.303**	.226*	.277**	.138	.065	-.041	.127	.053	-.006	.060
	Sig. (2-tailed)		.912	.002	.021	.004	.159	.512	.677	.196	.592	.948	.547
	N	105	105	105	105	105	105	104	105	105	105	105	103
LevelofEducation1	Pearson Correlation	-.011	1	.104	-.004	-.003	-.096	-.096	.293**	.206*	.014	.008	-.188
	Sig. (2-tailed)	.912		.290	.972	.977	.332	.332	.002	.035	.888	.938	.057
	N	105		105	105	105	105	104	105	105	105	105	103
occupation1	Pearson Correlation	-.303**	.104	1	-.120	-.002	-.028	-.055	.182	.117	.044	-.078	-.099
	Sig. (2-tailed)	.002	.290		.223	.984	.773	.576	.063	.235	.656	.427	.319
	N	105	105		105	105	105	104	105	105	105	105	103
Familiarity_level	Pearson Correlation	.226*	-.004	-.120	1	.338**	.076	-.136	-.072	.733	.005	.213*	-.088
	Sig. (2-tailed)	.021	.972	.223		.000	.440	.168	.465	.035	.959	.029	.378
	N	105	105	105		105	105	104	105	105	105	105	103
AI_enhancing_Fin	Pearson Correlation	.277**	-.003	-.002	.338**	1	.267**	-.148	.046	.039	-.068	.241*	-.123
	Sig. (2-tailed)	.004	.977	.984	.000		.006	.134	.643	.694	.489	.013	.217
	N	105	105	105	105		105	104	105	105	105	105	103
AI_Usage_for_Fin	Pearson Correlation	.138	-.096	-.028	.076	.267**	1	-.031	-.154	.091	.253**	.163	-.014
	Sig. (2-tailed)	.159	.332	.773	.440	.006		.754	.116	.356	.009	.098	.886
	N	105	105	105	105	105		104	105	105	105	105	103
AI_help_Rating	Pearson Correlation	.065	-.096	-.055	-.136	-.148	-.031	1	-.431**	-.434**	.231*	-.029	.693**
	Sig. (2-tailed)	.512	.332	.576	.168	.134	.754		.000	.000	.018	.774	.000
	N	104	104	104	104	104	104		104	104	104	104	103
Challenge_using_AI_in_Fin	Pearson Correlation	-.041	.293**	.182	-.072	.046	-.154	-.431**	1	.512**	-.172	-.087	-.381**
	Sig. (2-tailed)	.677	.002	.063	.465	.643	.116	.000		.000	.080	.378	.000
	N	105	105	105	105	105	105	104		105	105	105	103
Enough_Res_Avail	Pearson Correlation	.127	.206*	.117	.033	.039	.091	-.434**	.512**	1	-.167	-.121	-.412**
	Sig. (2-tailed)	.196	.035	.235	.735	.694	.356	.000	.000		.088	.218	.000
	N	105	105	105	105	105	105	104	105		105	105	103
Tool_rec_crosscheck	Pearson Correlation	.053	.014	.044	.005	-.068	.253**	.231*	-.172	-.167	1	.148	.279**
	Sig. (2-tailed)	.592	.888	.656	.959	.489	.009	.018	.080	.088		.131	.004
	N	105	105	105	105	105	105	104	105	105		105	103
Open_to_use_AI_for_FinMgmt	Pearson Correlation	-.006	.008	-.078	.213*	.241*	.163	-.029	-.087	-.121	.148	1	-.062
	Sig. (2-tailed)												
	N												

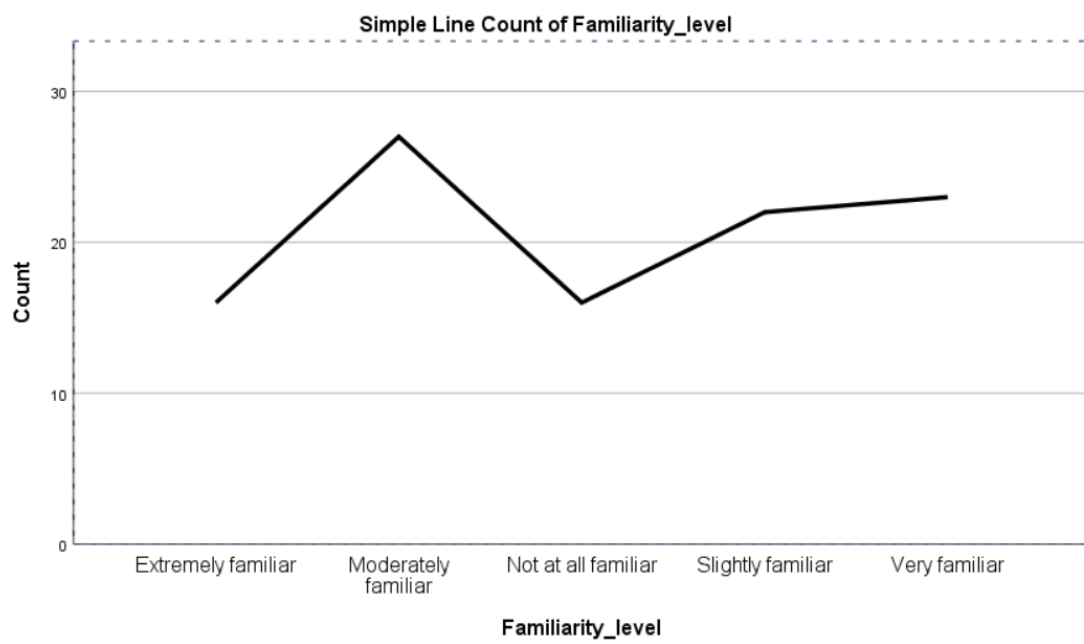
2.7 Visualization:

1. Create Graphs and Charts: Use SPSS's chart builder to create visualizations such as bar charts, scatter plots, and histograms to represent the data visually.
2. Customize Visuals: Customize the charts by adding titles, labels, and legends to enhance clarity and readability.

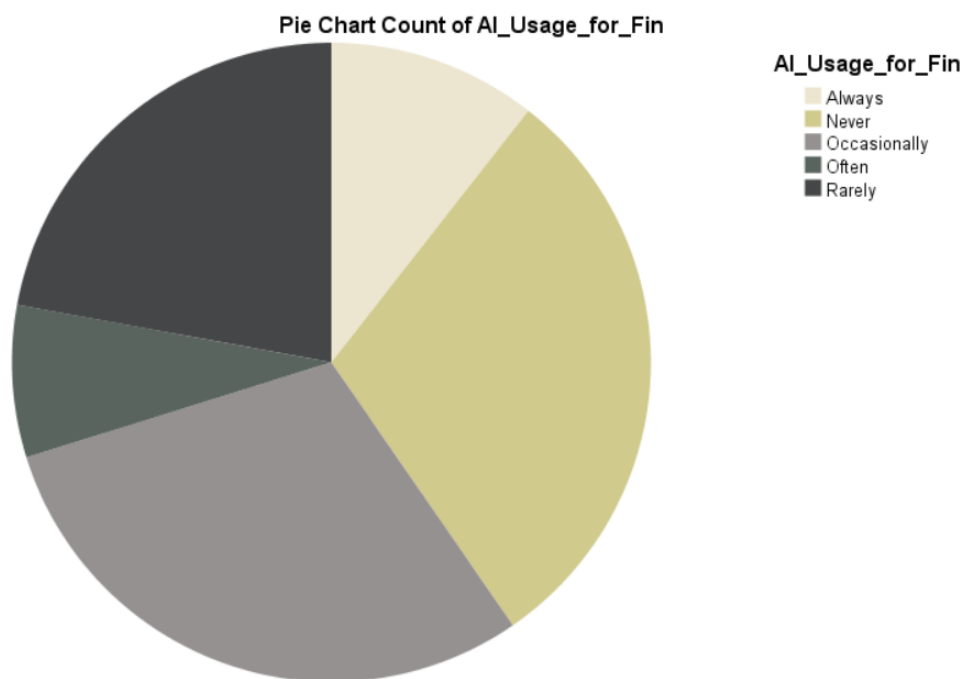
GGraph



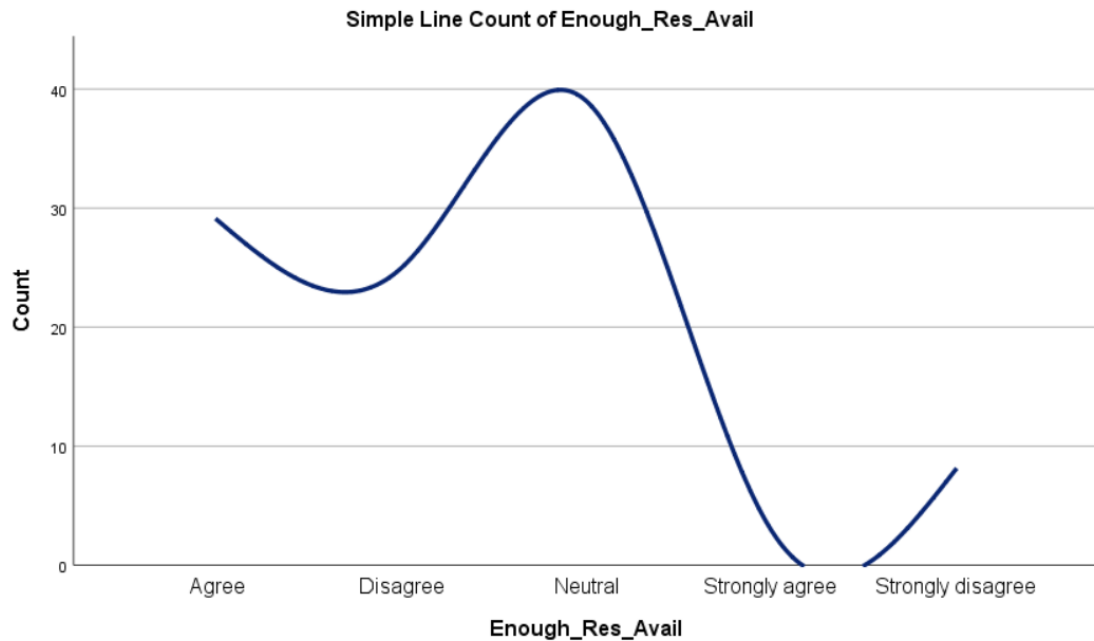
GGraph



GGraph



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3 References:

1. Patten, M.L. and Newhart, M. (2017). *Understanding Research Methods*. Tenth edition. | New York, NY : Routledge, 2017.: Routledge. doi: <https://doi.org/10.4324/9781315213033> .
2. Trinh Quang Long, Morgan, P.J. and Yoshino, N. (2023). Financial literacy, behavioral traits, and ePayment adoption and usage in Japan. *Financial literacy, behavioral traits, and e Payment adoption and usage in Japan*, 9(1). doi: <https://doi.org/10.1186/s40854-023-00504-3>
3. Dube, V., Pradeep, K. and Asthana (2017). A Comparative Study on Financial Literacy of Uttar Pradesh with Central Zone States in India. *A Comparative Study on Financial Literacy of Uttar Pradesh with Central Zone States in India*, [online] 19, pp.22–27. doi: <https://doi.org/10.9790/487X-1910032227> .