Survey: Daily Spending and Buying Behaviour

Field Work: Probability and Statistics (BSIT, BSDS, and BSCS)

Advent 2025 Semester

Uganda Christian University Market

Introduction / Background

This field work project applied principles of Probability and Statistics to study daily market spending and consumer behavior. The purpose was to transform theoretical concepts—such as random sampling, data collection, and descriptive statistics—into practical application. By analyzing market data, the research demonstrates how statistical tools can be used to understand economic patterns and predict consumer trends within the community.

Objectives of the Study

1. To determine the frequency distribution of market visits among respondents.
2. To find out the average daily spending using measures of central tendency (mean, median, mode).
3. To identify the most purchased goods based on observed data.
4. To analyze the relationship between buyers and sellers through probability-based sampling.
5. To help students apply statistical methods to real-life data, improving skills in data interpretation, presentation, and report writing.

Methodology

A random sampling technique was applied to ensure every market visitor had an equal chance of being selected, demonstrating the use of probability in research. Data was collected using both questionnaires and interviews, producing a mix of quantitative and qualitative data.

Microsoft Excel was used for data entry and computation of statistical measures such as mean, percentage, and frequency distribution. The validity of results was enhanced through careful data verification and the use of appropriate statistical tools for analysis.

Figure 1: Respondents filling out market survey forms

Data Presentation

Data was organized and presented in tables and charts for better visualization of trends. The use of bar charts, pie charts, and column graphs provided a clear picture of frequency distributions, spending levels, and product preferences. Statistical tables summarized key numerical values, making it easier to identify relationships and patterns among variables.

Data Analysis

Using descriptive statistics, the study analyzed respondents' behavior through frequency counts. Probability concepts were applied to interpret how often certain behaviors occur—such as the likelihood of visiting the market more than three times per week. The results help demonstrate how statistical analysis converts raw data into meaningful information for economic decision-making.

Charts and Graphs

Each graphical presentation shows a statistical relationship—for example, the bar chart shows frequency distribution, while the pie chart displays proportional spending. These visuals represent how probability and statistics are applied to summarize and interpret data efficiently.

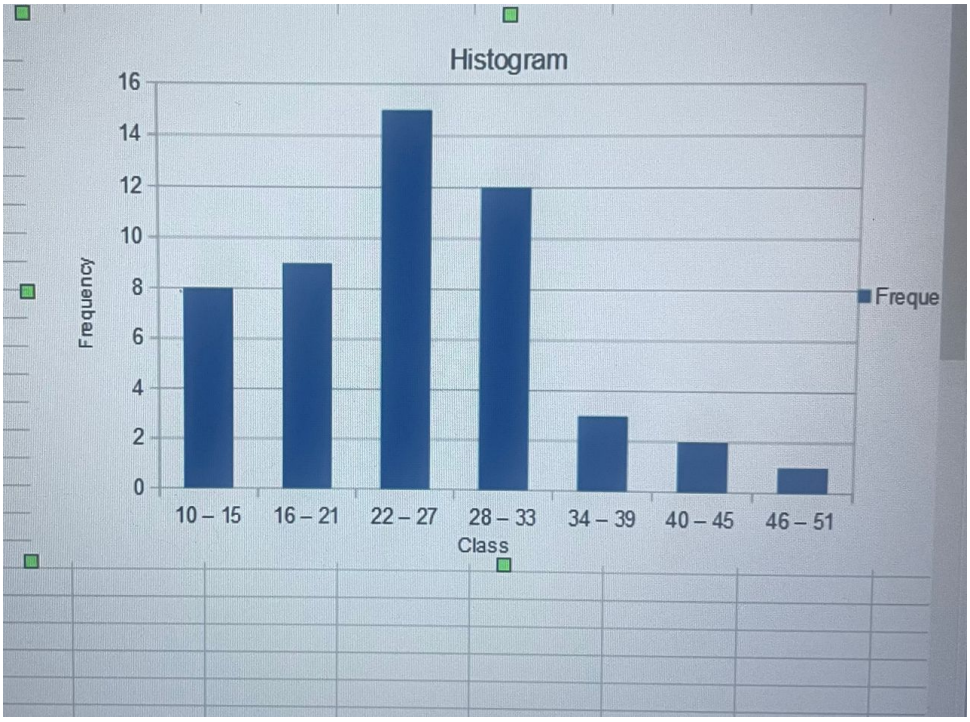

Figure 4: Bar chart showing frequency of market visits

Key Findings

- A majority of respondents (about 60%) visit the market 3–5 times weekly, showing a strong central frequency trend.
- The mean daily expenditure lies between UGX 10,000 and UGX 25,000.
- The mode of purchased goods falls under food and household items.
- Sellers reported that the probability of higher sales increases during weekends due to increased customer flow.

These findings confirm how probability patterns influence market operations and consumer choices.

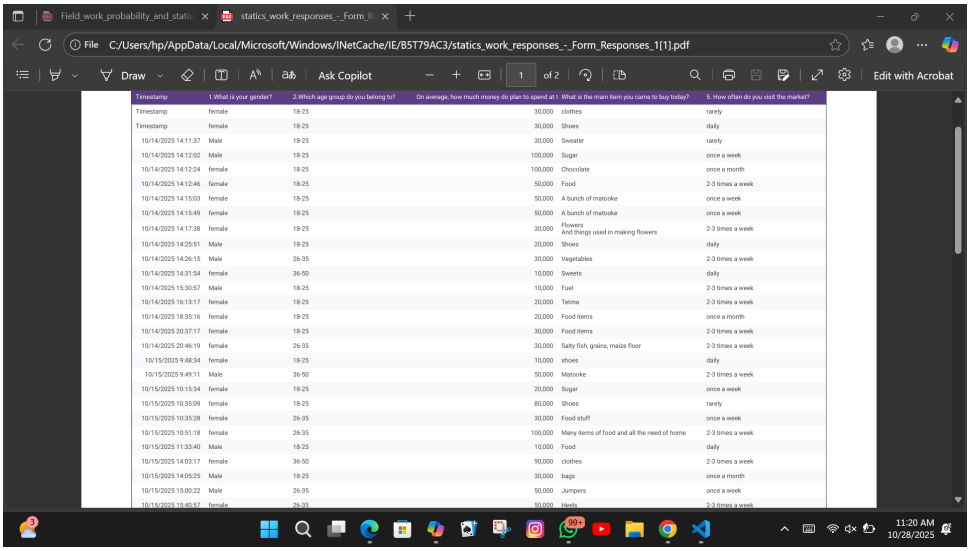

Figure 5: Findings from the survey

Conclusions and Recommendations

The application of Probability and Statistics in this fieldwork made it possible to measure and interpret consumer behavior scientifically. Statistical analysis revealed consistent spending habits and visit frequencies, proving that quantitative data can predict real-life market patterns.

Recommendations:

1. Incorporate statistical tools in market management for better decision-making.
2. Encourage vendors to collect daily sales data for statistical tracking.
3. Conduct periodic market surveys to observe changes in data distributions over time.

Teamwork and Acknowledgement

This research was successfully completed through collaborative effort. Each team member contributed to data collection, statistical computation, and probability-based analysis, reflecting teamwork in applying classroom theory to real fieldwork.

The group acknowledges the support of lecturers who guided the process and the respondents who provided valuable data for statistical interpretation.

Table 1: Group Members and Contributions

Name	**Access Number**	**Contribution**
Abiko Resty	M25B13/044	Team Leader, carried out fieldwork, compiled repo
Nankwanga Fridah	M25B13/033	Data collection and interview coordination
Mawuba Blair	M25B13/010	Data entry and Excel analysis
Napasiri Juliet	M25B13/053	Drafted methodology and key findings
Beniter Tumusiime	M25B13/058	Formulated questions for the fieldwork
Terma Aryouma Bahtokpah	M25B13/061	Worked on PowerPoint presentation and assisted i
Athieno Esther	M25B13/003	Carried out fieldwork and printed the work
Nalule Esther Precious	M25B13/021	Combined the findings and worked on the graphs