

UofG MGT4018/MGT4090 Lab 1

Bernd Wurth

Table of contents

1	Introduction	1
2	Exercise A: Creating and Exploring a Data Set in R	1
2.1	Step 1: Set Up Your Workspace	1
2.2	Step 2: Creating Variables	1
2.3	Step 3: Assign Labels and Levels	1
2.4	Step 4: Save the Dataset	2
2.5	Step 5: Entering Data	2
2.6	Step 6: Loading and Viewing Data	2
2.7	Step 7: Exploring Value Labels	2
2.8	Step 8: Basic Exploration with Summary Statistics	2
2.9	Step 9: Correcting Errors	2
2.10	Step 10: Descriptive Statistics	2
2.11	Step 11: Setting Variable Types	2
2.12	Step 12: Cross-tabulations	2
2.13	Optional Expansion: Plotting the Data	2

1 Introduction

This lab is the same as the SPSS Lab 1.

2 Exercise A: Creating and Exploring a Data Set in R

This lab will guide you through creating a dataset, assigning labels, and conducting basic analyses using R. You'll learn how to create variables, enter data, and generate summary tables similar to those you would in SPSS.

2.1 Step 1: Set Up Your Workspace

1. Open RStudio and start a new script.
2. Save your script with an appropriate name, e.g., `Lab_Exercise_A.R`.

2.2 Step 2: Creating Variables

We'll create three variables: `ID`, `AgeBand`, and `Gender`.

```
# Create an empty data frame with the variables ID, AgeBand, and Gender
data <- data.frame(ID = integer(), AgeBand = factor(), Gender = factor())
```

2.3 Step 3: Assign Labels and Levels

In R, we use **factors** to represent categorical data with defined levels.

Note

In R, we use `factor()` to create categorical variables. This is similar to value labels in SPSS. The `levels` argument specifies the underlying codes, while `labels` provides the human-readable labels.

- 2.4 Step 4: Save the Dataset
- 2.5 Step 5: Entering Data
- 2.6 Step 6: Loading and Viewing Data
- 2.7 Step 7: Exploring Value Labels
- 2.8 Step 8: Basic Exploration with Summary Statistics
- 2.9 Step 9: Correcting Errors
- 2.10 Step 10: Descriptive Statistics
- 2.11 Step 11: Setting Variable Types
- 2.12 Step 12: Cross-tabulations
- 2.13 Optional Expansion: Plotting the Data