

Data Import and Export Using R

- A sample data file containing 823 persons' responses on 6 survey items, each scored on a 0 – 3 rating scale, is provided in two formats. To import the data from Excel .csv format, use the pair of commands labeled “(1)” below. To import the data from SPSS .sav format, use the pair of commands labeled “(2)” below. [It is only necessary to import the data once; different native formats are possible.]

```
# (1) Read comma-separated values data file "sample data.csv" from the Desktop (or
another computer location that you specify), and save new data frame as an R object named
'input'.
```

```
# Note that R recognizes file path names specified with forward slashes '/', rather than
with the backslashes used by Windows\\'
```

```
# Mac OS does not have a "C" drive, so the equivalent file pathname for Mac would be
"/Users/username/Desktop/sample data.csv"
```

```
> input <- read.table("C:/Users/username/Desktop/sample data.csv", header = TRUE, sep =
",")
```

```
# (2) Using the R package 'foreign' that automatically installs with the software, read
SPSS-format data file "sample data.sav" from the Desktop (or another computer location
that you specify), and save new data frame as an R object named 'input2'.
```

```
> require(foreign)
```

```
> input2 <- read.spss("C:/Users/username/Desktop/sample data.sav", to.data.frame = TRUE,
use.value.labels = FALSE)
```

```
# Verify that the data imported correctly. (If you named the data object "input2" or
some other label above, that name would be used rather than "input" below.)
```

```
# Check dimensions of data frame (total numbers of variables [columns] and cases [rows])
```

```
> dim(input)
```

```
# View list of variable names
```

```
> colnames(input)
```

```
# View the entire data frame
```

```
> View(input)
```

```
# Obtain basic descriptive statistics - mean, range and quartile values - for every
variable in the dataset
```

```
# R saves missing values using the code "NA" (none here)
```

```
> summary(input)
```

```
# R can also be used for file format conversion: Export files in another format (for
instance,.dat format).
```

```
> write.table(input, file = "C:/Users/username/Desktop/sample data.dat", row.names = F,  
col.names = T)
```