

Introduction to Using SPSS Command Files

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Outline

- Overview
- Some command syntax details
- Examples of command files
- Tips
- Exercises
- Review
- Q&A

Overview

- Two ways to use SPSS
- Pros and Cons of each type of use
- Quick review of SPSS windows
- How to write command files
- How to save a command file
- How to run a command file

Two Ways to Use SPSS

- Drop-down menus
 - Point-and-click
 - Widely used
 - Fraught with problems
 - Tedious for long analyses
- Command syntax files
 - Not commonly taught in college
 - Provides more functionality

Pros and Cons

Functionality	Menu	Command File
Re-running	Harder	Easier
Learning curve	Easier	Harder
Debugging	Harder	Easier
Documentation	Harder	Easier
Long analyses	Harder	Easier
All procedures	No	Yes

Quick Review of SPSS Windows

- Data editor
 - See data
 - Transform variables
- Output
 - Results from commands, including tables, charts
- Chart editor
 - Can edit graphs
- Syntax editor
 - Write and execute SPSS commands

How To Write Command Files

- Paste from drop-down menus
 - Menu choices generate syntax automatically
- Modify previous command file
- Write commands in text file

Creating Syntax From Menus

- Use drop-down menus but do not run
- Choose PASTE
 - Creates a syntax window
- Save command file
- Run pasted commands

How to Save a Command File

- File-Save
- File extension: **.SPS**
- Can use same name for data and sps files

How to Run a Command File

- Open command file
 - File-Open
 - Click on .sps file in Windows Explorer
- Highlight all or part of command file
- Run commands in one of several ways
 - Click on right arrow
 - Control-R
 - Run-all

Some Command Syntax Details

- What is a command file?
- Command syntax structure
- Example of an SPSS command
- Some details of commands
- Common and important commands

What is a Command File?

- An ASCII text file
- Contains SPSS commands written out
- AKA syntax file

Command Syntax Structure

- Name of command
 - May include some variable names
 - May included some command options
- Name of subcommand
 - May include variable names or command options
- Slashes used to start subcommands
- Can continue over multiple lines
- End command with a period or blank line

Example of an SPSS Command

- GET DATA
 / TYPE=XLS
 / FILE='c:\path\file_name.xls'.
- This is one command
 - With two subcommands
- SPSS tries to use the Excel column heads as the variable names

Some Details of Commands

- Each command begins on a new line
- Variable names cannot be abbreviated
- Command may span lines
- Max line length: 80 characters
- Period or blank line terminates command
- Command syntax is case insensitive

Common & Important Commands

- Commands allow you to
 - Get data
 - Manipulate data
 - List data
 - Do statistical analyses
 - Save data

Most Important Command

- Asterisk
 - Identifies a comment line
 - End comment with period or blank line
- * This is an example of a comment line.
- * The next two lines correct data errors.

Compute Command

- Used to change values
- COMPUTE perscore = (score/60).
- COMPUTE composite =
var1 + var2 + var3.
- COMPUTE average = composite / 3.

IF

- IF (form = "A") zscore = $(\text{score} - 44.5)/6.5$

Create Ranks

- RANK VARIABLES = written oral ppt (A).
- Default is to create new variables
 - rwritten
 - roral
 - rppt
- Can specify names of new variables
- (A) means ascending

Save SPSS Data File

- `SAVE OUTFILE = 'c:\path\filename.sav'`.
- `SAVE OUTFILE = 'c:\path\filename.sav'
/ DROP ssn.`
- `SAVE OUTFILE = 'c:\path\filename.sav'
/ KEEP id lastname grade.`

TEMPORARY

- TEMPORARY.
SELECT IF (eoo_gp = 1).
LIST id written oral ppt /CASES = 15.

SORT

- SORT CASES BY grade.
- LIST id lastname firstname grade.
- SORT CASES BY grade (A).

Variable Label

- VARIABLE LABEL
failcol 'failed color vision'.

Value Label

- VALUE LABEL eeo_gp 0 'Unknown'
1 'Non-Minority' 2 'Minority' .
- VALUE LABEL eeo_gp
0 'Unknown'
1 'Non-Minority'
2 'Minority' .

Save Non-SPSS Data File

- `SAVE TRANSLATE OUTFILE =
'c:\path\filename.xls' /TYPE=XLS
/KEEP id gender eeo_gp age compos
/FIELDNAMES.`
- This creates an Excel file with variable names for column heads.

Statistical Commands

- Means
- Graph
- Correlation
- Many other commands

Means Command

- MEANS TABLES= oral written BY eeo_gp.
 - This minimal command will work
 - Commands have default settings
- MEANS TABLES= oral written BY eeo_gp / CELLS MEAN COUNT STDDEV.
 - This command is more specific.

Graph

- GRAPH /SCATTERPLOT(BIVAR)= oral
WITH written
/MISSING=LISTWISE
/TITLE= 'Title goes here'
'line 2 of title goes here'
/SUBTITLE= 'sub title goes here'
/FOOTNOTE= 'footnote goes here'
'line 2 footnote goes here'.

Correlation

- CORRELATIONS
/VARIABLES= oral written ppt
/PRINT=TWOTAIL NOSIG
/STATISTICS DESCRIPTIVES
/MISSING=PAIRWISE .

Command File Example

- SPSS Program to Grade a Test

(See separate pdf file.)

Tips for Using Command Files

- Documenting
- Debugging
- Use of capitalization
- Separate the major aspects of analyses

Document Your Files

- File name
- Date created
- Author
- Log of changes over time
- Outline file
- Visual divisions of file into sections

Debugging

- Debugging individual commands
- Debugging command logic

Debugging Individual Commands

- SPSS is very detail demanding
- Look for:
 - Missing or extra quotation marks
 - Unbalanced parentheses
 - Missing periods

Debugging Command Logic

- Look at data at various points in the file
 - List data
 - Do crosstabulations
- Do analyses in another software package
 - Excel
 - SAS
 - Minitab
 - R

Use of Capitalization

- Helpful convention
 - SPSS commands in upper case
 - Variable names in lower case

Separate the Major Aspects of Analyses

- Read and save
 - Verify data is read correctly
- Groom data
 - Transform variables
 - Change numbers 1 to 4 to letters A to D
 - Add variables
 - Name of data set
- Analyze data

Name Various Files

- Use one basic name
 - Keep track of all files related to one project
- For example:
 - IPMAAC_2007.dat
 - Read_IPMAAC_2007.sps
 - Groom_IPMAAC_2007.sps
 - Analyze_IPMAAC_2007.sps
- Similar system to name output files

Display Commands in Output

- Do this through menu
- Edit – Options
- Select the Viewer or Draft Viewer tab
- Check the Display commands in the log

SPSS Training Resources

- SPSS built-in tutorial
 - Help-Tutorial-Working with syntax
- SPSS help menu
 - Help - Command Syntax Reference
 - Full syntax options
 - Gives examples
 - States limitations
- SPSS website

SPSS Help

- When cursor is in a command
 - Click Syntax Help button to find out what subcommands and keywords are available for the current command
- If the cursor is not in a command
 - Clicking the Syntax Help button to display an alphabetical list of commands
 - You can select the one you want.

Other Training Resources

- On line tutorials for SPSS
 - Many from colleges
- Listserves

Exercise 1

- Fetch data from an Excel file
- Get average of oral and written scores
- Save data to an SPSS .sav file

Exercise 2

- Get data from an Excel file
- Get average of oral and written z-scores
- Save data to an SPSS .sav file

Review

- Pros and cons of drop-down menu
- How to use command files

Drop-Down Menus

- Easy to get started
- Unwieldy for longer analyses
- Easy to make undetected errors
- Hard to proof analyses

How to Use Command Files

- Create files
- Edit files
- Save files
- Name files
- Run files

Summary

- Start using SPSS drop-down menus
- Next, paste menu commands
- Write command files as soon as possible
- This enables you to
 - Do longer, more complex analyses
 - Detect errors and proof analyses

Final Thoughts

- Look at SPSS programs written by others
- Become acquainted with SPSS commands
- Learn details of commands you use often

Copies of this presentation are available at:
<http://ipmaac.org>

Q&A's

- The floor is open
 - Questions
 - Comments