

Quantitative Methods (GEO 441)

SPSS Mini-Lab 3: Basic Syntax

Dr. Paul Marr

Please copy the file **S:\GEO\Marr\Quantitative Methods\Other Data\Michoacan Village Data.sav** to your portable media.

1. Edit > Options
 - a. Check the *Display commands in the log* box. This will allow SPSS to output the exact syntax used for each process you run.
2. File > New > Syntax
 - a. This will open a syntax window. You can copy, paste, and edit command syntax in this window. The Execute or Run button is the green arrow.
3. Help > Topics
 - a. Click on the + symbol next to the **Command Reference Syntax** from the *Contents* pane.
 - b. Scroll down and click on **Examine**.
 - i. All of the commands used by SPSS are found in this Reference.
4. In the Syntax window type the following commands as they appear below:
EXAMINE VARIABLES =PctAct by LakeMnts
/PLOT=BOXPLOT
/STATISTICS=NONE
/NOTOTAL
 - a. Using the cursor, highlight (select) the entire command text block.
 - b. Click the **Execute** button.
 - c. In the syntax window, add the commands below to the beginning of the text block (they should appear BEFORE the commands already in the window).

```
USE ALL.
```

```
COMPUTE filter_$=(LakeMnts = 1).
```

```
VARIABLE LABELS filter_$ 'LakeMnts = 1 (FILTER)'.  
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.  
FORMATS filter_$ (f1.0).  
FILTER BY filter_$.
```

```
FORMATS filter_$ (f1.0).
```

```
FILTER BY filter_$.
```

- a. Using the cursor, highlight (select) the entire command text block.
 - b. Click the **Execute** button.
 - i. Note that the command block we just added selected all villages that were located on the lake and then produced a boxplot.
 - c. Delete all of the command code in the syntax window.
5. Enter the commands below in the syntax window:
FILTER OFF.
USE ALL.
EXECUTE.
GRAPH
/SCATTERPLOT(BIVAR)=PctEdu WITH PctAct
/MISSING=LISTWISE.
 - a. Using the cursor, highlight (select) the entire command text block.
 - b. Click the **Execute** button.
 - i. In this command block we selected all villages and then graphed a scatterplot of Percent Grade School or Higher Education by Percent Employed.
 - c. Delete all of the command code in the syntax window.

6. In the SPSS Data editor window:
 - a. Analyze > Descriptive Statistics > Explore
 - b. Move **Population > 15 Yrs** to the *Dependent List*.
 - c. Move **Region** to the *Factor List*.
 - d. Under *Display*, click on *Plots*.
 - e. Under *Plots...* select **Normality plots with tests** and **Histogram**.
 - f. Click **Continue**.
 - g. Click **Ok**.
 - h. In the SPSS Output Window, double click on the commands box to activate it. The box should appear as dashed lines.
 - i. Select and copy the command syntax to the Syntax Window.
 - j. Edit the command block so that it appears as follows:


```
EXAMINE VARIABLES=PctLT15 BY Region
/PLOT NPLOT
/COMPARE GROUPS
/STATISTICS NONE
/CINTERVAL 95
/MISSING LISTWISE
/NOTOTAL.
```
 - k. Using the cursor, highlight (select) the entire command text block.
 - l. Click the **Execute** button.
 - m. Delete all commands in the Syntax Window.

7. Copy the following command block into the Syntax Window (it would be best to Copy and Paste these commands):

```
USE ALL.
COMPUTE filter_$=(Region = 1).
VARIABLE LABELS filter_$ 'Region = 1 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
NPTESTS
/ONESAMPLE TEST (Crafts) KOLMOGOROV_SMIRNOV(NORMAL=SAMPLE )
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.
USE ALL.
COMPUTE filter_$=(Region = 2).
VARIABLE LABELS filter_$ 'Region = 2 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
NPTESTS
/ONESAMPLE TEST (Crafts) KOLMOGOROV_SMIRNOV(NORMAL=SAMPLE )
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE
/CRITERIA ALPHA=0.05 CILEVEL=95.
USE ALL.
COMPUTE filter_$=(Region = 3).
VARIABLE LABELS filter_$ 'Region = 3 (FILTER)'.
VALUE LABELS filter_$ 0 'Not Selected' 1 'Selected'.
FORMATS filter_$ (f1.0).
FILTER BY filter_$.
```

NPTESTS

```
/ONESAMPLE TEST (Crafts) KOLMOGOROV_SMIRNOV(NORMAL=SAMPLE )  
/MISSING SCOPE=ANALYSIS USERMISSING=EXCLUDE  
/CRITERIA ALPHA=0.05 CILEVEL=95.
```

EXECUTE.

- a. In the Syntax Window, Select **Run > All** from the *Menu Bar*.
 - i. This command block runs a Kolmogorov-Smirnov normality test on the variable Crafts for each Region (Lake, Mountain, Meseta).
8. Close all windows and exit SPSS.

Notes:

Syntaxing can be used for performing repetitive tasks or to make changes to graphics, etc... The best way to learn syntaxing is to use it often and try out new things using the command reference. This is especially true of graphs. Syntax allows more control over graphs than is available through the Graph Editor properties menu.