Fall 2018

SOC 3305

Lab 2

(Due in class on September 13, 2018)

Snowfall.xls file posted on your eLearning will be utilized for this Lab work. Please save your final work as lastname_lab2.doc and also lastname_lab2.dta .doc (word file, while .dta is your working data) and email it to the instructor. Please explain your results with your own words. (You must use Stata program to do this lab)

1. Upload both Berlin and Keene snowfalls on Stata at the same time so you can work on both simultaneously. (15 pts) (Show Stata command how you uploaded the data. For instance, once you import, Stata should produce a command)

   I cleaned my data in excel first by deleting the first three rows and I moved the Keene data on "Sheet 2" next to Berlin data on "Sheet 1" and erased "Sheet 3." I also erased the column titled "winter." Then I imported my excel spreadsheet on Stata.

   Command: import excel "C:\Users\vxs170930\Downloads\Lab 2 Data-Cleaned.xls", sheet("Ber> lin") firstrow

2. Provide annual winter (December, January and February) snowfall (one value for each year) for both Berlin and Keene separately. Generate "winterB" and "winterK" variables for your answers and also provide monthly average for winter of each year. Generate "wmonthlyB" and "wmonthlyK" as new variables for monthly average for each county. (15 pts)

   I used the following commands to find the annual winter snowfall for Berlin and Keene separately.

   Commands:

   1. **Berlin:** generate winterB=decB+janB+febB
   2. **Keene:** generate winterK=decK+janK+febK

   Then to find the monthly average for winter snowfall for both Berlin and Keene I used the following commands.

   Commands:

   1. **Berlin:** generate wmonthlyB=decB+janB+febB/3
   2. **Keene:** generate wmonthlyK=decK+janK+febK/3

3. Replace winter annual snows for each city for each year to centimeters (cm) and name your new variable "winterBCM" and "winterKCM" also label them accordingly. (15)

   To change the data for annual winter snowfall from inches to centimeters, I used the following commands:

Commands:

1. **Berlin:** replace winterB= 2.54*winter
2. **Keene:** replace winterK= 2.54*winter

Then I manually changed the variable name for Berlin ("winterB") to "winterBCM." I then changed the variable name for Keene ("winterK") to "winterKCM."

4. Tabulate any month which has more than 10 inches of snow for each city? (15 pts) (Please copy tabulation to word document)

Command:
Berlin: tabulate novB if novB>10

novB	Freq.	Percent	Cum.
11.7	1	12.50	12.50
12.7	1	12.50	25.00
13.3	1	12.50	37.50
14.5	1	12.50	50.00
17.2	1	12.50	62.50
17.3	1	12.50	75.00
23.5	1	12.50	87.50
26	1	12.50	100.00
Total	8	100.00	

Keene: tabulate novK if novK>10

novK	Freq.	Percent	Cum.
10.3	1	25.00	25.00
10.5	1	25.00	50.00
12	1	25.00	75.00
14.1	1	25.00	100.00
Total	4	100.00	

5. Show correlation table for months of winter for each city separately and comment. (20)
(Please copy correlation tables to word document and comment)

Command:
Berlin: correlate decB janB febB
(obs=52)

```
             |    decB    janB    febB
-------------+---------------------------
       decB |   1.0000
       janB |  -0.1140   1.0000
       febB |   0.2089  -0.0173   1.0000
```

December and January are inversely related. As December snowfall increases, the January snowfall decreases, and their relationship is weakly correlated since it is close to 0. December and February are directly related. As December snowfall increases, the February snowfall also increases, and their relationship is weakly correlated since it is close to 0. January and February are inversely related. As January snowfall increases, the February snowfall decreases, and their relationship is weakly correlated since it is close to 0.

Keene: correlate decK janK febK
(obs=52)

```
             |    decK    janK    febK
-------------+---------------------------
       decK |   1.0000
       janK |   0.0230   1.0000
       febK |   0.2072  -0.2159   1.0000
```

December and January are directly related. As December snowfall increases, the January snowfall increases as well, and their relationship is weakly correlated since it is close to 0. December and February are directly related. As December snowfall increases, the February snowfall also increases, and their relationship is weakly correlated since it is close to 0. January and February are inversely related. As January snowfall increases, the February snowfall decreases, and their relationship is weakly correlated since it is close to 0.

6. Graph both cities' annual snow fall in one graph with different colors. (20 pts) (Please copy graph to word document)