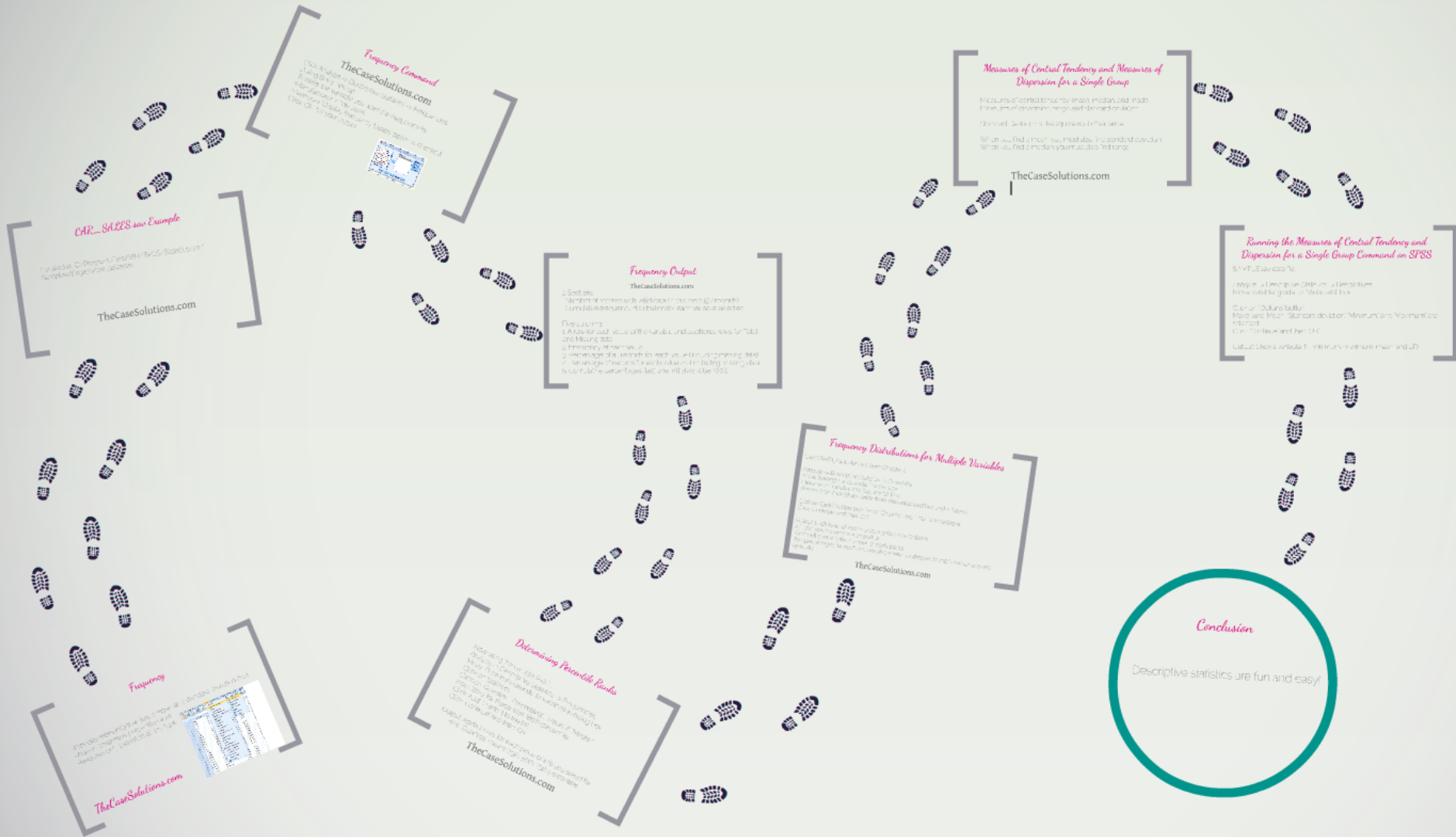


Practical Regression: Noise, Heteroskedasticity, and Grouped Data



CAR SALES raw Example

Use the following data to create a frequency distribution.

TheCaseSolutions.com

Frequency Command

1. Analyze > Descriptive Statistics > Frequencies
 2. Select the variable you want to analyze
 3. Click on the "Display" button
 4. Check the "Display" options you want
 5. Click on "OK"



Frequency Output

1. Sort the data by the variable you want to analyze
 2. Use the "FREQUENCIES" command to generate the output

- 1. Analyze for each variable of the variables and variables for "Total" and "Missing" cases
- 2. Frequency of each value
- 3. Percentage of the total for each value as well as computing the "Total" and "Missing" cases for each variable
- 4. Use the "Display" button to see the output

Frequency Distributions for Multiple Variables

1. Analyze > Descriptive Statistics > Descriptives
 2. Select the variables you want to analyze
 3. Check the "Display" options you want
 4. Click on "OK"

TheCaseSolutions.com

Measures of Central Tendency and Measures of Dispersion for a Single Group

Measures of central tendency (mean, median, and mode) provide information regarding the location of the data. Measures of dispersion (variance, standard deviation, range, etc.) provide information regarding the spread of the data.

TheCaseSolutions.com

Running the Measures of Central Tendency and Dispersion for a Single Group Command on SPSS

1. Analyze > Descriptive Statistics > Descriptives
 2. Select the variable you want to analyze
 3. Check the "Display" options you want
 4. Click on "OK"

Determining Percentile Ranks

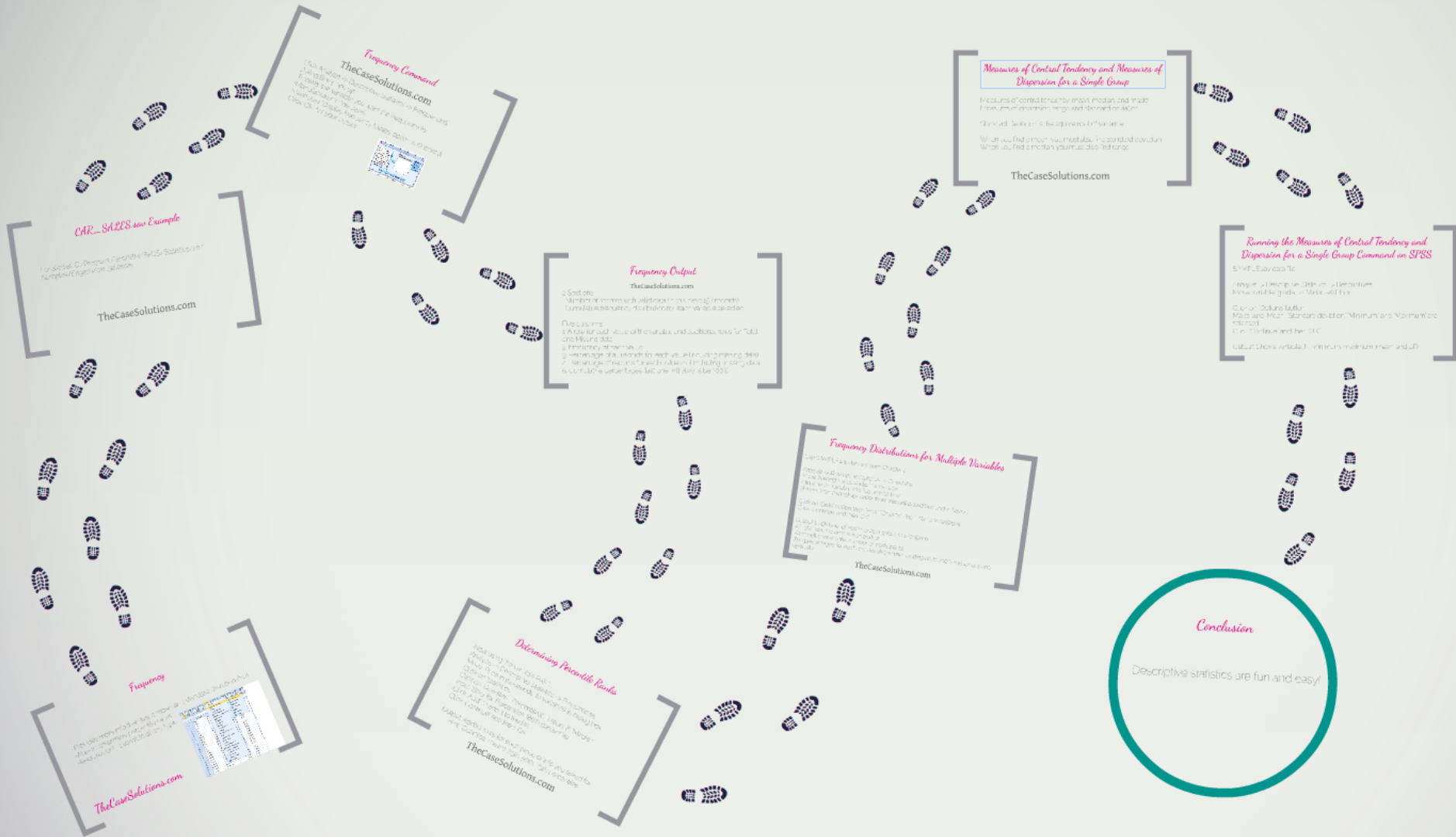
1. Analyze > Descriptive Statistics > Percentiles
 2. Select the variable you want to analyze
 3. Check the "Display" options you want
 4. Click on "OK"

TheCaseSolutions.com

Conclusion

Descriptive statistics are fun and easy!

Practical Regression: Noise, Heteroskedasticity, and Grouped Data



CAR - SALES raw Example

Use the CAR_SALES raw file for the following example.

TheCaseSolutions.com

Frequency Command

TheCaseSolutions.com



Frequency Output

TheCaseSolutions.com

Frequency Distributions for Multiple Variables

TheCaseSolutions.com

Determining Percentile Ranks

TheCaseSolutions.com

Measures of Central Tendency and Measures of Dispersion for a Single Group

TheCaseSolutions.com

Running the Measures of Central Tendency and Dispersion for a Single Group Command on SPSS

TheCaseSolutions.com

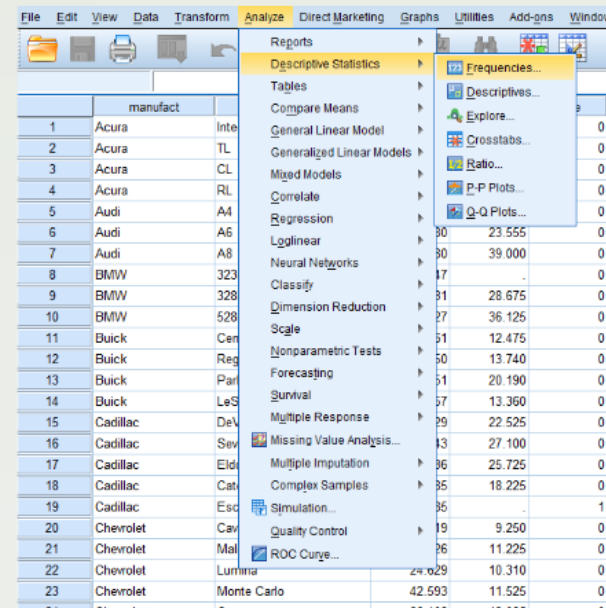
Conclusion

Descriptive statistics are fun and easy!



Frequency

- Provides more info than just a mean and standard deviation (SD)
- Able to determine percentile ranks
- Requires only 1 variable of any type



TheCaseSolutions.com



CAR_SALES.sav Example

Located at: C:/Program Files/IBM/SPSS/Statistics/20/
Samples/English/car_sales.sav

TheCaseSolutions.com



Frequency Command

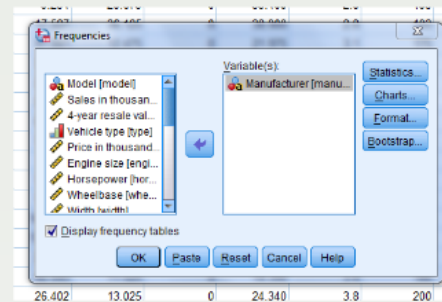
TheCaseSolutions.com

Click Analyze -> Descriptive Statistics -> Frequencies
Dialog Box pops up

Transfer the variable you want the frequency for
(Manufacturer in this case)

Make sure "Display frequency tables" option is checked

Click "OK" for your output



Frequency Output

TheCaseSolutions.com

2 Sections:

- Number of records with valid data (in this case 157 records)
- Cumulative frequency distribution for each variable selected

Five columns:

1. A row for each value of the variable and additional rows for Total and Missing data
2. Frequency of each value
3. Percentage of all records for each value (including missing data)
4. Percentage of records for each value (not including missing data)
5. Cumulative percentages (last one will always be 100%)





Determining Percentile Ranks

Now using the variable PRICE

Analyze -> Descriptive Statistics -> Frequencies

Move "Price in thousands" to variables in dialog box

Click on "Statistics:

Click on "Quartiles," "Percentile(s)," "Mean," & "Median"

Input "80.0" for Percentiles (80th percentile)

Click "Add" to add it to the list

Click "Continue" and then "OK"

Output: Added rows for each piece of info you asked for

Hint: "Quartiles" means 25th, 50th, 75th percentiles

TheCaseSolutions.com



Frequency Distributions for Multiple Variables

Use SAMPLE.sav data set from Chapter 1

Analyze -> Descriptive Statistics -> Crosstabs

Move "training" variable into "Row(s)" box

Move "work" variable into "Column(s)" box

(If more than 2 variables, enter them into unlabeled box under "Layer")

Click on "Cells" button, then "Row," "Column," and "Total" percentages

Click "Continue" and then "OK"

Output: Each level of each variable gets a row/column

A "Total" row/column is also added

Each cell contains the number of participants

The percentages for each cell are also shown (adding up to 100% horizontally and vertically)

TheCaseSolutions.com



Measures of Central Tendency and Measures of Dispersion for a Single Group

Measures of central tendency: mean, median, and mode
Measures of dispersion: range and standard deviation

Standard Deviation is the square root of variance

When you find a mean, you must also find standard deviation
When you find a median, you must also find range

TheCaseSolutions.com

